Volume 5, Issue 12 – Dec 2017

ISSN: 2054-7404

ARCHIVES OF BUSINESS RESEARCH

SOCIETY FOR SCIENCE AND EDUCATION - UNITED KINGDOM

TABLE OF CONTENTS

EDITORIAL ADVISORY BOARD

DISCLAIMER

All the contributions are published in good faith and intentions to promote and encourage research activities around the globe. The contributions are property of their respective authors/owners and Archives of Business Research (ABR) is not responsible for any content that hurts someone's views or feelings etc.

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.3940.
Maxwell, K. D., & Gerrior, S. (2017). Can the Use of Internet Applications Increase the Participation of Men in Healthy Lifestyle Behavior? *Archives of Business Research,* 5*(12),* 1-13.

Can the Use of Internet Applications Increase the Participation of Men in Healthy Lifestyle Behavior?

Karen Denise Maxwell
Hampton University School of Business
United States

Shirley Gerrior
Walden University since 2008.
United States

ABSTRACT
Mortality rates in the United States are higher for men than women as a result of chronic diseases such as heart disease, cancer, and diabetes. Although men suffer from chronic diseases at higher rates than women, few health interventions are targeted to men. Limited knowledge exists regarding the specific components needed to design Internet applications to appeal to men. The purpose of this quantitative study was to examine the relationship between Internet applications and the influence on participation of men in healthy lifestyle behaviors. A quasi-experimental design was used to analyze data collected from the Health Information National Trends Survey (HINTS) (*N* = 990). A group of men (*n* = 323) that used Internet applications was compared to a control group of men (*n* = 667) that did not use Internet applications. The study results are generalizable to men in the United States because of the use of data from HINTS. Results from the regression analysis indicated that Internet applications for self-management of health behavior had a significant effect upon participation in healthy lifestyle behavior t (49) = -2.212, p < .05. There was no significant effect upon men not using Internet applications t (49) = 1.023, p >.05. This study supports the United States federal government's Healthy People 2020 objective to increase the proportion of people who use Internet applications for health management.

Keywords: Internet, Men, Self-Management, Self-regulation, Nutrition, Physical Activity

INTRODUCTION

Background

Men in the United States commonly suffer from chronic and preventable diseases that are the result of their health behaviors (Danaei et al., 2010). Despite their high rates of chronic diseases, men are infrequently targeted for Internet applications (Duncan et al., 2012; George et al., 2012). Research that focuses specifically on Internet applications for men is also limited. Previous literature reviews on nutrition interventions (Taylor et al., 2013) and on physical activity (George et al., 2012) identified few chronic disease prevention programs designed to change the health behavior of men. Innovative Internet applications exclusively targeted to men are needed to improve health behavior to reduce chronic diseases endured by men (Vandelanotte et al., 2013).

Treatment of chronic diseases such as heart disease, cancer, and diabetes are projected to cost the U.S. healthcare system approximately $4.2 trillion per year by 2023 (Anderko et al., 2012). This forecast is a significant increase from total healthcare expenditures in 2013 of $2.9 trillion (Centers for Medicare & Medicaid Services, 2014). According to the Centers for Disease Control and Prevention (CDC; 2013b), heart disease, cancer, and diabetes are costly chronic preventable diseases. Although more men than women have been diagnosed with a higher percentage of chronic diseases such as heart disease, cancer, and diabetes that are linked to poor nutrition and lack of physical activity (Duncan et al, 2012), health educators have not targeted or designed many health promotion interventions exclusively for men (George et al., 2012). In addition, health interventions used by women do not appeal to men (Duncan et al., 2012). Internet applications are more appealing to men than traditional health promotion interventions because self-tailored and self-paced activities allow self-management (Taylor et al., 2013).

Internet applications have produced significant health behavior changes (Davies, Spence, Vandelanotte, Caperchione, & Mummery, 2012). This suggests that creating effective Internet applications would benefit from studying specific content and theoretical designs to understand what factors affect participation in healthy lifestyle behavior. A systematic review of the literature conducted by Webb, Joseph, Yardley, and Mitchie (2010) found that the use of the theory of planned behavior increased the effectiveness of Internet applications.

Objective

The purpose of this study was to examine the relationship between Internet applications Internet applications used for self-management of health behavior upon men in the United States, and the influence upon men's participation in healthy lifestyle behaviors. Internet applications can be used to manage healthcare appointments, communicate with healthcare providers, fill prescriptions, monitor nutrition, physical activity, weight management, and calculate body mass index (BMI). In the context of this study, participation in healthy lifestyle behavior included fruit consumption, vegetable consumption, and regular physical activity.

Chronic diseases such as heart disease, cancer, and diabetes are among the most widespread preventable health conditions in the United States; however, options to successfully manage these chronic diseases are limited (Chaney et al., 2013). Improving health outcomes associated with heart disease, cancer, and diabetes requires options that provide the opportunity for self-management (Chaney et al., 2013; Lorig et al., 2012; Miron-Shatz & Ratzan, 2011). Incorporating the self-management and self-efficacy components of the social cognitive theory into the design of diabetes Internet applications have successfully been used to significantly improve health behavior (Glasgow et al., 2012). Internet applications used for disease prevention, preventing disease complications, or managing existing chronic diseases such as heart disease, and cancer are less costly, more effective treatment for chronic diseases (Hyman, 2009). According to the CDC, chronic preventable diseases are responsible for 75% of U.S. healthcare spending (2013a).

Internet applications that increase male participation in healthy lifestyle behavior are predicted to produce better health outcomes that prevent or minimize the effects of heart disease, cancer, and diabetes, ultimately reducing healthcare expenses (Kennedy et al., 2012). This study was also designed to support the Healthy People 2020 objective to increase the proportion of people in the United States who use Internet Applications for health management (Healthy People 2020, 2013). Data from the U.S. National Cancer Institute's Health Information National Trends Survey (HINTS) was used to conduct this study.

Theoretical Framework

The theoretical framework for this study was based on social cognitive theory. Social cognitive theory was developed by Albert Bandura and is based upon modeling, self-regulation, and self-efficacy (Bandura, 2005). Utilizing self-efficacy and self-regulation skills have contributed to successful participation in positive health behavior changes that prevent disease (Bandura, 1997). Internet applications provides knowledge and encouragement to increase the participation of men in healthy lifestyle behavior. Internet applications assist with self-management of an individual's health behavior, thereby providing individuals the opportunity to employ self-regulation.

This study explores using interactive Internet applications to influence lifestyle habits. Lifestyle habits are a major factor in the participation of chronic disease prevention activities. Because individuals control their lifestyle habits, men can use these habits to have major input into their overall health (Bandura, 2005). Self-management provides individuals with the opportunity to realize the benefits of engaging in healthy lifestyle behavior. The benefits of positive self-management are effective in helping men live longer and healthier lives (Bandura, 2004). Interactive Internet applications offer methods of motivating individuals (Glasgow et al., 2012). If structured properly, interactive Internet applications have a strong potential to develop the motivation of individuals and provide the opportunity for self-management as they work through health behavior changes (Bandura, 2005). If Internet applications are not effectively designed to increase motivation and enhance self-management skills, the individuals that benefit most from these Internet Applications will not use them (Bandura, 2004).

METHODS

Data Source

Secondary data from the Health Information National Trends Survey (HINTS) 4 Cycle 1 survey was used to conduct this study. Data was collected by the National Cancer Institute from adult participants throughout the United States. HINTS is a national survey used to measure Internet use associated with healthcare, nutrition, physical activity, healthcare access, cancer risks, in relationship to individual's health (National Cancer Institute, 2014b).

First, a stratified sample of addresses was selected from a database of residential addresses in the United States. High-minority, low-minority, and Central Appalachian strata were created based on demographic data. Creation of the three strata was performed to increase the accuracy of the estimates for the high-minority and Central Appalachian subpopulation. Because of the low responses to previous HINTS surveys, the high-minority stratum and the Central Appalachia stratum were oversampled to increase the total responses for these subpopulations (Westat, 2012). The HINTS 4 Cycle 1 survey was mailed to 6,730 addresses in the high minority stratum, 5,475 surveys were mailed to addresses in the low minority stratum and 180 surveys were mailed to the addresses in the Central Appalachia stratum (Westat, 2012).

The second stage of the sample design consisted of selection of the adults living in the households that received the survey. Survey participants within the households were selected by either the "All Adult" method or the "Next Birthday" method. The "All Adult" method mailed two surveys that requested every adult in the household to respond. The "Next Birthday" method requested only the member of the household with the next upcoming birthday respond to the survey (Westat, 2012).

Participants

The survey response methods resulted in data being collected from 3,959 respondents, which included men and women (Westat, 2012). The final response rate for the high-minority strata was 27.97%, the low-minority strata response rate was 39.34%, and the Central Appalachia strata response rate was 32.62% (Westat, 2012). The overall response rate to the HINTS 4 Cycle 1 survey was 36.67% (Westat, 2012). Only the 1,552 responses from men were used for analysis of this study.

The target population of this study consisted of men at least 18 years of age and older. The sample consisted of 1,552 men whose responses were collected between October 2011 and January 2012 for the HINTS 4 Cycle 1 survey. Inclusion in the HINTS 4 Cycle 1 survey required respondents to be at least 18 years of age, but had no upper age limit. This led to all men's responses collected by the survey being included in the sample. The sample of the HINTS 4 Cycle 1 survey is generalizable to approximately 111,372,696 men in the United States according to Westat (2012).

Measures

Demographics, which included age, education, and ethnicity were self-reported by the participants of the survey. Survey items in the HINTS 4 Cycle 1 survey were used to perform a secondary analysis of the variables in this study. Though the HINTS questionnaire provided measurement of numerous items, only some of the items measured are applicable to this study.

Internet applications, measured the use of the Internet to monitor nutrition and physical activity. The first questions used to measure this variable from the HINTS 4 Cycle 1 questionnaire is: "In the last 12 months, have you used the Internet for any of the following reasons" (National Cancer Institute, 2014b)? Used a website to help you with your diet, weight, or physical activity. Response options are measured on a categorical scale, possible responses were: 1.Yes or 2. No. The second question in the survey asked: "Have you used the Internet to keep track of personal health information such as care received, test results, or upcoming medical appointments" (National Cancer Institute, 2014b)? Response options are measured on a categorical scale, possible responses were: 1. Yes or 2. No.

Healthy lifestyle behavior, is participation in healthy lifestyle behavior that included, activities related to healthy nutrition and participation in regular physical activity. Fruit consumption, vegetable consumption, and physical activity were used to measure this variable. To measure fruit consumption participants were asked "About how many cups of fruit (including 100% pure fruit juice) do you eat or drink each day" (National Cancer Institute, 2014b)? The 7 responses were measured on an interval scale, which ranged from none to 4 or more cups per day. Vegetable consumption was measured by the question "About how many cups of vegetables (Including 100% pure vegetable juice) do you eat or drink each day" (National Cancer Institute, 2014b)? The 7 responses were measured on an interval scale, which ranged from none to 4 or more cups. The first question measuring physical activity is: "In a typical week, how many days do you do any physical activity of at least moderate intensity, such as brisk walking, bicycling at a regular pace, swimming at a regular pace, and heavy gardening" (National Cancer Institute, 2014b)? Response options were measured on an interval scale, possible responses are: none, 1 day a week, 2 days a week, 3 days a week, 4 days a week, 5 days a week, 6 days a week, 7 days a week. The second question measuring physical activity: "In a typical week, outside of your job or work around the house, how many days to you do leisure-time physical activities specifically designed to strengthen your muscles such as lifting weights or circuit training (do not use cardio exercise such as walking, biking, or swimming" (National Cancer Institute, 2014b)? Response options were measured on an interval scale, possible responses are: none, 1 day a week, 2 days a week, 3 days a week, 4 days a week, 5 days a week, 6 days a week, 7 days a week.

Statistical Analysis Procedures

The Statistical Package for the Social Sciences (SPSS) version 21 was used to analyze the data sets available for public use containing information collected for the HINTS 4 Cycle 1 survey. The statistical program WesVar 5.1 was used in addition to SPSS version 21. Use of WesVar 5.1 is necessary to incorporate the jackknife replicate weights used in the HINTS database (National Cancer Institute, 2014a). Not including the jackknife replicate weights in the analysis of information in the HINTS 4 Cycle 1 data sets could increase the possibility of type I errors resulting from incorrect p-values (National Cancer Institute, 2014a). Results of the statistical test performed in SPSS were imported into WesVar 5.1 to complete the analysis of this study. Secondary data obtained from HINTS data sets were used to analyze information associated with the independent variable, Internet applications, and the dependent variable participation in healthy lifestyle behavior.

The HINTS data sets available for public use have undergone data cleaning by Westat (2012) using predetermined processing rules for the data collected from the HINTS 4 Cycle 1 questionnaire. Rules were created to recode items without responses or items with responses that could not be determined, missing values were recoded using a forced-choice standardized data cleaning methods, and responses that allowed respondents to elaborate verbally were cleaned for spelling errors (Westat, 2012). The gender question had 103 missing responses. Cases that did not answer the gender question were not included in the sample. Responses with missing data that are included in the 1552 cases were coded by Westat (2012) with a value of -9. Westat (2012) performed the coding to include the value -9 for missing data for all responses; therefore, no modification was required to any of the 1552 cases that contained missing data because these cases are clearly identified.

A visual inspection of the information assisted in cleaning the data to remove errors prior to analysis. SPSS sorts survey responses in ascending order for each variable. SPSS was used to visually inspect the records of the responses to each survey question. Viewing the responses to each survey question in ascending order offered an easy method to identify out-of-range or misnumbered cases.

RESULTS

Statistical Analysis of the Sample

The final sample of men used for this study consisted of 990 participants. Table 1 shows the frequencies and percentages for age, education and ethnicity of the sample. The frequency and percentages of the sample were divided into two groups. One group consisted of men that used Internet applications and another group of men that did not use Internet applications. Men between the ages of 50 and 64 accounted for the highest usage of Internet applications. While Internet application usage for men between 35 and 49 years of age was similar at 30.3%, men between 50 and 64 years of age had the highest Internet application usage rate at 36.2%. Men between 18 and 34 years of age were the next largest group, utilizing Internet applications at a rate of 21.7%. Overall use of Internet applications was 33% across the entire sample; however, the percentage of men that used Internet applications dropped dramatically for men 65 years of age and older. The largest group of men (37.8%) in the entire sample not using Internet applications was between 50 and 64 years of age.

The analysis highlighted a strong correlation between college attendance and Internet application use. Internet application usage amongst college graduates was the highest at 33.7%. The next highest usage was found amongst men with postgraduate education, followed by college graduate's usage, at 26.9% and 21.7%, respectively. While college attendance significantly increases the use of Internet applications, post high school training did not have the same impact, with only 5.3% of these men using Internet applications. High school graduates used Internet applications at a rate of 9.0%, which was significantly higher than men with post high school training.

Distinct differences between ethnic groups were depicted by the results. Non-Hispanic white men used Internet applications at a rate of 68.7%, which was the highest usage by men of any ethnicity. Hispanic and Non-Hispanic Black men had the next highest use of Internet applications following Non-Hispanic white men at rates of 9.3% and 8.7% respectively. Non-Hispanic Asian men were the only other ethnic group to have significant Internet application usage at a rate of 7.4%.

Table 1
Frequencies and Percentages of Demographic Data

	Internet Application Users		Non-Internet Application Users	
Demographic	*n*	%	*n*	%
Age				
18-34	70	21.7%	89	13.3%
35-49	98	30.3%	149	22.4%
50-64	117	36.2%	252	37.8%
65-74	30	9.3%	119	17.8%
75+	8	2.5%	58	8.7%
Education				
Less than 8 years	2	0.6%	4	0.7%
8 through 11 years	9	2.8%	18	2.7%
High School Graduate	29	9.0%	105	15.7%
Post high school training	17	5.3%	53	7.9%
Some college	70	21.7%	179	26.8%
College graduate	109	33.7%	162	24.3%
Postgraduate	87	26.9%	146	21.9%
Ethnicity				
Hispanic	30	9.3%	51	7.6%
Non-Hispanic White	222	68.7%	483	72.5%
Non-Hispanic Black	28	8.7%	68	10.0%
Non-Hispanic American Indian or Alaska Native	1	0.3%	1	0.1%
Non-Hispanic Asian	24	7.4%	27	4.0%
Hawaiian or Pacific Islander	1	0.3%	1	0.1%
Non-Hispanic multiple races	17	5.3%	36	5.5%

The mode and the standard deviation of the age of men using Internet applications differed from that of men who did not use Internet applications as depicted in Table 2. The mode of the age of men who used Internet applications is nine years less than men that did not use Internet applications. The mode and standard deviation of men that used Internet applications compared to men that did not use Internet applications in relationship to education also differed. The largest number of men who did not use Internet applications was college graduates, which was demonstrated by the mode. The standard deviation for education of men that did not use Internet applications was larger than that for men that used Internet applications. The mode for men that used Internet applications and men that did not use Internet applications in relationship to ethnicity was the same; the standard deviation for each group was also relatively similar.

Table 2
Descriptive Statistics of the Sample

Table 2	Internet Application Users		Non-Internet Application Users	
Demographic	Mode	*SD*	Mode	*SD*
Age	54	15.02	63	16.84
Education	College Graduate	1.58	Some College	2.25
Race/Ethnicity	Non-Hispanic White	2.22	Non-Hispanic White	2.37

Inferential Statistical Analysis

To determine if there is a quantitative effect of the use of Internet applications upon participation in healthy lifestyle behavior a group of men that used Internet applications n = 323 was compared to a group of men that did not use Internet applications n = 667. A t test was used to determine if there was a significant difference between the samples of the two groups of men in this study. Comparison of the group of men using Internet applications to the group of men that did not use Internet applications offered the opportunity to measure the effect of Internet applications by determining the differences of the means between the two groups. The mean and the standard error of the mean were used to determine the significance of the differences of the means of the two groups. Comparing the means of the two samples provide the opportunity to determine the significance of the null hypothesis.

Results of the t test are outlined in Table 3. The two-tailed t test was significant, t = (561) = 2.738, p = .006, p <.05 which do not support the null hypothesis. Men using Internet applications (M = 5.42, SD = 1.22) participated more in healthy lifestyle behavior then men not using Internet applications (M = 5.21, SD = 1.06). The 95% confidence interval for the difference in the means was quite distinct, ranging from .06 to .37. Calculation of an effect size of .12 indicated a small effect, which would explain approximately 1% of the total variance of the strength of the relationship between Internet application usage and participation in healthy lifestyle behavior

Table 3
Independent Samples t Test Analysis

							95 % CI	
Internet Application Usage	*n*	*M*	*SD*	*SEM*	*t*	Effect Size	LL	UL
Internet Application Users	323	5.42	1.22	0.07	2.74	.12	0.06	0.37
Non-Internet Application Users	667	5.21	1.06	0.04				

Note. CI = confidence interval; LL = lower limit; UL = upper limit.

p = .006, p < .05

Two multiple linear regression analyses were conducted to determine if the use of Internet applications had an effect upon participation in healthy lifestyle behavior. To test the null hypothesis the average of two questions from the HINTS 4 Cycle 1 survey was used to measure the effect of the use of Internet applications by men in the sample. A yes response to either question resulted in placement in the group of men using Internet applications. Men responding no to both questions were placed in the group not using Internet applications.

Participation in healthy lifestyle behavior was measured by four questions from the HINTS 4 Cycle 1 survey. An index was created to measure diet and physical activity participation of the men in the sample. Two questions were recoded to measure healthy fruit and vegetable consumption based upon the Dietary Guidelines for Americans 2010 established by the U.S. Department of Agriculture and the U.S. Department of Health and Human Services (U.S. Department of Agriculture & U.S. Department of Health and Human Services, 2010). Two questions were recoded to measure physical activity participation based upon the physical activity guidelines outlined by the U.S. Department of Health and Human Services (U.S. Department of Health and Human Services, 2014).

The null hypothesis was rejected for the men in the group using Internet applications because there was a significant effect upon the average use of Internet applications upon participation in healthy lifestyle behavior as demonstrated by the significant statistical results illustrated in Table 4. The value of the t statistic and the associated significance t (49) = -2.212, p = .032, $p <$ .05 also supports rejection of the null hypothesis because the probability of the t value was significant. The multiple linear regression analysis indicated that there was a significant effect upon Internet application use and participation in healthy lifestyle behavior.

The null hypothesis was accepted for the men in the group not using Internet Applications because there was not a significant effect upon the average use of Internet applications on participation in healthy lifestyle behavior as illustrated in Table 4. The value of the t statistic and the associated significance t (49) = 1.023, p = .312, $p >$ .05 also supported acceptance of the null hypothesis because the probability of the t value was not significant. The multiple linear regression analysis suggests that men that did not use Internet applications are less likely to participate in healthy lifestyle behavior than men that do use Internet applications.

Table 4
Multiple Linear Regression Analysis

	Internet Application Users				Non-Internet Application Users			
Model 1	*B*	*SE*ь	Beta	95% CI	*B*	*SE*ь	Beta	95% CI
(Constant)	6.64	0.521			5.19	0.055		
Health tool use	-0.87	0.378	-.16	[-0.30, -0.02]	0.03	0.027	.05	[-0.04, 0.13]

Note: Internet application users R^2 = .025, F(1, 49) = 5.298, p = .026, $p <$ .05.
Non-Internet application users R^2 = .002, F(1,49) = 1.097, p = .300, $p >$ .05.

Review of the results of the statistical analysis measuring the effect of the use of Internet applications upon participation in healthy lifestyle behavior of men yielded a positive response. An independent samples t test and a regression analysis both demonstrated a significant effect of the use of Internet applications upon participation in healthy lifestyle behavior. These results are demonstrated in Tables 3 and 4.

DISCUSSION

Principle Findings

This study provides an understanding of the components of Internet applications that have the potential to increase participation of men in healthy lifestyle behavior using secondary data that is generalizable to approximately 111,372,696 men in the United States. Statistical analysis measuring the effect of the use of Internet applications upon participation in healthy lifestyle behavior of men demonstrated a significant effect of the use of Internet applications on participation in healthy lifestyle behavior. These results confirm the finding of two previous studies. Kazer et al. (2011) found that Internet applications provide the opportunity for self-management in addition to increased participation in healthy lifestyle behavior. McCully et al. (2013) conducted a study that used data from HINTS surveys collected in 2007 and 2011 that also demonstrated a significant relationship between the use of Internet applications Internet applications and participation in healthy lifestyle behavior.

The utility of self-management provided by Internet applications has been noted by several studies. Self-management has been identified as a strategy that increases the effectiveness of Internet applications (Duncan et al., 2012; (Webb, Joseph, Yardley, & Mitchie, 2010). The effectiveness of Internet applications is further increased when self-management options allow results to be tracked (Bandura, 2004; George et al., 2012; Morgan, Warren, Lubans, Collins, and Callister, 2009; Morgan, Warren, Lubans, Collins, & Callister, 2011).

The effects of self-management upon participation in healthy lifestyle behavior was confirmed by this study. Only men in the group using Internet applications, which accounted for 33% of the total sample, demonstrated a significant effect on healthy lifestyle participation. Men not using Internet applications, which represented 66% of men of the men in the total sample did not have a technological opportunity for self-management. There was no effect on participation in healthy lifestyle behavior on men in the group not using Internet applications.

The use of Internet applications offers a method of self-management of health behavior. Self-management provides successful self-regulation, which enhance self-efficacy (Bandura, 2005). Self-efficacy is the confidence a person has in their ability to develop and implement a plan to deal with possible circumstances that prevent an individual from attaining their goals (Bandura, 1995). Self-efficacy has been associated with successful health behavior changes (Chen & Lin, 2010). Self-management of health behavior supplies a vehicle for individuals to improve self-efficacy by taking responsibility for their health behaviors (Kazer, Bailey, Sanda, Colberg, & Kelly, 2011; Kelders et al., 2012). Self-efficacy along with self-management influence participation in nutrition and physical activity health interventions (Anderson-Bill et al., 2011).

Mobile phones usage is prevalent throughout the United States, as evidenced by ownership of 91% of all adult Americans (Duggan & Smith, 2013). The number of men with smartphones continues to grow, currently 59% own smartphones (Smith, 2013). The availability of Internet applications on smartphones offer men the flexibility to access Internet applications anywhere. Increasing options for self-management increase participation in healthy lifestyle behavior (Bandura, 2004; Kennedy et al., 2012). According to the ManUp study conducted by Duncan et al. (2012) men designated self-management as a major factor to change health behavior. Access to methods for self-management, self-regulation of diet, and physical activity can contribute to increasing participation in healthy lifestyle behavior. The implications for social change include proliferation of opportunities for men to engage in self-management of diet and physical activity because mobile devices are usually always with users and easily assessable (Fanning et al., 2012; Riley et al., 2011).

Internet application usage by minorities has demonstrated significant results in participation in healthy lifestyle behavior (MuCully et al., (2013). Self-management was demonstrated by this study to have a significant effect upon participation of men in healthy lifestyle behavior. Results from this study offer a solution to increase participation of minority men in healthy lifestyle behavior. Smartphone applications used to track health behavior have been downloaded at high rates by Non-Hispanic Blacks and Hispanics (Fox, 2011; Purcell, 2011). Smartphone applications, which incorporate self-management have the potential to increase participation in healthy lifestyle behavior. Designing smartphone applications that all minority men have the ability to understand can increase participation in health lifestyle behavior. Minorities are disproportionately affected by low health literacy (Berkman et al., 2011; Chaudhry et al., 2011). Implications for positive social change is the opportunity for minority men to have frequent access to Internet applications they understand and to address the health literacy challenges many minority men experience (Broderick et al., 2013). Increased participation of minority men in healthy lifestyle behavior can reduce development of chronic diseases in this population within the United States.

LIMITATIONS OF THE STUDY

This study has several limitations, including its dependency on self-reporting and the use of a cross-sectional design. Self-reporting of data is a limitation of this study. Missing or invalid responses reduced the size of the sample substantially. The original sample consisted of 1,552 men; however, the sample size was reduced to 990 due to screening. Although the size of the sample was reduced 36%, the results of this survey are still generalizable to all men in the United States because of the use of data from HINTS. Alternative survey methods may have resulted in a larger sample size.

Another limitation was the use of a cross-sectional design as opposed to a longitudinal design. The cross-sectional design used for this study only analyzed data collected from respondents to the HINTS 4 Cycle I survey, which collected data between October 2011 and February 2012. Previous data collections for HINTS surveys used different participants preventing longitudinal comparisons. As a result, it was not possible to measure long-term trends or evaluate the sustainability of the use of Internet applications by men and their participation in healthy lifestyle behaviors.

CONCLUSION

Internet applications can proliferate an increase in the participation of men in healthy lifestyle behavior because Internet applications provides options for self-management. Results from this nationally representative study of men established the significant effect of the use of Internet applications used for self-management upon participation of men in healthy lifestyle behavior. Furthermore, accessibility of Internet applications offers frequent opportunities for men to practice self-management of diet and physical activity at lower costs than services offered by physicians or medical facilities. The availability of mobile devices increases options for men to conveniently use Internet applications to participate in self-management of their health behavior.

Internet applications has made numerous contributions to healthcare. Establishment of self-regulation as a component that contributed to an increase in the participation of men in healthy lifestyle behavior demonstrates the need to develop Internet applications for men that include self-management. Increasing participation of men in healthy lifestyle behavior can reduce the development of chronic diseases, such as heart disease, cancer, and diabetes. Reducing the number of men with chronic diseases by improving the quality of life of men and contribute to a reduction of costs the United States healthcare system incurs in the treatment of chronic diseases.

References

Anderko, L, Roffenbender, J. S, Goetzel, R. Z., Howard, J., Millard, F., Wildenhaus, K., . . . Novelli, W. (2012). Promoting prevention through the Affordable Care Act: Workplace wellness. *Preventing Chronic Disease*, *9*, 120092. doi:http://dx.doi.org/10.5888/pcd9.120092.

Anderson-Bill, E. S., Winett, R. A., & Wojcik, J. R. (2011). Social cognitive determinants of nutrition and physical activity among web-health users enrolling in an online intervention: The influence of social support, self-efficacy, outcomes expectations, and self-regulation. *Journal of Medical Internet Research*, *13*(1), 147-162. doi:10.2196/jmir.1551

Bandura, A. (1995). Exercise of personal and collective efficacy in changing societies. In A. Bandura (Eds.), *Self-efficacy in changing societies* (pp. 1-45). Cambridge, United Kingdom: Cambridge University Press.

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York, NY: W.H. Freeman and Company.

Bandura, A. (2004). Health promotion by social cognitive means. *Health Education & Behavior*, *31*(2), 143-164. doi:10.1177/1090198104263660

Bandura, A. (2005). The primacy of self-regulation in health promotion. *Applied Psychology: An International Review*, *54*(2), 245-254. doi:10.1111/j.1464-0597.2005.00208.x

Berkman, N. D., Sheridan, S. L., Donahue, K. E., Halpern, D. J., and Crotty, K. (2011). Low health literacy and health outcomes: An updated systematic review. *Annals of Internal Medicine*, *155*(2), 97-107. http://dx.doi.org/10.7326/0003-4819-155-2-201107190-00005

Broderick, J., Devine, T., Langhans, E., Lemerise, A. J., Lier, S., Harris, L. (2014). Designing health literate mobile apps. Retrieved from http://www.iom.edu/Global/Perspectives/2014/HeathLiterateApps.aspx

Centers for Disease Control and Prevention. (2013a). Chronic disease prevention and health promotion. Retrieved from http://www.cdc.gov/chronicdisease/

Centers for Disease Control and Prevention. (2013b). *Deaths: Leading causes for 2010.* Retrieved from http://www.cdc.gov/nchs/data/nvsr62_06.pdf

Centers for Medicare & Medicaid Services. (2014). National health expenditures continued to grow in 2013. Retrieved from http://www.cms.gov/Newsroom

Chaney, B., Barry, A. E., Chavarria, E., Tennant, B., Walsh-Childers, K., Sriram, P. S., & Zagora, J. (2013). Web 2.0 chronic disease self-management for older adults: A systematic review. *Journal of Medical Internet Research*, *15*(2), 1-27. doi:10.2196/jmir.2439.

Chaudhry, S. I., Herrin, J. Phillips, C., Butler, J., Mukerjhee, S., Murillo, J., . . . Krumholz, H. M. (2011). Racial disparities in health literacy ad access to care among patients with heart failure. *Journal of Cardiac Failure*, *17*(2), 122-127. doi.org/10.1016/j.cardfail.2010.09.016

Chen, S., & Lin, C. (2010). Predictors of adopting a health promoting lifestyle among worksite adults with prediabetes. *Journal of Clinical Nursing*, *19*, 2713-2719. doi:10.1111/j.1365-2702.2010.03320.x

Danaei, G., Rimm, E. B., Oza, S., Kulkarni, S. D., Murray, C. J., Ezzati, M. (2010). The promise of prevention: The effects of four preventable risk factors on national life expectancy and life expectancy disparities by race and county in the United States. *PLoS Med*, *7*(3), 1-13. doi:10.1371/journal.pmed.1000248

Davies, C. A., Spence, J. C., Vandelanotte, C., Caperchione, C. M., & Mummery, W. K. (2012). Meta-analysis of Internet delivered interventions to increase physical activity. *International Journal of Behavioral Nutrition and Physical Activity*, *9*(52), 1-13. doi:10.1186/1479-5868-9-52

Duggan, M., & Smith, A. (2013). Cell Internet use 2013. Retrieved from http://www.pewinternet.org/2013/09/16/cell-internet-use-2013/

Duncan, M. J., Vandelanotte, C., Rosenkranz, R. R., Caperchione, C. M, Ding, H., Ellison, M., . . . Mummery, W. K. (2012). Effectiveness of a website and mobile phone based physical activity and nutrition intervention for middle-aged males: Trial protocol and baseline findings of the ManUp Study. *BMC Public Health*, *12*, 1-14. doi:10.1186/1471-2458-12-656

Fanning, J., Mullen, S. P., & McAuley, E. (2012). Increasing physical activity with mobile devices: A meta-analysis. *Journal of Medical Internet Research*, *14*(6), 1-16. doi:10.2196/jmir.2171

Fox S. (2011). The social life of health information. Retrieved from http://www.pewinternet.org/2011/11/02/half-of-adult-cell-phone-owners-have-apps-on-their-phones/

George, E. S., Kolt, G. S., Duncan, M. J., Caperchione, C. M., Mummery, W. K., Vandelanotte, C., . . . Noakes, M. (2012). A review of the effectiveness of physical activity interventions for adult males. *Sports Medicine*, *42*(4), 281-300. doi:10.2165/11597220Ger

Glasgow, R. E., Kurz, D., King, D., Dickman, J. M., Faber, A. J., Halterman, E., . . . Ritzwoller, D. (2012). Twelve-month outcomes of an Internet-based diabetes self-management support program. *Patient Education and Counseling*, *87*, 81-92. doi:10.1016/j.pec.2011.07.024

Healthy People 2020 (2013). Health communication and health information technology. Retrieved from http://healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=18

Kazer, M. W., Bailey, D. E., Sanda, M., Colberg, J., & Kelly, W. K. (2011). An Internet intervention for management of uncertainty during active surveillance for prostate cancer. *Oncology Nursing Forum*, *38*(5), 561-568. doi:10.1188/11.ONF.561-568

Kelders, S. M., Kok, R. N., Ossebaard, H. C., & Van Gemert-Pijnen, J. E. (2012). Persuasive system design does matter: A systematic review of adherence to web-based interventions. *Journal of Medical Internet Research*, *14*(6), 1-36. doi:10.2196/jmir.2104.

Kennedy, C. M., Powell, J., Payne, T. H., Ainsworth, J., Boyd, A., & Buchan, I. (2012). Active assistance technology for health related behavioral change: An interdisciplinary review. *Journal of Medical Internet Research*, *14*(3), 1-26. doi:10.2196/jmir.1893.

Lorig, K., Ritter, P. L., Plant, K., Laurent, D. D., Kelly, P., & Rowe, S. (2012). The South Australia health chronic disease self-management Internet trial. *Health Education & Behavior*, *40*(1), 67-77. doi:10.1177/1090198112436969.

McCully, S. N., Don, B. P., & Updegraff, J. A. (2013). Using the Internet to help with diet, weight, and physical activity: results from the health information national trends survey (HINTS). *Journal of Medical Internet Research*, *15*(8), e148. doi:10.2196/jmir.2612

Miron-Shatz, T., & Ratzan, S. C. (2011). The potential of an online and mobile health scorecard for preventing chronic disease. *Journal of Health Communication*, *16*, 175-190. doi:10.1080/10810730.2011.602464.

Morgan, P. J., Warren, J. M, Lubans, D. R., Collins, C. E., & Callister, C. (2011). Engaging men in weight loss: Experiences of who participated in the male only SHED-IT pilot study. *Obesity Research & Clinical Practice*, *5*(3), e239-e248. doi:10.1016/j.orcp.2011.03.002

Morgan, P. J., Lubas, D. R., Collins, C. E., Warren, J. M., & Callister, R. (2009). The SHED-IT randomized controlled trial: evaluation of an Internet-based weight-loss program for men. *Obesity*, *17*, 2025-2032. doi:10.1038/oby.2009.85

National Cancer Institute. (2014a). *Analytics recommendations for HINTS4 – Cycle 1 data*. Retrieved from http://hints.cancer.gov/dataset.aspx

National Cancer Institute. (2014b). Health Information National Trends Survey (HINTS). Retrieved from http://appliedresearch.cancer.gov/hints/

Purcell, K. (2011). Half of adult cell phone owners have apps on their phones. Retrieved from http://www.pewinternet.org/2011/11/02/half-of-adult-cell-phone-owners-have-apps-on-their-phones/

Riley, W. T., Rivera, D. E., Atienza, A. A., Nilsen, W., Allison, S. M., & Mermelstein, R. (2011). Health behavior models in the age of mobile interventions: Are our theories up to the task? *Journal of Translational Medicine*, *1*, 53-71. doi:10.1007/S13142-011-0021-7.

Smith, A. (2013). Smartphone ownership 2013. Retrieved from http://www.pewinternet.org/2013/06/05/smartphone-ownership-2013/

Taylor, P. J., Kolt, G. S., Vandelanotte, C., Caperchione, C. M., Mummery, W. K., George, E. M., . . . Noakes, M. J. (2013). A Review of the nature and effectiveness of nutrition intervention in adult males. *International Journal of Behavioral Nutrition and Physical Activity*, *10*, 1-13. doi:10.1186/1479-5868-10-13

U.S. Department of Agriculture & U.S. Department of Health & Human Services (2010). Dietary guidelines for Americans 2010. Retrieved from http://www.health.gov/dietaryguidelines/dga2010/DietaryGuidelines2010.pdf

U.S. Department of Health & Human Services (2014). Physical Activity Guidelines for Americans. Retrieved from http://www.health.gov/paguidelines/guidelines/chapter1.aspx

Vandelanotte, C., Caperchione, C. M., Ellison, M., George, E. S., Maeder, A., Kolt, G. S., & Duncan, M. J. (2013). What kind of website and mobile phone-delivered physical activity and nutrition interventions do middle aged men want? *Journal of Health Communication*, *0*, 1-14. doi:10.1081/10810730.2013.768731

Webb, T. L., Joseph, J., Yardley, L., & Michie, S. (2010). Using the Internet to promote health behavior change: A systematic review and meta-analysis of the impact of theoretical basis, use of behavior change techniques, and modes of delivery on efficacy. *Journal of Medical Internet Research*, *12*(1), e4. doi:10.2196/jmir.1376.

Westat. (2012). Health Information National Trends Survey (HINTS 4) Cycle 1 Methodology Report. Retrieved from http://hints.cancer.gov/instrument.aspx

Whittaker, R., Borland, R., Bullen, C., Lin, R. B., McRobbie, H., & Rodgers, A. (2009). Mobile phone-based interventions for smoking cessation. *Cochrane Database Systematic Review*, *4*, 1-26. doi:10.1002/14651858.CD006611.

Wong, J. Y., Gilson, N. D., van Uffelen, J. G., & Brown, W. J. (2012). The effects of workplace physical activity interventions in men: a systematic review. *American Journal of Men's Health*, *6*(4), 303-313. doi:10/1177/1557988312436575

Yu, C. H., Parsons, J., Mamdani, M., Lebovic, G., Shah, B. R., Bhattacharyya, O., . . . Straus, S. E. (2012). Designing and evaluating a web-based self-management site for patients with type II diabetes – systematic website development and study protocol. *BMC Medical Informatics and Decision Making*, *12*(57), 1-12. doi:10.1186/1472-6947-12-5

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.3809.
Al – Ataibi, M. H. (2017). The role of good corporate governance in the financial performance of companies "Kuwait as a model". *Archives of Business Research,* 5*(12),* 14-34.

The role of good corporate governance in the financial performance of companies "Kuwait as a model"

Dr. Mahmoud Hosni Al – Ataibi
Associate Professor, Taif University

ABSTRACT
The present study aims at revealing the extent of the impact of the principles of governance in improving the financial performance indicators of the companies enlisted in the Kuwaiti market. The study has developed a set of hypotheses and models to test them and arrived at the following findings: The first condition of governance, "the ownership of managers," is the least applied in the study sample. The banking sector is the most applying to the principles of governance although it is not statistically significant. The study also finds that the market value added indicator and the rate of return contribute in improving the market value added. As for the impact of governance on the rate of return, the study does not find a statistically significant relationship, and finds that there is an impact of governance on improving the operational performance.

The role of good corporate governance in Kuwait's financial market

INTRODUCTION

The GCC countries are witnessing rapid growth and radical changes in the regulatory and legal environment. Recently, their economy has rapidly grown. The Gulf countries, in order to encourage foreign investment, have started reforms in some Gulf countries in addition to tax exemptions. Three markets have been upgraded to bull markets rather than emerging markets. Regulatory and legislative aspects of the financial markets, including governance controls that contributed to the elimination of conflicts that may arise from the interest group, have developed. Governance is not recent rather it is a natural evolution of a group of internal and external controlling tools that were organized in a set of controls represented by the corporate governance. Therefore, the study of governance is important not only for decision-makers but also for investors as it presents the frameworks of corporate governance systems in one of the GCC countries, i.e. Kuwait, with the regulatory criticism of the legal and legislative governance governing the work of companies and comparing them with good governance systems. Then investigating into the extent to which companies comply with good governance and its relationship to various aspects of financial performance, and its role in enhancing the confidence and credibility of the financial statements.

The focus of this study will be on the relationship between corporate governance and the corporate investor and the impact of governance on financial, operational, and stock performance.

Definition of Corporate Governance

There have been many definitions of corporate governance, most notably that is of the (Organization for Economic Co-operation and Development OECD) which defines it as "a set of relationships between the management of the institution, its board of directors, shareholders and related parties, including the structure through which the objectives of the corporation, the tools in which these objectives are implemented, and the method of monitoring performance is determined." Khatib and Qashi (2006) define it as "a set of mechanisms, procedures, systems and decisions that ensure both discipline, transparency, and fairness which aims to achieve quality and distinction in performance by activating the actions of the economic unit management with regard to the exploitation of available economic resources in order to achieve the best possible benefits for all parties and society as a whole.

Characteristics and Structures of Corporate Governance

Corporate governance is based on three pillars:

1. The first pillar is the moral conduct, which includes adherence to good ethics and rules of good professional conduct, balance in achieving the interests of the parties associated with the corporation, transparency in the provision of information, and the implementation of social responsibility.
2. The second pillar is monitoring and accountability. It can be achieved by activating the role of stakeholders in the success of the corporation and forming direct monitoring parties such as the auditing committee and internal auditing committee, activating the role of external auditing, and activating the monitoring of other parties as suppliers and customers.
3. The third pillar of corporate governance is risk management through developing a risk management system in order to be disclosed and communicated to users, stakeholders, and other related parties (Hammad, 2004). Abu Amsha (2011) shows that there are four parties that affect the proper application of corporate governance rules through the intensification of their efforts. These are shareholders, the Board of Directors, and stakeholders.

As for the characteristics of corporate governance, Al Jaidi (2007) summarizes them in discipline, transparency, independence, accountability, responsibility, fairness, and social awareness that can be illustrated in Figure 1.

Figure 1: Characteristics of Corporate Governance

Discipline	Following the appropriate and correct ethical method.
Transparency	Providing a true picture of everything that happens.
Independence	Lack of influences that lead to decisions as a result of stress.
Accountability	The possibility of evaluating and estimating the work of the Board of Directors and the Executive Management.
Fairness	Respecting the rights of the various stakeholders of the corporation.
Responsibility	Liability to all parties related to the corporation.
Social Awareness	Considering the corporation as a good citizen and socially conscious.

Objectives of Corporate Governance

There are many objectives that good corporate governance seeks to achieve. Al-Jaidi (2007) and Bashir (2003) summarized these objectives as follows:

Protecting the rights of the shareholders

Shareholders are considered the cornerstone of the institution in general. Protecting their interests on the one hand and reassuring them of their invested money in the organization are among the priorities of the successful work led by the management of any institution. The relationship between the shareholders' satisfaction on the management of the institution and its functioning and success in achieving their objectives is controversial. As the profits and their increase are of the most important priorities of any institution, in addition to other goals that ultimately result in the protection of shareholders who find themselves responsive to the demands of the institution in the development and progress and expansion after the institution secures its position in the market in general.

Fairness

Fairness in the treatment of shareholders, whether they are in the direct responsibility of the administration or not, and whether they are citizens who hold the nationality of the institution, or they are of another nationality, the law allowed them to contribute and invest in this institution. Fairness in the distribution of benefits—whether functional, financial or other data from the work of the institution— not only will to a great extent enhance the dominance of law and regulations, but also will turn the corporate governance of the institution into reality. The feeling of minor shareholders that caring for them is equal to that of the major shareholders, thus will undoubtedly the result of an institution governed by law, order, and sound procedures which will ultimately result in the validity of corporate governance.

Protecting the rights of various stakeholders

Ensuring the interests of the various parties related to the work of the institution by instilling the spirit of belonging to the dealers and employees, who truly believe in that this institution is theirs and is the guarantee for their future and the future of their children, the thing that will double their productivity and contribute to its advancement. This also applies to other parties, such as the suppliers or other creditors, whose cooperation and eagerness to deal with the institution stand for the continuous flow of the benefits expected from the institution. The supplier that deals with the institution in a proper, resonant, and strategic manner will gain more benefits in the long run, specifically if its best and most accurate logo is to facilitate the procedures, punctuality, and the compliance with agreements.

Availability of information and safety of communication channels

The provision of information and its accuracy about the institution or organization and the quickness of answering the inquiries of concerned parties make the trust in this institution a means of continuity of dealing with it from all parties. This advantage reflects the soundness of its corporate governance. It indicates that there is a sound system of procedures used to achieve the objectives of different sections, and that there are regulations and instructions that are consistent with the laws related to institutions or other laws related to the nature of the activity of the institution.

Disclosure of financial conditions at appropriate times requires the presence of qualified accountants and appropriate accounting systems based on financial and administrative systems covering the purchases, sales, and any other matters related to the operation of the institution.

Corporate Strategy

The establishment of a clear strategy is primarily related to the objectives of the institution. The plan set by the founders at the beginning of the institution's work and its evaluation during the life of the institution will make the strategic management of the institution a reality. This will only be done by linking the objectives of the institution to the overall plans and procedures set by the administration.

The constant review of the plans and the treatment of gaps during implementation are derived from the strategic management and its view towards the future. This will make the views of the concerned bodies and their observations a different means of permanent development, modification and expression the thing that will reflect on the production and integrity of the institution the of this production, which means that corporate governance is an umbrella imposes itself on the performance of the corporation and all of its dealers and employees.

Al-Shammari (2011: 53) summarized the main objectives of governance in: Ensuring that successful companies seek to serve the community, protect the rights of shareholders, creditors and customers of the company, achieve transparency in decisions of interest to all those involved in the company, and enhance the level of responsibility of managers.

The Problem of the study

Good corporate governance helps reduce risk in the institution, market its shares in financial markets and increase the values of its shares. Corporate governance has intrinsic value that is effectively reflected on share prices. Corporate governance also improves the quality and efficiency of leadership in the institution, the quality of its commodity or service production, and also contributes to the transparency of the organization's operations and enhances the confidence of the community in the credibility of its financial statements (Hamdan, 2012). Therefore, the main problem is to answer the following questions:

1) Does corporate governance contribute in improving the company's financial, operational, and equity performance?
2) Is there an impact on corporate governance in the performance of companies in light of the difference: the size of the company, its indebtedness and type of activity?

The researcher aims to examine the impact of corporate governance on performance in the Kuwait Stock Exchange (KSE), which financial analysts and investors view it as one of the oldest, most important and most active Arab financial markets. So, the determination of the relationship of corporate governance to performance in this market will yield the first indicators on the relationship of corporate governance to performance in the Kuwait Stock Exchange.

LITERATURE REVIEW

The relationship between corporate governance and performance has raised the interest of researchers around the world. Studies in Europe have agreed on that there is a positive relationship between corporate governance and corporate performance (see Fernandez-Rodriguez *et al*., 2004; Pagett and Shabbir, 2005; Toudas and Karathanassis, 2007; Blom and Schauten, 2008; Toledo, 2009). Most of the studies conducted in emerging economies have pointed to the existence of such a relationship (see: Black, 2001; Bai *et al*, 2004; Durnev and Kim, 2005; Zheka, 2006; Price *et al.,* 2011). While the results of previous studies concerning the relationship between corporate governance and performance in the United States and Canada were different. For example (Brown and Caylor, 2006; Bozec *et al*, 2008) noted that there is a positive relationship between corporate governance and performance in the United States and Canada, other studies (e.g. Fodor and Diavatopoulos, 2010; Gupta *et al*., 2009) noted that there is no relationship between corporate governance and corporate performance in the United States and Canada (Bozec and Bozec, 2012).

In Southeast Asia, Ibrahim and Abdul Samad (2011), examined the relationship between corporate governance procedures and performance in family businesses and public shareholding companies (non-family) in Malaysia for the period 1999-2005. The experimental results of this study showed that family businesses achieve better return on ownership than non-family businesses, but corporate governance procedures such as the size of the board of directors, the duality of roles, and the board members' autonomy have a significant impact on performance in non-family businesses. The independence of board members—one of the characteristics of corporate governance—has an impact on improving the financial performance of banks, according to the study of Mahmood and Abbas (2011) which was carried on 21 leading banks in Pakistan.

Christensen *et al.* (2010) examined the relationship between the application of Australian corporate governance and financial performance recommendations measured by the return on assets accounting measure and the market-based measure of “Tobin's Q.” The study has concluded that the application of the Australian recommendations on the best practice of corporate governance and sub-committees contribute to improving corporate financial return, while the principles of board autonomy, particularly the managers, have had a negative impact on corporate returns, whether the return on assets or the Tobin's Q. index. The results were mixed with regard to the impact of the dual role of the executive director and the size of the board of directors in both the financial return based on the accounting scale and that based on the market scale.

In the same vein, Gurbuz *et al* (2010) examined the relationship between corporate governance and financial performance in 164 companies listed on the Istanbul Stock Exchange ISE for the period 2005-2008. The study concluded that corporate governance has a positive impact on the financial performance of the company, particularly the impact of institutional investors. The positive role of corporate governance in the company's performance is also reflected in the company's ability to pay distributions.

The impact of corporate governance on dividend policy was also the focus of the Jiraporn *et al* (2011), who sought to examine this relationship in US companies and found that the high-level corporate governance firms significantly tend to pay off the dividends. These dividends are high compared to other companies. This confirms the idea that corporate governance has a clear impact on company decisions such as profit dividends policy. This study is an extension of the study is an extension of the Adjaoud and Ben-Amar (2010) which aimed at examining the relationship between corporate governance and profit dividends policy in Canada, and concluded that the companies that implement corporate governance are characterized by the high equity dividends and that composition of the board of directors and the policy on shareholders' equity positively affect the profit dividends indicators. It also found a positive relationship between the size of the company, the level of free cash flow and dividends, and that there is an inverse relation between company risks and dividends.

The study of Yu (2011) examined the relationship between the level of corporate governance and useful information contained in stock price informativeness in 22 developed countries. The study found that the useful information included in stock prices—as measured by the instable earnings per share at the company level and future profit response factors—is relatively increasing at the level of corporate governance. Additional analysis has shown that all procedures related to corporate governance—with the exception of board of directors’ governance—are positively related to useful information included in stock prices. Finally, this study found that corporate governance plays a more important role in enhancing corporate returns in countries which have strong institutional environments.

The study of al-Jaidi (2007) examined the role of corporate governance in the performance of companies listed on Amman Stock Exchange. The results showed that corporate governance has a different effect on the financial performance of companies. On one hand, this effect is strong in all sectors and at the levels of higher and middle governance with regard to the variable of market value added, this effect is weak in the services sector with respect to the ROI variable as well as the average governance level on the other. As for operational performance, corporate governance has an impact on both the net profit margin and the operational return on assets in the companies as a whole except for the services sector, but with regard to the impact of corporate governance on the stock performance, it showed that there was a positive impact on earnings per share in the industry sector, but its impact on the market value added was weak on the companies as a whole.

Returning to Kuwait, Al-Shammari and Al-Sultan (2010) examined the relationship between corporate governance and voluntary disclosure in the companies listed on the Kuwait Stock Exchange. The study included 170 companies distributed across all sectors within the financial market. The study examined four characteristics of corporate governance: the percentage of non-executive directors of the board of directors, the proportion of directors who have relations with the total board members, and the duality of the roles of managers; the executive management, the chairman of the board, and the auditing committee. The results of the study showed that the percentage of voluntary disclosure in Kuwaiti companies is 19 %. The study also showed that the level of voluntary disclosure in Kuwaiti companies was high. The Al-Shammari study (2008) indicated that the percentage of voluntary disclosure is 15 %. This increase also indicates that the degree of transparency in disclosure among Kuwaiti companies was high. Moreover, the study showed that the existence of an auditing committee—of one of the characteristics of corporate governance—contributes to the improvement of voluntary disclosure in Kuwaiti companies. The other characteristics of corporate governance did not play a role in voluntary disclosure. The researchers recommended that voluntary disclosure in Kuwaiti companies should be improved by supporting the characteristics of corporate governance, thus leading to improving the decisions of investors and users of financial data in Kuwaiti market. In addition, the proper implementation of corporate governance contributes in improving the company's liquidity (Chung *et al*, 2010). Tang and Wang (2011) found strong evidence to support this hypothesis that the proper application of corporate governance contributes to increase in liquidity. It showed that the increase in the levels of governance (1%) contributes to increase the company's annual sales rate to 1.2%.

RESEARCH METHODOLOGY

Study Sample and Data Collection Sources

Several data collection sources were used for the statistical analysis for the purposes of testing the hypothesis. The financial statements and other disclosures of companies disclosed in the Kuwait Stock Exchange database were used to collect data on the characteristics of corporate governance, financial performance indicators, operational performance and stock performance. The study population includes 230 companies listed in the Kuwait Stock Exchange until the end of 2016. The companies that have all the necessary data to estimate the study variables were (222) companies, while (8) companies were excluded.

Study hypotheses and mathematical models

The basic problem of the study is to answer the following questions: Is it possible to prove the theoretical relationship between meeting the requirements of corporate governance and improving the performance of the company? Does this relationship differ in light of the size of the company, its indebtedness and type of activity? Based on the above mentioned, a set of hypotheses can be developed in the form of nihilism, and their theoretical basis as follows:

The first major hypothesis of the study

H02: There are no statistically significant indicators of the relationship of the characteristics of corporate governance to improving the performance of Kuwaiti public shareholding companies.

Several studies have examined the relationship between corporate governance and corporate performance (see, for example, Jaidi, 2007; Weir et al, 2002; Gürbüzet al, 2010; Brown et al, 2009; Brown and Caylor, 2006). Based on previous studies as (Hamdan, 2012; Yasin, 2008), and the availability of disclosures on corporate governance in the KSE, the current study has adapted a set of corporate governance characteristics as independent sub-variables: the ownership of the main shareholder of the company, the size of the board of directors, the ownership ratio of the three main shareholders of the company, the autonomy of the members of the board of directors, and the separation between the positions of the chairman of the board of directors and the executive director manager and other managers. The dependent variable in the study model is the performance of the company. The model of the study was reinforced by a number of controlling variables, which aim to control the relationship between the independent and dependent variables, and reduce the random error ratio in the model so as to arrive at the best representation of the relationship between the characteristics of corporate governance and performance. The principal mathematical model which serves the main premise of the study can be written as follows:

$$Perf_i = \beta_0 + \beta_1 OLSh_i + \beta_2 SBoard_i + \beta_3 OThLSh_i + \beta_4 IndepB_i + \beta_5 ChCSEO_i + \beta_6 PManager_i + \beta_7 CSize_i + \beta_8 Leverage_i + \sum_{k=1}^{n=7} \beta_k Sector_{i,k} + \varepsilon_i \quad \text{………} (1)$$

whereas:
Perfi: The main dependent variable: company performance (i).
β0: the fixed value of the model, the level of performance of the company without taking into account the impact of corporate governance's factors and other controlling variables.
β1.15: The slope of the independent and controlling variables in the model.
OLShi: The ownership of principal shareholder in the company (i).
SBoardi: The size of the company's board of directors (i).
OTHLShi: Ownership of the major shareholders in the company (i).
IndepBi: Autonomy of the members of the board of directors (i).
ChCSEOi: Separating the positions of chairman of the board of directors and CEO of the company (i).
PManageri: Ownership of directors in the shares of the company (i).
CSizei: Controlling variable: the company size (i).
Leveragei: Controlling variable: the financial leverage of the company (i).
Sectori, k: Controlling variable: the type of sector to which the company belongs (i), which is divided into seven sectors (k = 7).
εi: random error.

The second main hypothesis examines the relationship between the characteristics of corporate governance and the performance of the company. The study divides performance into financial, operational and stock performance. So that their positive impact on the characteristics of corporate governance will be examined. Therefore, the first study hypothesis is divided into several sub-assumptions according to the division of performance; thus, five sub-mathematical models will be constructed, as follows:

The Impact of Corporate Governance Characteristics in Improving Financial Performance:
Financial performance has been measured by two indicators: market value added and return on investment. Sub-assumptions for measuring the impact of corporate governance characteristics on financial performance can be presented as follows:
H02.1: There are no statistically significant indicators of the relationship between the characteristics of corporate governance to improving the market value added of Kuwaiti public shareholding companies.
H02.2: There are no statistically significant indicators of the relationship of the characteristics of corporate governance to improving the return on investment of Kuwaiti public shareholding companies.

The Impact of Corporate Governance Characteristics on Improving Operational Performance:
Operational performance was measured by two indicators: net profit margin and return on assets. Sub-assumptions for measuring the impact of corporate governance characteristics on operational performance can be presented as follows:
H02.3: There are no statistically significant indicators of the relationship of the characteristics of corporate governance to improving the net profit margin of Kuwaiti public shareholding companies.
H02.4: There are no statistically significant indicators of the relationship of the characteristics of corporate governance to improving the return on assets of Kuwaiti public shareholding companies.

The Impact of corporate governance characteristics on improving stock performance:
The performance of stocks is measured by normal return on equity. The sub-hypothesis that examines the impact of corporate governance characteristics on stock performance can be described as follows:
H02.5: There are no statistically significant indicators of the relationship between the characteristics of corporate governance and the improvement in the ordinary earnings per share of Kuwaiti public shareholding companies.

The method of measuring the study variables

The selection of the study variables and their measuring were based on the previous studies and in accordance with what is disclosed in the Kuwait Financial Market. The method of measuring the independent, dependent and controlling variables of the study can be explained as follows:
First: dependent variables: the performance of companies:
The financial performance: it has been measured by the market value added and return on investment, as follows:
Market value added: The difference between the market value of the company in addition to its debt, and the capital provided by the owners which can be calculated by (the number of shares traded x market share price at the end of the year) + debt) - (the number of shares traded x nominal value per share).

The rate of return on investment: it is measured by dividing the net profit and interests on the average capital invested.

Operational Performance: it is measured through the net profit margin and return on assets,

as follows:
Net Profit Margin: it refers to the remaining percentage of each dinar of sales as profit, calculated by dividing net profit on revenues.

ROA: The ROA refers to the efficiency of the management in using the assets to generate profits, as well as the ratio of profitability of the company to its assets, calculated by dividing the net profit on total assets.

Stock Performance
It is measured by the return on the ordinary stock: It refers to the share of one ordinary share of the profits of the company, and this percentage is very important to the investors who rely on it in making many of their investment decisions. It is calculated through (net profit - share of preferred shares of profits, if any) divided by the weighted average of the number of issued shares.

Second: Independent variables: Corporate governance characteristics:
A comprehensive analytical list of the six conditions of corporate governance has been prepared, and the Kuwaiti companies have been investigated for the implementation of these conditions. Number (1) is given to the company if the condition is met, and (0) to that one which does not meet the condition. These conditions are:

1. The percentage of ownership of the main shareholder of the company: it should not exceed 20% of the issued shares. If the percentage does not exceed 20%, the company shall be given the number (1); otherwise, it shall be given (0).
2. The size of the board of directors: The number of the members of the board of directors must not be less than 7 and not more than 13 members. If the company meets this condition, the number (1) shall be given; otherwise, the number (0) shall be given.
3. Ownership percentage of the three main shareholders of the company: where this percentage shall not exceed 50% of the issued shares. If the company meets this condition, the number (1) shall be given; otherwise, the number (0) shall be given.
4. Board members' autonomy: The board of directors must be composed of 50% of the non-executive independent members. If the company meets this requirement, the number (1) is given; otherwise, the number (0) is given.
5. The separation between the positions of the Chairman of the Board of Directors and the Executive Director: There must be a separation between these two positions. If the company meets this condition, the number (1) shall be given; otherwise, the number (0) shall be given.
6. The Ownership of Managers: it should not exceed 20% of the company's issued shares. If this condition is met, the company shall be given the number (1) otherwise the number (0) shall be given.

Third: Controlling variables:

1. Company Size: Natural logarithm of total assets.
2. Leverage: ratio of total assets to total liabilities.
3. Type of economic sector, so that the number (1) is given to the company from the sector to which it belongs, and (0) to others.

A descriptive study on the relationship between governance and performance
A set of descriptive statistical measures was used and two tests were used to compare the performance indicators and the characteristics of corporate governance among the economic sectors. Results were shown in tables (1, 2, 3).

Description of performance indicators:

The first part of Table (1) shows that the average market value added for Kuwaiti companies is positive. This is a good indicator of the performance of Kuwaiti companies in 2016 and achieving a market value added exceeding their book value. However, the following performance indicators are negative: return on investment, net profit margin, return on assets, and earnings per share. Although Kuwaiti companies have achieved negative performance indicators in 2016, they maintained a high market value which justifies their achievement of a market value added at the end of the year. Table (3) shows that the average size of the Kuwaiti companies is (4859) million KD. The decrease in their dependence on the debt in financing their assets is also observed with an average leverage of 2.4%. Finally, the skewness of all previous variables does not come close to zero, and Kurtosis does not approach (3). This indicates that these variables do not approach normal distribution.

Comparison of performance indicators:

In order to compare performance indicators between the economic sectors within the Kuwait Stock Exchange, the Bonferroni test was used to find the mean difference in OneWay ANOVA. The banking sector was compared with other economic sectors, since the study cannot compare all sectors. The results were as shown in Table (2). The mean difference was higher, while the value of (p-value) below was shown in parentheses. The value of positive mean difference indicates that the comparison was in favor of the banks sector, whereas the negative value of the mean difference indicates that the comparison was not valid for the banks sector.

As for the first indicator, the market value added, shown in Table (2): it is noticed that the value of the mean difference was positive and statistically significant. This indicates that the banking sector has a better market value added compared to all other sectors, as well as the net profit margin indicator. In terms of return on investment, the food sector was the best but not of statistical significance. It was the same with the rate of return on assets where the comparison was in favor of the food and industry sectors, and then the insurance sector, but not of statistical significance. Finally, the comparison of the return on ordinary share/stock was in favor of the food sector, but not of statistical significance. Therefore, it can be said that the banking sector in Kuwaiti financial market is the best in terms of performance indicators; as the other economic sectors, although it showed better status in some indicators, they were not statistically significant.

Description of Corporate Governance Characteristics:

The second part of Table (1) shows the descriptive statistics of the characteristics of corporate governance in Kuwaiti companies. It is noticed that there is a difference in the extent to which the conditions of corporate governance in these companies are met, considering the first characteristic, the ownership of the main shareholder in the company, which should not exceed 20%, it is noticed that only 65 companies have met this condition with (29%) of the sample, while (157) companies did not meet this condition as the most important shareholder owns more than (20%) of the shares of the company, which means the highest control over the decisions of the company. As for the size of the board of directors which according to corporate governance should be between (7-13) members. It is noticed that more than half of the Kuwaiti companies have fulfilled this condition. It has been found that 52% of the companies have a size of between 7-13 members. The condition of ownership of the main three shareholders in the company's shares, which stipulated not to exceed 50%, has met this condition, as well as the condition of the independence of the members of the Board of Directors. As for the criteria of separating the positions of the Chairman of the Board of Directors and CEO and that of the ownership of managers, majority of companies did not meet these conditions.

Table (1) descriptive statistical measures:

Part One: Continuous variables							
Variable	Label	Mean	SD	Minimum	Maximum	Skewness	Kurtosis
Market value added (millions of Kuwaiti dinar)	MVA	111.449	535.795	-100.008	5,497.835	7.962	70.505
Rate of return on investment	ROI	-0.125	0.476	-3.005	0.669	-3.692	15.918
Net profit margin	NPM	-1.031	3.969	-32.733	13.788	-4.504	29.613
Rate of return on assets	ROA	-0.027	0.179	-1.787	0.770	-4.758	46.299
Return on ordinary share / earnings per share	EPS	-0.009	0.215	-2.959	0.679	-11.574	161.330
Company Size (Millions of Kuwaiti Dinars)	CSize	4,859.075	64,737.352	3.238	964,779.000	14.886	221.719
Leverage	Leverage	2.381	11.273	0.001	124.537	8.136	75.740
Part Two: Dichotomous variables							
Variable	Label	Companies that have met governance requirements			Companies that have not met governance requirements		
		Frequency of 1's			Frequency of 0's		
Corporate governance characteristics:		Frequency		Percent	Frequency		Percent
Share of the main shareholder of the company	OLSh	65		29.3	157		70.7
Size of the Board of Directors	SBoard	116		52.3	106		47.7
Ownership ratio of the three main shareholders of the company	OThLSh	98		44.1	124		55.9
Independence of the members of the Board of Directors	IndepB	100		45.0	122		55.0
Separation the positions of the Chairman of the Board of Directors and the Executive Director	ChCSEO	118		53.2	104		46.8
Ownership of Managers	PManager	142		64.0	80		36.0

Table (2) shows the detailed extent to which the economic sectors of the Kuwait Stock Exchange meet the requirements of corporate governance. A general indicator of corporate governance has been developed covering all the principles. Based on this indicator, it can be said that the banking sector is the most committed to the requirements of corporate governance as it has met its requirements with a ratio of (55.6 %). Two-thirds of Kuwaiti banks meet the first condition of governance: determining ownership of the main shareholder and the third condition that is the ownership ratio of the main three shareholders. All of which meet the second condition related to the size of the board of directors, as for the fourth related The majority of which comply with the fifth and sixth terms. On a vertical basis, the most economic sectors in fulfillment of the first and third conditions related to determining the largest share of the ownership of the largest shareholder and the three largest shareholders is the investment sector. The banking and insurance sectors, which achieved this condition in full, and the fourth condition on the independence of the members of the Board of Directors noted that the industry is the best to achieve, as nearly (61) percent of the industrial companies, the 28 companies, Of the Board of Directors are independent from those who do not have executive functions in the company. The fifth condition of governance is that eight out of nine banks separate the positions of the chairman and CEO. The last condition of corporate governance was that the investment sector is the most applicable (20%) of the company's shares, followed by the banking sector. Using the overall corporate governance index, the economic sectors in Kuwait's financial market can be arranged in terms of corporate governance, as follows: banks, investment, industry, insurance, real estate, services, food.

Comparison of Corporate Governance Characteristics:

In order to compare the characteristics of corporate governance between the economic sectors and the banking sector within the KSE, the LSD test was used to find the mean difference in the OneWay ANOVA test as shown in table (3) (Table 2) shows that the investment sector is the most applicable to the first and third conditions of governance related to the ownership ratio of the largest shareholder and the three largest shareholders of the company. This is confirmed in Table (3), which showed That the investment sector is better than the banking sector in their application, but this comparison did not The second condition is that the banking sector is the best in its application from all sectors. As for the fourth condition, the average of the differentiation showed that the comparison was in favor of the industrial sector and statistically, followed by the insurance sector and services at the expense of the banking sector. The fifth condition related to the separation of the positions of the Chairman of the Board of Directors and the Executive Director, the banking sector remains the best compared to other economic sectors, as well as the owners' ownership index. In general, the results of the comparison of the general corporate governance index showed that the banking sector is the best but not in statistical terms. The difference in applying the principles of corporate governance among the economic sectors within the Kuwait Stock Exchange remains small and does not increase the statistical differences.

الجدول (2) التكرارات والنسب لمدى تحقق شروط الحوكمة المؤسسية في القطاعات الاقتصادية:

القطاع	**شروط الحوكمة المؤسسية**													
	نسبة ملكية أكبر مساهم من أسهم الشركة		حجم مجلس الإدارة		نسبة ملكية أكبر ثلاثة مساهمين من أسهم الشركة		استقلالية أعضاء مجلس الإدارة		الفصل بين منصبي رئيس مجلس الإدارة والمدير التنفيذي		ملكية المديرون		المؤشر العام للحوكمة المؤسسية	
	متحقق	غير متحقق	متحقق	غير متحقق	متحقق	غير متحقق	متحقق	غير متحقق	متحقق	غير متحقق	متحقق	غير متحقق	متحقق	غير متحقق
البنوك	3	6	9	0	3	6	0	9	8	1	7	2	30	24
	0.333	0.667	1.000	0.000	0.333	0.667	0.000	1.000	0.889	0.111	0.778	0.222	0.556	0.444
الاستثمار	21	29	27	23	26	24	13	37	27	23	42	8	156	144
	0.420	0.580	0.540	0.460	0.520	0.480	0.260	0.740	0.540	0.460	0.840	0.160	0.520	0.480
التأمين	2	5	7	0	3	4	2	5	3	4	3	4	20	22
	0.286	0.714	1.000	0.000	0.429	0.571	0.286	0.714	0.429	0.571	0.429	0.571	0.476	0.524
العقارات	10	27	14	23	19	18	21	16	21	16	19	18	104	118
	0.270	0.730	0.378	0.622	0.514	0.486	0.568	0.432	0.568	0.432	0.514	0.486	0.468	0.532
الصناعة	8	20	14	14	13	15	17	11	16	12	19	9	87	81
	0.286	0.714	0.500	0.500	0.464	0.536	0.607	0.393	0.571	0.429	0.679	0.321	0.518	0.482
الخدمات	14	44	25	33	23	35	32	26	24	34	34	24	152	196
	0.241	0.759	0.431	0.569	0.397	0.603	0.552	0.448	0.414	0.586	0.586	0.414	0.437	0.563
الأغذية	0	6	4	2	1	5	2	4	3	3	2	4	12	24
	0.000	1.000	0.667	0.333	0.167	0.833	0.333	0.667	0.500	0.500	0.333	0.667	0.333	0.667

* للأعلى عدد الشركات التي حققت شرط الحوكمة المؤسسية، وللأسفل النسبة المئوية.

جدول (3) المقارنات المتعددة لأداء الشركات الكويتية وخصائص الحوكمة المؤسسية:

F-Test	القطاعات الاقتصادية مقارنة بقطاع البنوك								السمة المقارنة
	شركات السوق الموازي	شركات غير كويتية	الأغذية	الخدمات	الصناعة	العقارات	التأمين	الاستثمار	
	Oneway ANOVA – Bonferroni								**مقارنة مؤشرات الأداء:**
8.968 (0.000)	1,389,057,848 (0.000)	1,302,208,328 (0.000)	1,278,922,884 (0.000)	1,265,128,530 (0.000)	1,315,532,496 (0.000)	1,392,152,085 (0.000)	1,359,860,683 (0.000)	1,380,877,976 (0.000)	القيمة السوقية المضافة
3.453 (0.001)	0.179 (0.917)	0.280 (0.772)	-0.085 (0.891)	0.132 (0.385)	0.017 (0.129)	0.213 (0.834)	0.030 (0.578)	0.460 (0.208)	معدل العائد على الاستثمار
1.864 (0.067)	2.672 (0.666)	2.304 (0.983)	0.985 (0.219)	1.555 (0.222)	0.845 (0.341)	3.112 (0.089)	0.819 (0.911)	3.239 (0.830)	هامش صافي الربح
2.848 (0.005)	0.036 (0.239)	0.020 (0.304)	-0.084 (0.209)	0.005 (0.377)	-0.034 (0.560)	0.093 (0.134)	-0.008 (0.397)	0.107 (0.888)	معدل العائد على الأصول
1.206 (0.296)	0.036 (0.212)	0.036 (0.510)	-0.075 (0.901)	0.009 (0.671)	0.001 (0.092)	0.052 (0.231)	0.009 (0.771)	0.109 (0.404)	العائد على السهم العادي
	Oneway ANOVA – LSD								**مقارنة خصائص الحوكمة المؤسسية:**
1.576 (0.134)	0.262 (0.176)	-0.128 (0.513)	0.333 (0.163)	0.092 (0.570)	0.048 (0.783)	0.063 (0.707)	0.048 (0.834)	-0.087 (0.596)	نسبة ملكية أكبر مساهم من أسهم الشركة
4.447 (0.000)	0.714 (0.000)	0.077 (0.707)	0.333 (0.182)	0.569 (0.001)	0.500 (0.006)	0.622 (0.000)	0.000 (0.755)	0.460 (0.008)	حجم مجلس الإدارة
1.453 (0.176)	0.190 (0.367)	-0.282 (0.189)	0.167 (0.522)	-0.063 (0.721)	-0.131 (0.490)	-0.180 (0.327)	-0.095 (0.702)	-0.187 (0.298)	نسبة ملكية أكبر ثلاثة مساهمين من أسهم الشركة
3.147 (0.002)	-0.429 (0.038)	-0.538 (0.010)	-0.333 (0.189)	-0.552 (0.002)	-0.607 (0.001)	-0.568 (0.002)	-0.286 (0.239)	-0.260 (0.136)	استقلالية أعضاء مجلس الإدارة
3.481 (0.001)	0.675 (0.001)	-0.111 (0.593)	0.389 (0.125)	0.475 (0.006)	0.317 (0.085)	0.321 (0.073)	0.460 (0.058)	0.349 (0.046)	الفصل بين منصبي رئيس مجلس الإدارة والمدير التنفيذي
2.688 (0.008)	0.349 (0.082)	0.009 (0.966)	0.444 (0.072)	0.192 (0.254)	0.099 (0.580)	0.264 (0.129)	0.349 (0.139)	-0.062 (0.713)	ملكية المديرون
2.752 (0.007)	0.294 (0.018)	-0.162 (0.194)	0.222 (0.144)	0.119 (0.250)	0.038 (0.732)	0.087 (0.415)	0.079 (0.584)	0.036 (0.733)	مؤشر الحوكمة المؤسسية

* للأعلى قيمة متوسط التمايز (mean difference)، وللأسفل بين قوسين (*p*-value). ** جميع الاختبارات تمت عند مستوى ثقة 99%.

لجدول رقم (3) نتائج الاختبارات غير المعلمية للفرضية الأولى:

One-Sample Kolmogorov-Smirnov		Binomial Test					خصائص الحوكمة المؤسسية
p-value	Z-test	p-value	الانحراف المعياري	الوسط الحسابي	النسبة	العدد	
0.000**	6.657	0.000**	0.456	0.293	0.293 (0.707)	65 (157)	نسبة ملكية أكبر مساهم من أسهم الشركة
0.000**	5.251	0.546	0.501	0.523	0.523 (0.477)	116 (106)	حجم مجلس الإدارة
0.000**	5.528	0.093	0.498	0.441	0.441 (0.559)	98 (124)	نسبة ملكية أكبر ثلاثة مساهمين من أسهم الشركة
0.000**	5.459	0.159	0.499	0.450	0.450 (0.550)	100 (122)	استقلالية أعضاء مجلس الإدارة
0.000**	5.320	0.383	0.500	0.532	0.532 (0.468)	118 (104)	الفصل بين منصبي رئيس مجلس الإدارة والمدير التنفيذي
0.000**	6.149	0.000**	0.481	0.640	0.640 (0.360)	142 (80)	ملكية المديرون

ذات دلالة إحصائية عند مستوى: **1%، *5%؛ قيمة Z المجدولة هي 1.65؛ للأعلى عدد ونسبة الشركات التي حققت شرط الحوكمة المؤسسية، وللأسفل بين قوسين عدد ونسبة الشركات التي لم تحقق الشرط.

Applied Study and Hypothesis Testing

The study models belong to the general linear model, and since the study data is of a cross section data, the regression model used to test these models is the multiple regression, in the normal least squares squares, and the results are shown in Table (4).

Test Hypothesis 1: Impact of Corporate Governance Characteristics on Market Value Added:

The first sub-hypothesis is to measure the impact of corporate governance attributes on improving the company's added market value. Is the high level of corporate governance contributing to increasing investor confidence and thus increasing its market value? To answer this question, the first null hypothesis of the study was tested, which can be mathematically labeled as follows: (H02.1: β1 = β2 = β3 = β4 = β5 = β6 = 0) In contrast to the alternative hypothesis (H02.1: β2-6 ≠ 0), from Table (4) it is noted that five characteristics of corporate governance (I, III, IV, V, and VI) had a significant positive effect on the market value model The value of t-test is greater than its scheduled value and its probability is less than (5) percent. Based on these results, the first null hypothesis can be rejected. Corporate governance contributes to increasing the market value of the company.

لجدول رقم (4) نتائج الانحدار المتعدد لإختبار نماذج الدراسة الفرعية:

معلمات النموذج					الإشارة المتوقعة	الرمز	المتغير
EPS	ROA	NPM	ROI	MVA			
							المتغيرات المستقلة: شروط الحوكمة المؤسسية:
1.566	2.223**	3.226**	0.091	1.985*	+	OLSh	نسبة ملكية أكبر مساهم من أسهم الشركة
(0.119)	(0.000)	(0.008)	(0.927)	(0.031)			
0.969	0.759	4.081**	0.820	1.167	+	SBoard	حجم مجلس الإدارة
(0.334)	(0.449)	(0.000)	(0.413)	(0.245)			
0.385	1.892*	1.896*	-2.443*	2.441**	+	OThLSh	نسبة ملكية أكبر ثلاثة مساهمين من أسهم الشركة
(0.701)	(0.041)	(0.030)	(0.015)	(0.005)			
1.220	3.469**	2.323*	0.864	1.869*	+	IndepB	استقلالية أعضاء مجلس الإدارة
(0.224)	(0.000)	(0.011)	(0.389)	(0.045)			
1.552	0.633	4.202**	-0.611	4.199**	+	ChCSEO	الفصل بين منصبي رئيس مجلس الإدارة والمدير التنفيذي
(0.122)	(0.527)	(0.000)	(0.542)	(0.000)			
0.483	3.143**	2.220**	0.866	2.970**	+	PManager	ملكية المديرون
(0.630)	(0.000)	(0.002)	(0.388)	(0.001)			
							المتغيرات الضابطة:
-0.002	-0.292	-0.357	-0.401	0.707	-/+	CSize	حجم الشركة
(0.998)	(0.771)	(0.721)	(0.689)	(0.480)			
0.186	-0.115	0.146	4.171**	-2.371	-/+	Leverage	الرافعة المالية
(0.853)	(0.909)	(0.884)	(0.000)	(0.009)			
						Sector	**نوع القطاع الاقتصادي:**
-0.188	0.220	0.941	1.174	6.474**	-/+	Banks	قطاع البنوك
(0.851)	(0.826)	(0.348)	(0.242)	(0.000)			
-2.479*	-2.459*	-2.177*	-3.089**	-1.215	-/+	Investment	قطاع الاستثمار
(0.014)	(0.015)	(0.031)	(0.002)	(0.226)			
0.131	0.124	0.541	0.905	-0.735	-/+	Insurance	قطاع التأمين
(0.896)	(0.901)	(0.589)	(0.367)	(0.463)			
-1.121	-2.136*	-1.598	-0.480	-1.458	-/+	Real Estate	قطاع العقارات
(0.264)	(0.034)	(0.112)	(0.631)	(0.146)			
0.116	1.090	0.783	1.210	-0.539	-/+	Manuf.	قطاع الصناعة
(0.908)	(0.277)	(0.435)	(0.228)	(0.591)			
0.725	0.910	0.267	1.075	-0.258	-/+	Food	قطاع الأغذية
(0.469)	(0.364)	(0.789)	(0.284)	(0.797)			
-0.483	0.052	-0.403	-0.372	-0.741	-/+	Non-Kuw.	شركات غير كويتية
(0.630)	(0.958)	(0.688)	(0.711)	(0.459)			
-0.510	-0.915	-1.137	-0.758	-0.654	-/+	Par.Mark.	شركات السوق الأولي
(0.611)	(0.361)	(0.257)	(0.449)	(0.514)			
1.082	2.027*	2.250*	2.527**	4.844**			*F*-test
(0.375)	(0.013)	(0.023)	(0.001)	(0.000)			*p*-value
0.078	0.137	0.089	0.165	0.274			R Square
0.006	0.069	0.018	0.100	0.218			Adjusted R Square

The top of the T-test value, and the bottom of the parentheses is the value of the probability (p-value).

- Statistical significance at level: ** 1%, * 5%
- The value of (T) is scheduled at 5% and the degrees of freedom (n-β-1 = 222-15-1 = 206) are 1.645.
- The value of (F) at the denominator (n-β-1 = 222-15-1 = 206), the numerator (β = 15), at the level of 1% was 2.13, and the 5% level was 1.72.
- The statistical program (SPSS) with the exception of variable (service sector) is a variable officer of all study models.

Second Hypothesis Test: Impact of Corporate Governance Characteristics on IRR:

The second sub-hypothesis tests the impact of achieving the characteristics of corporate governance in improving the rate of return on investment. In other words, do the procedures of activating institutional work, compliance with rules and regulations, and institutional and financial transparency contribute to the company's growth and growth, thereby increasing investors' return on investment?

Table 4 shows that one of the characteristics of corporate governance was statistically significant in the ROI model: ownership ratio of the three largest shareholders of the company. There are five characteristics that were not statistically significant. Therefore, the null hypothesis can not be rejected. There is no statistically significant impact on the characteristics of corporate governance in improving the rate of return on investment.

Third Hypothesis Test: Impact of Corporate Governance Characteristics on Net Profit Margin:

The results in Table (4) show that all the characteristics of corporate governance were statistically significant in the net profit margin model, either at a level of 99 percent or 95 percent. Thus, the third null hypothesis and alternative acceptance can be rejected. Corporate Governance Improves the profit margin of Kuwaiti public shareholding companies. Corporate governance measures contribute to the improvement of the company's production and control activity, which increases profit margin and has a role in improving the company's reputation and thus increasing the demand for its products.

Sub-Hypothesis Testing 4: Impact of Corporate Governance Characteristics on ROA:

The fourth sub-hypothesis examines the impact of the characteristics of corporate governance on improving the return on assets of the company, which is an indicator of the operational performance. In examining this hypothesis, the results in Table 4 showed that there were four characteristics that were statistically significant in the model: Shares of the company, the ownership ratio of the three largest shareholders of the company, the independence of the board members and the ownership of the directors, compared to two characteristics that were not statistically significant: the size of the board of directors and the separation between the positions of the chairman of the board of directors and the executive director. Based on these results, Naked rap And accept the alternative hypothesis that provides a statistically significant impact on the characteristics of corporate governance in improving the return on the company's assets.

Sub-hypothesis test 5: The impact of corporate governance characteristics in the EPS:

The recent sub-hypothesis examines the role of corporate governance characteristics in stock performance, which is measured by return on ordinary stock. This indicator is one of the most important indicators on which investors and financial analysts base their valuation and investment valuation. The results of the V- (T-test) of all the characteristics of corporate governance was positive; that is, there is a positive relationship between the application of the characteristics of corporate governance and the return on ordinary stock; the governance procedures and the activation of administrative and financial control contribute to improving the performance of the company and its market value, (T-test) is less than its scheduled value and its probability (p-value) is greater than the permissible error level; therefore, the hypothesis can not be rejected The fifth subdivision states that there is no statistically significant impact on the characteristics of corporate governance in improving the return on ordinary stock.

The previous analysis of the secondary hypotheses of the second main hypothesis shows that there are three alternative hypotheses acceptable and two are rejected; therefore, the second major null hypothesis and alternative acceptance can be rejected; there is an impact on the characteristics of corporate governance in improving the performance of the firm.

In order to compare which models are more representative of the relationship between corporate governance and performance, the adjusted R squared is seen in Table 4 and is used to compare the different models, (21.8%). The relationship between corporate governance and performance was most evident in its effect on the market value added, so F-test was the largest and statistically significant at the level of (99)).

CONCLUSIONS AND RECOMMENDATIONS

This study aimed at achieving a main objective: to investigate the application of the principles of corporate governance in the Kuwaiti public shareholding companies and to study the effect of these principles on improving the financial performance indicators of these companies.

3) When comparing the economic sectors within the Kuwait Financial Market in terms of the degree of corporate governance, it is found that the banking sector is the best but not in statistical terms; the difference in the application of the principles of corporate governance remains small and does not rise to the statistical significance.
4) The study examined the role of corporate governance in financial performance, through the index of market value added and the rate of return on investment; it was found that corporate governance contributes to improving market value added as an indicator of financial performance.
5) As for the impact of corporate governance on the rate of return on investment, the present study did not find a statistical relationship between them.
6) On the impact of corporate governance on improving operational performance, it has been found that corporate governance procedures through the separation of powers and the setting of powers contribute to improving the operational performance of companies, by improving the net profit margin and return on investment.
7) The study did not find evidence supporting the relationship between corporate governance and return on equity in the Kuwait Stock Exchange.

STUDY RECOMMENDATIONS

Based on the previous results, the study provides a set of recommendations for both the organizers and supervisors of the work of the Kuwaiti financial market, as well as researchers regarding future studies:

1) The need for the organizers of the Kuwait Stock Exchange and its supervisors to develop the corporate governance guide for Kuwaiti companies, taking advantage of the regional expertise in this field, and the participation of professionals and academics in developing the principles of corporate governance and commensurate with the Kuwaiti environment.
2) Call for the development of an institutional governance index on the Kuwait Stock

Exchange, which will be an indicator of the level of governance benefiting financial analysts and stakeholders.

3) The necessity of supervising the application of the requirements of corporate governance by the Kuwaiti companies, especially regarding the separation between the authorities and the powers of the Executive Director and the Chairman of the Board, for the transparency of management.
4) Invite researchers to study the impact of corporate governance on the quality of financial disclosure, its impact on profit quality, and study the relationship between corporate governance and institutional ownership of Kuwaiti companies' shares.

Sources and References

First: Arab sources and references:

Ihsan Saleh Al-Maataz, Afaf Salem Basfar, 2010, Role of Audit Committees in Activating Corporate Governance: An Empirical Study on Saudi Joint Stock Companies, King Abdul Aziz University Journal: Economics and Management, Volume 24, Issue 2: 193-239.

Ahmed Abdul Qadir Al-Qarni, 2010, Reasons for the Disclosure of Companies Listed in the Saudi Stock Market in accordance with the requirements of the Corporate Governance Regulations: A Field Study, Journal of King Abdulaziz University: Economics and Management, Volume 24, No. 2: 111-157.

Amani Bursali, 2011, The Effects of the Application of Modern Governance Standards and the Foundations of Evaluation, chapter in Corporate Governance, the Federation of Investment Companies, Kuwait: Afaq Library.

Ayman Sulaiman Al-Qatawneh, 2011, The Availability of Dimensions of the Characteristics of Corporate Governance, and its Impact on Business Motivation in Commercial Banks Operating in Jordan, Journal of Studies: Administrative Sciences, Vol 38, No.1: 76-102.

Turki Al-Shammari, 2011, Corporate Governance in the Arab Gulf States, chapter in Corporate Governance, Investment Companies Association, Kuwait: Afaq Library.

Abdulmutallab Sartawi, 2013, The Effect of Corporate Governance on the Performance of Gulf Banks: A Comparative Study between Islamic and Traditional Banks in the GCC Countries, Al-Taawon Magazine, Issue 79: 66-90.

Allam Mohamed Hamdan, Sabri Maher Mashtahey, 2011, Relationship of the Characteristics of the Audit Committee to the Type of Auditor's Report: An Empirical Study on the Public Joint Stock Companies listed on the Amman Stock Exchange, Arab Journal of Accounting, Volume 14, Issue 1: 109-163.

Allam Mohammed Hamdan, Emad Mohammed Abu Aujaila, and Omar Eid Al-Jaidi, 2012, did the procedures of corporate governance contribute to the reduction of profit management practices in Jordanian industrial joint stock companies ?, Arab Economic Research Journal, Acceptable Study, No. 57.

Omar Eid Al-Jaidi, 2007, The Level of Corporate Governance and its Impact on Corporate Performance: An Applied Study of the Credit Lyonnais Securities Asia Model for Companies Listed on the Amman Stock Exchange, unpublished doctoral dissertation, Arab Academy for Banking and Financial Sciences, Amman, Jordan.

Amrozidan, 2005, Stages and Constraints of Growth of Family Industrial Companies, No. 1, Cairo: Arab Organization for Administrative Development

Awad Salama Al-Rahaily, 2008, Audit Committees as a Pillar of Corporate Governance: The Case of Saudi Arabia, Journal of King Abdulaziz University: Economics and Management, Volume 22, Number 1: 179-218.

The Impact of the Corporate Governance Guide issued by the Central Bank of Jordan on Improving the Quality of Internal Audit in Jordanian Banks, Jordan Journal of Business Administration, University of Jordan, Volume 7, No. 2: 209-227.

Majid Ismail Abu Hammam, 2009, Effect of the Application of Governance Rules on Accounting Disclosure and Quality of Financial Reports: A Field Study on Companies Listed in the Palestine Securities Exchange, Unpublished Master Thesis, Islamic University, Palestine.

Mohammed Batwaih, 2011, Governance: Legislation, Culture and Behavior, chapter in Corporate Governance, Federation of Investment Companies, Kuwait: Afaq Library.

Mohammed Bashir, 2003, Institutional Control and Auditor, 5th Professional Scientific Conference of the Association of Chartered Accountants of Jordan, Amman, Jordan.

The Effect of Jordanian Public Shareholding Companies on the Principles of Corporate Governance in Institutional Investor Decisions in Amman Stock Exchange, Jordan Journal of Business Administration, vol. 8, no. 1: 1-21.

Mohammed Kamalabo Amsha, 2011, Risk Management under the Institutional Control of Kuwaiti Banks, Journal of Gulf and Arabian Studies, vol. 37, no. 141: 257-322.

Mohamed Mustafa Suleiman, 2006, Corporate Governance and the Treatment of Financial and Administrative Corruption, No. 1, Alexandria: University House.

Mohamadasin, 2008, Measuring the level of reservation in accounting policies under corporate governance and its impact on the quality of disclosure of financial statements of Jordanian commercial banks, unpublished PhD thesis, Arab Academy for Banking and Financial Sciences, Amman, Jordan.

Second: Foreign sources and references:

Adjaoud, F., and Ben-Amar, W. 2010. Corporate Governance and Dividend Policy: Shareholders' Protection or Expropriation?. *Journal of Business Finance & Accounting*, 37(5&6): 648-667.

Al-Shammari, B. 2008. Voluntary disclosure in Kuwait corporate annual reports, *Review of Business Research*, 8(1): 62-81.

Al-Shammari, B., and Al-Sultan, W. 2010. Corporate governance and voluntary disclosure in Kuwait, *International Journal of Disclosure and Governance*, 7(3): 262-280.

AL-Wasmi , M. 2011. Corporate Governance Practice In the GCC: Kuwait as a Case Study, Unpublished doctoral dissertation, *Brunel University*.

Bai, C., Liu, Q., Lu, J., Song, F., and Zhang, J. 2004. Corporate governance and market valuation in China. *Journal of Comparative Economics*, 32(4): 599–616.

Beiner, S., Drobetz, W., Schmid, M., and Zimmermann, H. 2006. An integrated framework of corporate governance and firm valuation. *European Financial Management*, 12(2): 249–283.

Black, S. 2001. The corporate governance behavior and market value of Russian firms. *Emerging Markets Review*, 2 (1): 89–108.

Blom, J., and Schauten, M.B.J. 2008. Corporate governance and the cost of debt. In Soares, J.O.J. Pina and M. Catalao-Lopes (Eds.), New Developments in Financial Modeling. Newcastle: Cambridge Scholars Publishing, 116–145.

Bozec, R., and Bozec Y. 2012. The Use of Governance Indexes in the Governance-Performance Relationship Literature: International Evidence. *Canadian Journal of Administrative Sciences*, 29(1): 79-98.

Bozec, R., Dia, M., and Bozec, Y. 2008. Governance-performance relationship: A re-examination using technical efficiency measures. *British Journal of Management*, 21(1): 684–700.

Brown, D., and Caylor, L. 2006. Corporate governance and firm valuation. *Journal of Accounting and Public Policy*, 25(1): 409-434.

Brown, D., and Caylor, L. 2009. Corporate Governance and Firm Operating Performance, *Review of Quantitative Finance and Accounting*, 32(2): 129–144.

Cheung, Y., Connelly, J., Jiang, P., and Limpaphayom, P. 2011. Does Corporate Governance Predict Future Performance? Evidence from Hong Kong, *Financial Management*, 40(1): 159-197.

Christensen, J., Kent, P., and Stewart, J. 2010. Corporate Governance and Company Performance in Australia, *Australian Accounting Review*, 20(4): 372-386.

Chung, H., Elder, J., and Kim, J. 2010. Corporate Governance and Liquidity, *Journal of Financial and Quantitative Analysis*, 45(2): 265–291.

Chung, K., and Zhang, H. 2011. Corporate Governance and Institutional Ownership. *Journal of Financial and Quantitative Analysis*, 46(2): 247-273.

Durnev, A., and Kim, E. 2005. To steal or not to steal: Firm attributes, legal environment, and valuation, *Journal of Finance*, 60(3): 1461–1493.

Eugene, F., and Jensen, M. 2009. Separation of Ownership and Control. *Journal of Law and Economics*, 26(2): 301-325.

Fernandez-Rodriguez, E., Gomez-Anson, S., and Cuervo-Garcia, A. 2004. The stock market reaction to the introduction of best practices codes by Spanish firms. *Corporate Governance: An International Review*, 12(1): 29–

46.

Fodor, A. and Diavatopoulos, D. 2010. Does corporate governance matter for equity returns? Working Paper available on SSRN http://www.ssrn.com.

Gupta, P., Kennedy, D., and Weaver, S. 2009. Corporate governance and firm value: Evidence from Canadian capital markets. *Corporate Ownership and Control*, 6(3): 293–307.

Gurbuz, A., Aybars, A., and Kutlu, O. 2010. Corporate Governance and Financial Performance with a Perspective on Institutional Ownership: Empirical Evidence from Turkey. *Journal of Applied Management Accounting Research*, 8(2): 21-37.

Hamdan, A., Mushtawa, S., and Al-Sartawi, A. 2012. The Audit Committee Characteristics and Earnings Quality: evidence from Jordan. *The Australasian Accounting Business and Finance Journal*, Accepted paper, 7(4), 2013.

Ibrahim, H., and Abdul Samad, F. 2011. Corporate Governance Mechanisms and Performance of Public-Listed Family-Ownership in Malaysia. *International Journal of Economics and Finance*, 3(1): 105-115.

Jiraporn, P., Kim, J., and Kim, Y. 2011. Dividend Payouts and Corporate Governance Quality: An Empirical Investigation. *The Financial Review*, 46(1): 251-279.

Kang, S., and Kim, Y. 2011. Does Earnings Management Amplify The Association Between Corporate Governance And Firm Performance?: Evidence From Korea. *International Business & Economies Research Journal*, 10(1): 53-66.

Klai, N., and Omri, A. 2011. Corporate Governance and Financial Reporting Quality: The Case of Tunisian Firms. *International Business Research*, 4(1): 158-166.

Kocmanova, A., Hrebicek, J., and Docekalova, M. 2011. Corporate Governance and Sustainability. *Economics and Management*, 16(1): 543-550.

Lara, J., Osma, B., and Penalva, F. 2007. Board of Directors' Characteristics and Conditional Accounting Conservatism: Spanish Evidence, *European Accounting Review*, 16(4): 727-755.

Lara, J., Osma, B., and Penalva, F. 2009. Accounting conservatism and corporate governance, *Review of Accounting Studies*, 14(1): 161-201.

Mahmood, I., and Abbas, Z. 2011. Impact of Corporate governance on financial performance of banks in Pakistan. *Interdisciplinary Journal of Contemporary Research in Business*, 2(12): 217-228

Pagett, C., and Shabbir, A. 2005. The UK code of corporate governance: Link between compliance and firm performance. Working Paper available on SSRN http://www.ssrn.com/

Price, R., Roman, F., and Rountree, B. 2011. The impact of governance reform on performance and transparency. *Journal of Financial Economics*, 99(1): 79–96.

Shanikat, M., and Abbadi, S. 2011. Assessment of Corporate Governance in Jordan: An Empirical Study, *Australasian Accounting Business and Finance Journal*, 5(3): 93-106.

Tang, K., and Wang, C. 2011. Corporate Governance and Firm Liquidity: Evidence from the Chinese Stock Market. *Emerging Markets Finance & Trade*, 47(1): 47-60.

Toledo, E. 2009. The relationship between corporate governance and firm value: A simultaneous equations approach for analyzing the case of Spain. Working Paper available on SSRN http://www.ssrn.com/

Toudas, K., and Karathanassis, G. 2007. Corporate governance and firm performance: Results from Greek firms. Working Paper available on SSRN http://www.ssrn.com/

Weir, C., Laing, D., and McKnight, P. 2002. Internal and External Governance Mechanisms: Their Impact on the Performance of Large UK Public Companies, *Journal of Business Finance & Accounting*, 29(1): 579–611.

Yu, J. 2011. Stock Price Informativeness and Corporate Governance: An International Study, *International Review of Finance*, 11(4): 477-514.

Zheka, V. 2006. Does corporate governance causally predict firm performance? Panel data and instrumental variables evidence. Working Paper available on SSRN http://www.ssrn.com/

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.3866.
Giri, A. V. (2017). "Innovative Study of Indian Marketing and Advertising Sector: A Creative Approach". *Archives of Business Research, 5(12),* 35-41.

"Innovative Study of Indian Marketing and Advertising Sector: A Creative Approach"

Capt. Dr. Ashok V. Giri
MES Garware College of Commerce,
Ph. D & M. Phil Research Guide Savitribai Phule Pune University

ABSTRACT

In today's media landscape where it's very difficult to shape consumers attitude and intentions and move them to next level of buying process, advertisers find it even more difficult and challenging to break through the clutter of competing advertisement. The advertising industry has experienced dynamic changes over the last several decades. The importance of creativity factor in advertising has got wide recognition by many researchers, practitioner, but there is a miss of true & systematic research to define advertising creativity and how it relates to ad effectiveness. The review study discusses some campaigns that have left their strong impression on consumers. The presented review study tries to come up with some evidence of creativity by reviewing expert views, past literature in advertising, studied advertising campaign and marketing activities. The study discusses different forum on how creativity works, and what makes an ad to travel good or poorly. It summarized the value of creativity in advertising through Expert interviews, published material and related secondary data to understand the logic. The changes have been good in terms of Technology advancement, Medium and more methods to attract consumers and on Creativity. This paper represents how creativity impacted advertising, also understanding the value of creativity in advertising through the review of various literatures.

Keywords: Advertising Strategy, Media, Creativity, Consumer Behavior, Innovative Advertising.

INTRODUCTION

Advertising allows you to communicate a salient message to a large group of consumers faster than any other form of communication. It allows you to truly connect with your consumer; it gives you an opportunity to develop an ongoing relationship between the consumer and a brand. At its best, advertising will create a sense of urgency for the consumer, honest awareness and accurate that there are products, places, styles or sensibilities that cry out for attention or action. To do that there are various styles of advertising, a soft sell or a hard sell, a subtle approach or a blatant approach, an informative style, humor or a modern and edgy one. Style will always change: with the product or service you are selling; with the timing of the message and with the medium you are using. But important aspect is how you can engage your consumers to watch that Creative challenge you took with the blend of style. It is known fact that there should be an element of creativity in an advertisement. This creativity is to create something new, unique, extremely attractive and appealing to the consumers. In fact, advertising itself is a creative process. It is the outcome of long term planning and hard work on the part of the copy writer & creative director who prepares & shapes the final copy of advertisement.

OBJECTIVES

The objectives of this review study are to find out the role of creativity in advertising in Indian market. How creativity impacted the television ads. How advertisers can create distinctive effects through creative dimension especially in today's media landscape where advertisers find it even more challenging to break through the clutter of competing ads in order to shape consumers attitudes and intentions. One of the strategy alternative strategies to greater advertising spending may be more creative advertising. Understanding the fact that creative ideas do not come over night they are required to be developed through systematic thinking. Breakthrough ideas might appear to be instant or impulsive, but they are not. They are based on sound strategy, outstanding visuals and copy, and the correct application of timing and media. The art is in ensuring that all elements of communication work together so that the end result is more powerful and effective.

There are much bold evidences that significant changes faced by this industry. Some of these changes are good: big ideas, innovative partnerships, & interesting new work, that show what advertising can do for brands.

METHODOLOGY

This study used a review study method to analyze the secondary data & observations. David Ogilvy once quoted that "If it doesn't sell, it isn't creative." In this review study researcher has analyzed secondary data through the series of interview, expert comments, and live cases of various literatures and through live observations to understand the value of creativity in advertising. The review paper includes a various article, discussion and market insight from the leading marketers, creative director insights about how this promising form of advertising is constantly evolving.

The important thing is finding the right balance between defining a good creative message and execution. The true craft is in identifying ways to interest consumers in what is being offered at the same time justifiable creativity. A creative strategy can put you on the right course, but in a world filled with distractions and clutter you must develop communications that capture consumer attention and interest. The key of delivering effecting creative message is the selling point in an interesting, non-contrived manner. Great advertising builds the brands and some advertising sells brands. Creativity makes advertisement popular among the consumers and motivates them to purchase advertisement specific product. The advertising message is received well by the target audience for follow-up action. The review paper concludes that creative plays extremely important role in advertising, while studying many ad campaigns it's been prove that how consumers have different reaction to unique ads. If Ad contains fun, humor, excitement, drama with the creative ingredient consumer will defiantly like the idea. It is an accepted fact that if you present your product, service, and idea in different manner you'll get high brand recall.

Learning From Past: Some Heritage Brands and Recall Value

In India there are some brands who have acquired distinct space in consumer mindset. These brands played very important role in initial marketing era, and managed to become an unforgettable brand for Indian households. From the initial years advertisers have used many different strategies to promote the products. There are classic television commercials caught consumers attentions and brands have endured the test of time. Colgate Toothpaste, Vimal, Pear's soap, Mysore Sandal Soap, Woodward's Gripe Water, Dabur India, Amrutanjan balm, Vicco, Pond's, Hindustan Unilever's Surf, Amul from Amul India and Prestige Pressure Cooker are symbols of heritage brands of India. Some of these brands are represent the Indian culture. Sometimes the brand relies heavily on product and price features, rather than advertising creativity.

Bajaj Auto with it all time hit tagline 'Hamara Bajaj', or it be Lux with tagline "filmi sitaron ka saundarya sabun", (*translate as* Beauty soap for film stars) & Dalda-vanaspati was a impressive success and ruled the perch during its time, the unforgettable Liril campaign, the ad was all about waterfalls, sparkler water and the girl splashing water in total abandon singing "la la la la laaa". The ad was major success & very much appreciated, at the same time it became the highest selling premium toilet soap in a period of two years. Most of the these Heritage brands appeal to many age groups, probably the product /brands is what used by one generation to another generation and continued to current generation, but understanding the success mantra behind these heritage brands can be tough but there are strong evidence stating towards their advertising appeal. The uniqueness of the campaign leads towards the high recalling. The frequency of television commercial was less and during that era there wasn't much competition and managed with only Indian National TV channel, "Doordarshan" these brands made their presence heavily on consumers, whereas Today's as a competitive market emerged in various categories i.e. soaps, shampoos, TV's fridge, Air conditioner and computers so did the media options to reach more people. The recalled values of these heritage brands in India are higher, than today's brands, the famous Colgate Toothpaste's "Surkasha chakra" (protective cycle) Vicco Cream's jingle concentrating on herbal benefits "Vicco turmeric nahi cosmetic" or the classic advertisement of Hindustan Unilever's Surf, where well known character "Lalita Ji" represents middle class women of India, gives Advice that "Surf ki khariddari mai hi samjhdari hai"*(translate as, it makes sense to buy Surf)*, she became iconic figure overnight in Indian middleclass households.

The Campaigns: How Creativity Works?

Creative advertising needs to intelligent, sharp, imaginative to the point and extremely catchy. It must motive people to purchase advertisement product. The message and appeal made should be able to make positive impact on the consumers. The creativity develops new useful ideas which further fulfill the desired requirement. Creativity should focus the attention of the customer on the product and he must feel the urge to have that product for same benefit. This suggests that creative advertising should be able to create demand for the product when it is introduced for the first time. Some of the distinct creative ads impacted hard. The advertising strategies are changing but should not leave question mark on the sustainability of creativity and also not to overlook consumer's intelligence.

The current scenario focuses that advertising has altered in many ways, now advertising become more creative, and getting real. Creativity increases the brand value. There is enough evidence that value for a brand will be formed through creativity. With Pointing on India's phenomenal growth, it has become even more important for ad agencies and their clients to gear up together to meet challenges that come with such expansion. Creative ideas have no boundaries, Ideas can strike anytime. A successful & great creative idea can give brands the required thrust to explore new heights. It is very important that with creativity involved in advertising it should not forget its basic agenda –of informing, convincing, and selling.

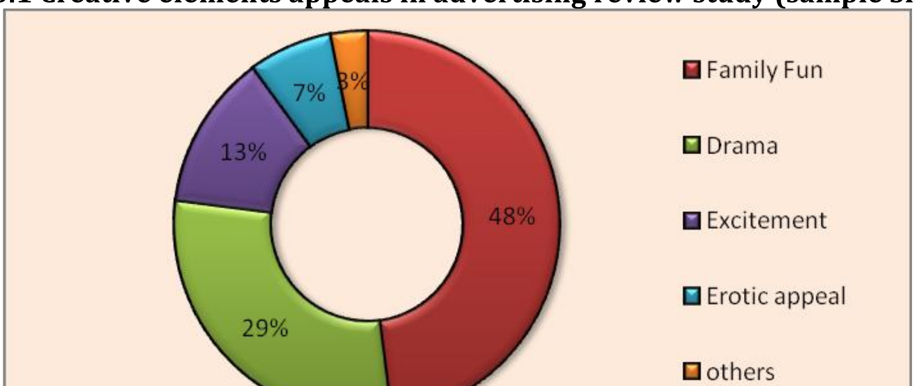
Another creative hit in Indian market is VODAFONE'S Creation "The Zoozoo", after successfully rebranding "Hutch to Vodafone" Vodafone Essar Limited, the India-based subsidiary of the global mobile network operator; Vodafone started expanding its presence in pan India. The new brand avatar of Vodafone is "Zoozoo" has created a new dimension of creativity. The Zoozoos advertising campaign highlighted the different value added service (VAS) offered by the company. This creative aspect got huge appreciation from the customer and they say you simply Love them and you just can't ignore them. The Zoozoos were everywhere, the creative ad series of 30 TVCs, were created by Ogilvy & Mather for Indian Primer League of Cricket Season 2. The Zoozoos Coffee Mugs and T-shirts became instant hit in the market. Prior to this what Vodafone did to show the transition from Hutch to Vodafone, ad agency O&M launched a rather direct, thematic ad showing the trademark pug in a garden, moving out of a pink colored kennel symbolizing Hutch, and making his way into a red one (the Vodafone color). A more energetic, chirpier version of the 'You and I' tune associated with Hutch, plays towards the end, as the super concludes, 'Change is good. Hutch is now Vodafone'.

If advertisers taking an absolute social cause to advertise it might lead to instant success in the market, review study suggested an example of '**IDEA' Cellular**, The big ideas of Idea cellular campaign was worked really well in Indian market. It has been an interesting and almost 'off the track' ride for the brand belonging to the Aditya Birla Group, India. This cellular service used its brand name "idea" and real social issues to successfully showcasing its message in the consumer's mind spreading high level awareness. Some of the campaign shot in pure rural market setting. The campaign shows ugly reality in the social and political arena in India, it's very unique and different combination of creative aspect, "What an Idea sir ji" campaigns raised issues related to Caste wars, Education for all, Democracy, health Campaign, 'walk and talk'. The creativity of ideas worked well, while the team is well aware that most of the solutions it propagates in its ads may seem improbable, but at least it makes people think. The job is done if consumer also starts saying "what an Idea, Sirji!!.

There are many creative ads which made a direct entry into customer mind. **Camlin India's** Permanent Marker made a distinct effect on the consumer it leaves Lowe Lintas, devised a cool concept for the brand to advertise the product. This time this is Out of Home (OOH) advertising, the simple but eye-catching hoarding, with the three cut-out men having mechanically-backed moving limbs, trying to wipe off the words written in bright red, also displays the product - the permanent marker. Many times even public Awareness ads creates buzz and becomes click famous. The reveiew study of some of the public ads, result shows an ad where how a simple public awareness TVC shows a man manipulating a remote control toy car in an office set up. He receives a call and tries to answer it with continuing to manipulate the controls of the car. The car crashes. The ad message is very clear and gets across with no extra layers. Driving while talking on a mobile can cause accidents. The effects are visible. The campaigns that generate awareness about protective sex create high time awareness. Excellent example is "Condom, its Ok" ads by National Rural Health Mission (India) (National Aida control Organization) especially in the market like India.

The category of permanent markers are a very low involvement, in such scenario also ad agency had done clutter breaking, and at the same time, something that brings out the message clearly – here the message being 'permanent'."

Table 3.1 Creative elements appeals in advertising review study (sample Size 100 ads)



What Makes Ad Successful; A Reality Check

There are numerous factors play roles in determining whether advertisement travel well or poorly. Marketers need to test multiple markets to get a full understanding of an ad's likely effectiveness, but it becomes equally imperative to understand what it takes to beat the odds and create a truly Creative Advertising.

Humor, this word will now be associated with advertising for a long time to come. Humor can work greatly well, probably because it was cracked not long ago by the advertising fraternity, Or probably because the otherwise fretting Indian audience feels largely pepped up with humor in ads, and therefore, there are more chances of an ad acquiring mind space. Whatever be it, it's a formula which now everybody is trying hands on. Some ads are surely worth the effort. Particularly when it comes from visual and music, the examples can be

'Happydent white', and the great 'Amul butter' print series with "Amul girl" , 'Fevicol' ads,
'Mentos' , Vodafone ad

Children are one of the key prominent features in ads and can be seen in every fourth advertisement. They are certainly great help for an ad to do well. But is it only the cuteness that adds to creative aspect? The child's simplicity, instant reaction and unique perspective towards the ads make changes. There are many examples where kids played important role in commercial and that leads to high success of the ads. An excellent example is "Dirt is Good or 'Daag Achche Hai'" ad for **Surf Excel**, in which a brother "fights" the mud his sister fell into. And the recent on which shows a little boy pretending to be a dog in order to make his teacher, who has just lost her dog, smile. Of course, in the process his white uniform gets mud spattered and totally worthy of a Surf Excel wash. This one from Lowe Lintas tugs the heart strings. This campaign sticks to its 'Daag Achche Hai' premise. **Bank of India** showing kid with piggy bank is yet another creative scoop.

The combination of creativity and the characteristics of ads that travelled well are, Children, Celebrities, Music, Humor and Emotions. In India presence of **Celebrities** makes a big difference and this can work across markets. True to the phenomena that the famous celebrity can contribute to an ad travelling well but the ultimately success comes down to the power of good copy.

At the same time advertising that generates an emotional response also has its own benefit, like it can help generate engagement and memorability and it can help the emotions transfer to the brand shaping the brand perception. **Dove'**s real beauty campaign is perfect example.

Creative Advertising: Is There A Strong Need In Market:

Most brands in the same category deliver more or less the same functional benefits and answer the same needs of the consumers. With so many products on the market having the same function, the only way to position a product, service, or company differently from anything else in the same category is through creative development in advertising.

Today traditional advertising is losing its sheen. The biggest problem with traditional media is that consumers today have lots of choice for ad avoidance. The fragmentation is very high and there is very less scope of customized message for all. The Indian consumer has changed if we focus on this issue there is a lot more on the menu to choose from. Now the message unlike the past is no longer a one way process. But public opinion is far more mobilized, they have immediate platform for expression.

The expert believes that the creativity in advertising could never exist in isolation without a context. The success of final product completely depends on empathy and the relevance of message it intends to deliver. The trigger for ideas and insights must necessarily come from the environment.

The new millennium is decade old now, advertising, which is about creating demand, has undergone a complete transformation. Many things have changed and many things have stayed exactly the same in this industry. The media agencies have witnessed the tremendous growth in skills set. If one critically analyze, "advertising reflects the mood of the times. The simplistic inform-persuade-sell mode worked beautifully for a long time but once communication became sophisticated, technology entered, there was a paradigm shift. Multi-tasking became the order the day. It is not uncommon to see today's kids on the mobile while hitting the net, right? So in this age of Youtube, Twitter and Facebook, advertising content has to keep pace. It can't be as direct, naïve and simplistic as it once was. The new-age consumer would dismiss it, straightaway." For hard-core information and details about products and services that are in the hi-ticket category, the internet provides it all; one doesn't have to completely depend on advertising. So the job of advertising today is to primarily push the brand in an endearing fashion that triggers the recall factor, and examples discussed indicates that 'creativity' stored better recall value.

CONCLUSION

There are many ads different product, categories, but how many of them were able to differentiate themselves from other? With creative ads they can certainly communicate it differently so as to create a distinct brand image in the minds of the consumer,"

There is great hunger from consumer's side they wanted to see things differently and its advertiser's responsibility to attract and engaged the consumers, they remember and memorize the creative ads than the product. Marekters needs to understand the various dimension of advertising creativity is important. To fully understand creativity, one would need to expose what factors are generally held to comprise it, and these some dimensions could be Novelty, Meaningfulness, Well Craftiness, Positivity, and Humor.

Advertising business involves people & creative advertising is one that sells through people's efforts, and appropriate market demand. If you create the healthy environment for creative people with right kind of required information, they can genuinely create great & saleable advertising. Advertising people bond together as a 'team' not as individual, Therefore, creative advertising that actually sells in the market and live a hard impression in mind is the result of 'team work.' In advertising business creativity resulting from great team efforts, effective idea and communicate exactly same to the audience, these are the key factors in successful advertising campaigns. The Ad agencies must have hunger for these elements and strive for them.

References

Chintala Medha (2006), "Heritage Brands Building and Repositioning Them" available at http://www.indianmba.com/Faculty_Column/FC270/fc270.html (accessed May 8 2010)

Joshi D. (2007), India calling: Vodafone's Strategy, unplugged available

Joshi, Devina (2010), 'Rewind 2009: The highs and lows of Advertising',

Joshi, Devina, (2009), 'The idea of idea', *The Brand Reporter* July 09, pp 32-34

Lethagen, H. and Modig E.(2008), 'Unbundling creativity', master thesis Consumer Marketing May 2008

Mathias Lloyd (2010),"Advertising –Big Idea, "Has advertising lost the plot"

Moulee Shiv (2010), 'The advertiser's India: one country or Many? Article @ Millward brown 2010

Sen, Gullu (2009), how advertising has changed: 'the instinct to heard still exists, now it's in electronic media' *The Brand Reporter*, Oct 2009, pp 16

Sheehan Kim Bartel, Morrison K. Deborah (2009) 'The creativity challenge: media confluence and its effects on the evolving advertising industry', *Journal of interactive advertising*, Vol 9 no 2 pp 40-43

Souza, Lynn De (2009), how advertising has changed: 'Media agencies have grown both in scale and skill' *The Brand Reporter*, Oct 2009, pp 18

Suneja, Sameer (2009), how advertising has changed: 'Traditional advertising is losing its sheen' *The Brand Reporter*, Oct 2009, pp 20

Chintala Medha (2006), "Heritage Brands Building and Repositioning Them" available at http://www.indianmba.com/Faculty_Column/FC270/fc270.html (accessed May 8 2010)

Joshi D. (2007), India calling: Vodafone's Strategy, unplugged available

Joshi, Devina (2010), 'Rewind 2009: The highs and lows of Advertising',

Joshi, Devina, (2009), 'The idea of idea', *The Brand Reporter* July 09, pp 32-34

Lethagen, H. and Modig E.(2008), 'Unbundling creativity', master thesis Consumer Marketing May 2008

Mathias Lloyd (2010),"Advertising –Big Idea, "Has advertising lost the plot"

Moulee Shiv (2010), 'The advertiser's India: one country or Many? Article @ Millward brown 2010

Sen, Gullu (2009), how advertising has changed: 'the instinct to heard still exists, now it's in electronic media' *The Brand Reporter*, Oct 2009, pp 16

Sheehan Kim Bartel, Morrison K. Deborah (2009) 'The creativity challenge: media confluence and its effects on the evolving advertising industry', *Journal of interactive advertising*, Vol 9 no 2 pp 40-43

Souza, Lynn De (2009), how advertising has changed: 'Media agencies have grown both in scale and skill' *The Brand Reporter*, Oct 2009, pp 18

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.3891.
Rzepka, A., & Olak, A. J. (2017). Agility and inter-organizational relations as elements of creating knowledge in an organization. *Archives of Business Research, 5(12)*, 42-49.

Agility and inter-organizational relations as elements of creating knowledge in an organization

Agnieszka Rzepka
Department of Economics and Management of Economy
Lublin University of Technology, Poland

Andrzej Jan Olak
The BronisławMarkiewicz State
Higher School of Technology and Economics in Jarosław, Poland

ABSTRACT
Knowledge and abilities of employees are the most important tools that serve the development of each organization. The dynamics of changes in modern economy requires from the people who manage an organization to have extremely high competences. This is dictated by an increasing competitiveness and constant pursuit to increase the value of the organization. The speed of changes that happen during this process is so big that it forces organization to make fast responses to emerging market opportunities. The use of such situations may direct the organization towards becoming an agile organization. Agility of an organization is one of the latest concepts which concerns both the organization itself as well as people employed in it. Therefore, the best solution is a process approach to creating and implementing organizational goals. One of the most important factors facilitating this process is the synergy of knowledge and possibilities of all organization's intangible resources. In this article the most important dependencies that condition the agility of an organization have been described.

Keywords: organization as a process, knowledge, agility.

INTRODUCTION

Achieving success is the goal each organization faces no matter what business profile it has. The solution on how to guide an organization through this process is extremely complex. The goal of modern organizations is development of business models that would facilitate the achievement of assumed goals. Managing the market in which each organization operates becomes a system that controls creating organizational strategy. Managing the market in which each organization operates becomes a system that controls the development, creating a strategy of each organization.

Management since the beginning of the 21st century is a permanent search for modern systemic solutions which purpose is to increase the effectiveness of organizations. It results from the increasing confrontation between different areas of business activity of particular parts of the globe competing witch each other. Contemporary organizations face the challenges typical of the current stage of civilization and economic development. An ability to read these challenges by managers in a proper way is a decisive factor that predestines the level and way of reacting to increasingly difficult external conditions.

Constant search for new solutions that could guarantee the development or even a survival should be based on knowledge, skills and teamwork. Such approach, accompanied by a good communication process, seeking for new market opportunities, increasing the level of competence, should create an effective imperative of the management in an organization.

ORGANIZATION IN A PROCESS MEANING

One of the most important problems of modern times, in the era of constant changes of business and social environment is the fulfillment of the requirements of all members of the organization. This results in the need to increase the level of competencies of the members of management of an organization, and the necessity to increase the engagement of all employees in an organization in pursuing daily and strategic goals.

In the real social and economic mechanism, decisive is the interaction of the past and the future as it influences the present [1].

Interpersonal relations at work may result in a given person being satisfied or not from his professional situation. As we may read, positive interpersonal relations may become [...] a solid foundation for social support, [...] they may also be a source of synergy because [...] people who support each other and who work well with each other can do much more than people who do not support each other and who do not work with each other "[2].

Organizations that aim to achieve a high level of knowledge application have to be able to use emerging market opportunities better, and implement them well, as it would make possible to call such organizations,,dynamic and developing". For an organization to develop, it is essential to be able to read signals from the environment, interpret facts and events, develop useful knowledge from data and information obtained from external sources [3].

Organization in a process meaning should be understood as a mutual interdependence not only inside but also outside the environment. The achievement of goals must be made through interdependence which is cooperation and business partnership with other entities. Practically, there are no self-sustaining business entities which could operate effectively on their own and lead the enterprise to absolute development in an efficient and comprehensive manner. The entire business activity is a continuous process that is the fundamental component of an organization. By definition it can be presented in a form of a diagram of flow and changed under the influence of efficiency.

In practice, processes are most often benchmarked and they are improved by principles of Business Process Reengineering [4]. Process orientation of an organization "forces" to change paradigms, often based on rationalism, where knowledge and the experience of human behavior has evolved. It may be, by referring to the semiotics of communication, especially in organizations, indicate the importance of "systems of creation," interpretation and transmission of all messages, those entropic ones and those of high redundancy. Creation and management in such a complex structure which the process organization is must be based on the professional management of message flows. Only in that way the process of information absorption will be adopted.

The process organization when it is in the *process stage of organizational structure*, may be identified as a horizontal organization based on process management. This means that there followed a balance between the roles of processes and functional areas between cells, decentralization of decisions and the effective implementation of information systems. Companies, organizations that have applied state-of-the-art technology in process management have achieved short-term return on investment. The use of the latest technology, in turn, requires good organization and properly prepared people. And this, in turn, requires the knowledge and observing the principles of effective communication. These processes are complementary. Horizontal organizations may be distinguished from functional organizations by a point of reference in the analysis of the activities of particular organizational areas. In a horizontal organization, each process is verified by the level of value assessed by the customer. In the functional structure, the measurement refers to implementation of tasks and it is assessed the managers responsible for it. Functional organization focuses more on such issues as which products or services should be delivered to the market and it is more oriented to their internal problems than relationship with the external environment. In classical organizational structures it may be observed, however, that internal problems are solved by using external entities. Such organizations lack the course of the whole process.

It manages only by its fragments. Process organization puts an emphasis on the overall and methodical scope of implement work.

KNOWLEDGE IN ORGANIZATION

One of the designations of the existence and duration of the management process is the existence of a flow of information in the managed system. It is not important here, whether the exchange process is carried out between the entity and the subject of management or between the manager and the environment of the organization. Undertaking decision by the managers is conditioned on one hand by providing the necessary information to the decision-maker, on the other hand, the decisions that have been transformed into information should effectively reach the person that carries them out. In order for this process to proceed properly, a necessary or even fundamental element is and always will be knowledge.

Knowledge is one of the elements that influence the development of an organization. It can, therefore, be assumed that organizations naturally aspire to exploit the potential of knowledge that is the basis for the knowledge based economy. Knowledge, as the most important asset of any organization is created by its intellectual assets. Knowledge is defined as judgments or beliefs. Knowledge is strongly connected with such factors as culture, ethics, intuition, working conditions, and management style [5].

For many people, knowledge is an ambiguous concept, which in addition is often confused with data or information, especially in organizations where these terms are used interchangeably. According to Davenport and Prusak, data are separate objective facts that may take the form of subordinated records of operations performed by the organization. The knowledge resources that an organization has may be of an open or conscious or hidden nature such that needs to be stimulated or extracted.

An organization which functioning is based on a high level of knowledge may be described as an intelligent organization. A knowledge-based company is a smart company that builds its competitive advantage on a global external environment based on competencies that distinguish it from other entities, which are constantly improving through ongoing learning and acquiring new knowledge, its dissemination and application in the conducted activity [6]. Knowledge resources also include data and information, based on which individual and collective knowledge is built. Knowledge resources are constantly changing, which is a manifestation of the organization's learning process [7].

In organization, knowledge is often embedded not only in documents or collections of knowledge but also in organizational processes and organizational procedures, in pragmatics and norms of action [8]. A knowledge-based organization is one whose structure is subordinated to and aimed at creating added value based on the efficient use of knowledge [9]. Factors determining the functioning of organizational knowledge may be classified as such which result from the structure of an organization itself and those that derive from organizational connections with the external environment.

The essence of internal factors constitutes the organizational culture, the quality of the IT process, the level of the strategy, and the flexibility approach to the environment. External factors, that is, those which are in a sphere outside the organization, include, most often the level of innovation, legal status, or progress in human capital development. The development of an organization where knowledge is the foundation of its development will foster seeking market opportunities, as they create progress and the development of the organization.

The flow of information and proper use of it is a good predictor for the organization's development. Knowledge and information are becoming main factors that drive the "life" of an organization, increasing its effectiveness. They are becoming attractive to an organization as "(...) only that exists what can be measured [10].

The increase of the possibility to reach information combined with changes in the economic reality makes that information-based knowledge more and more often is regarded as an important capital of a modern organization, which, when used effectively, becomes a source of competitive advantage [11]. Knowledge is thus the practical use of information that is important to a given process. Knowledge is created by people and from their education, experience, skills, and degree of involvement depends the way how information will be acquired and used in an organization. Extensive knowledge on a particular topic in combination with pragmatism is defined as wisdom: "skill and the ability of people and organizations to create and acquire knowledge and learn it through the skillful transformation of data and information between people and organizations "[12].

AGILITY OF AN ORGANIZATION

Organizations, especially those of a business nature, constantly build and maintain relationships with their environment and, as a result, give new meanings to business processes. In order for this to take place, new concepts and management methods must be sought and the existing ones must be improved. One of such is the concept of an agile organization understood as one which responds to changes in the market environment quickly and decisively, thus taking advantage of emerging opportunities. The creators of the agility concept - the Iacocca Institute from Lehigh University, USA, defined it as a production system which has the ability to implement hard and soft technologies. They argued that efficiency should be understood as the effective application of competition rules such as speed, flexibility and innovation. Despite their differences, the available definitions of the concept emphasize the fact that speed and flexibility are the basic characteristics of an agile organization. Therefore, an agile enterprise should be able to deal quickly and effectively with unpredictable changing markets [13].

Most of the literature on agility only discusses strategies and techniques. Few works solve the conceptualization and development of integrated approach to the term *agile* as an enterprise concept. However, several *agile* frameworks based on different definitions and ways of understanding may be found in the world literature. A review of some approaches to *agility* has been made to identify main elements and agility attributes of an enterprise. Goldman has developed four major strategic dimensions that emphasize the achievement of *agile* competitive ability.

Authors suggest that any company is able to create a program of achieving *agility* based on an audit that addresses the *agility* dimensions of the present and future operations in the organization. The proposed strategic dimensions of *agility* include: customer enrichment, cooperation to increase competitiveness, permanent organization of changes, and the use of the influence of people and information. Enriching your customers means delivering value and solutions to them, not products. In order to adapt products to market as quickly and efficiently as possible, it is necessary to use all existing resources independently of their location and to cooperate internally with other companies. Successful stimulation of change requires flexible organizational structures that will allow rapid reconfiguration of human and physical resources.

According to Goldman and others *agile competitive environment* is such where people's skills, knowledge and experience are the key factors that distinguish and differentiate organizations. Continuous education and development of skills among employees is an integral part of agility, which id decisive in the process of the future success of the organization.

According to Jackson and Johansson, agility is not the goal in itself, but an indispensable tool for maintaining competitiveness on the market. Agility is based on several possibilities that exist in three main main dimensions of a company: production, product and market size. Jackson and Johansson divide the agility into four main dimensions: possibility of change connected with the product, change in competence as part of the business activity, internal and external cooperation and people, knowledge and creativity.

The first dimension is related to the product strategy and the operations that are necessary to conduct in response to changes and market instability. The second dimension refers to the ability of the departments of an enterprise to cooperate with each other and the ability of the entire enterprise to cooperate with suppliers and customers. The final dimension refers to the need to use knowledge and employee skills as the basis of all activities that concern the turbulent market changes. Yusuf and others have identified competitive fundamentals of *agility*: speed, flexibility, innovation, proactivity, quality and profitability. In this context, the author claimed that proposed fundamentals of competitiveness are the primary *agile* features that must be achieved in synergy.

There are three aspects of agility at different levels of the company. Basic efficiency refers to individual resources (people, machines and management); micro-agility refers to an enterprise, and macro-agility to the level of international companies.

Such assumptions consist of four basic *agile* concepts: core of competence management, virtual company creation, ability to re-configure, knowledge-based enterprise. Key competencies related to employees and corporate products are identified at individual and company level. The company's core competencies are the result of the whole process of corporate activity, integration of different skills and technologies, organization of work and the ability to cooperate between organizations, sometimes taking on a virtual character. A virtual enterprise it is the integration of core competencies, distributed between several organizations with similar supply line. According to Yusuf and others "the development of a strategy that presents a wide range of basic skills of a team, may allow an organization to make rapid changes and allow to reconfigure business as soon as the opportunity arises.

In *agile* organization there is an extremely fluid flow of information which is beneficial taking into account the variety and complexity of the functional areas. H.M. Hormozi interprets the essence of agile approach as an innovative method of production that is capable of creating a significant competitive advantage. Innovation is the basic tool for realizing the concept of agility and leading to significant organizational changes. It determines and stimulates the whole organization. It often determines the main source of competitive advantage.

Innovations become a decisive factor not only for the development and the expansion of the organization, but above all, for its survival. Generally, innovation can be understood as the introduction of new things, ideas or ways of doing things [14]. Innovations (...) are understood as changes made predictively and deliberately which are based on substituting previous states with others - positively assessed in the light of the criteria of a given organization - and concurring to its development and progress in management. The process of innovation should best be developed irregularly, not in accordance with conventions, and above all in a positive way.

Without it, we will rarely have the energy or strength to question status quo, withstand heavy attempts to deliver new ideas to clients [15]. This undoubtedly difficult process depends, among other things on "skillful reading" information both from inside and outside the organization. The organization needs to read signals from the environment, interpret facts and events, develop useful knowledge from data and information obtained from external sources [16].

Innovations are now implemented by all organizations, not just new ones and those that wish to enter new markets or new customers, as well as by stabilized, well prospering companies. Companies that do not innovate fall into a trap where innovation impossibility weakens competition, harms their market position and profitability.

Contemporary organizations must become a "space" for innovation, open to novelty, perceiving problems from different perspectives, sensitive to signals and market challenges and ready to introduce adaptive changes.

It must, therefore, develop its own innovation, providing professional management and creating attractive conditions for people who are prone to it. Innovation is today a key to the competition strategy and its foundation. The pace of new product launching is currently frenetic and the failure rate is high [17].

This concept is based on building a community of employees who understand each other well and creative partners. It implies improving structures and brings meeting expectations closer. In such organizations, the most important are intangible resources, including the knowledge at the disposal of the most outstanding individuals: highly qualified, passionate, energetic and ambitious, following professional standards and principles [18]. Company intelligence always in a large extend influences the ability to create and use of innovation understood as a collection of creative professionals. It decides the way a company uses its opportunities and possibilities, the way it adapts to new situations, creates and introduces new concepts and solutions that meet the needs of the environment. Innovation and creativity become today one of the most important factors in the development of the organization and account for its existence [19].

CONCLUSIONS

Agility concept of an organization is determined by such factors as the level of knowledge, the quality of the strategy, the level of the information processes as well as the information processes [20]. The type of organizational structure is also important. Process-type organizations have better possibilities to respond to the organization's environment and a far better structure that allows for more flexible use of decision-making processes. Evolutionary processes in organization are the result of acquiring knowledge from external and internal sources, as well as the quality of the implementation of newly acquired knowledge.

The dynamics of changes that occur during this process is so great that it forces the rapid responses of an organization to emerging market opportunities. The use of such situations may direct the organization toward an *agile* organization. One of the most important factors facilitating this process will be the synergy of knowledge, inter-organizational relations and the intangible assets of each organization.

Proper selection and continuous development of human capital resources of an organization become essential processes based on precise recruitment process and staff training. Therefore, social competences and teamwork skills are gaining in importance. To implement the above effectively, it is necessary to improve knowledge combined with building effective relations inside and outside the organization. Such change is a continuous process of development of every organization.

It causes or even forces an organization to constantly learn and deepen skills. There is no doubt that Bauman's philosophy of organization management, based to a great extent on the business theory in an unprecedented manner has been outdated. Contemporary organizations are looking for new concepts and solutions in the area of organizational behaviors. These solutions constitute an integral part of management, based on continuous synergy and interdisciplinarity of many fields of science leading to development of an organization. This article highlighted most important dependencies determining the agility of an organization in the context of external conditions.

References

Kołodko G., Wędrujący świat, Publisher: Prószyński i S-ka, Warszawa 2008, p.328.

Griffin R., Podstawy zarządzania organizacjami, Publisher: Wydawnictwo Naukowe PWN, Warszawa 2006, pp..591.

Morawski M., Zarządzanie profesjonalistami, Publisher: Polskie Wydawnictwo Ekonomiczne, Warszawa 2009, pp.17

Olesiński Z., Rzepka A., Olak A., Zarządzanie międzyorganizacyjne w zwinnych przedsiębiorstwach, Publisher: Texter, Warszawa 2017, pp. 75-81.

Kisielnicki J., Zarządzanie projektami. Ludzie – procedury – wyniki, Publisher: Oficyna a Wolters Kluwer business, Warszawa 2011, pp.160-161.

Malara Z., Przedsiębiorstwo w globalnej gospodarce, Publisher: Wydawnictwo Naukowe PWN, Warszawa 2006, pp.132

Probst. G. Raub S. Romhardt K., Zarządzanie wiedzą, Publisher: Oficyna Ekonomiczna, Kraków 2002, pp.35.

Davenport T. Prusak L., Working Knowledge. How Organizations Manage What They Know, Publisher: Harvard Business School Press, Boston 1998, pp..5.

Grudzewski W. Hejduk I., Zarządzanie wiedzą w przedsiębiorstwach, Warszawa, Publisher: Difin 2004, pp.135.

Jurek M., Pojęcie i pomiar kapitału intelektualnego, „Zeszyty Naukowe Uniwersytetu Szczecińskiego", Szczecin 2002, pp.85.

Kaczmarek B. Walczak, W, Zarządzanie wiedzą we współczesnych przedsiębiorstwach, Publisher: Uniwersytet Łódzki 2009, pp.11.

Grudzewski W. Hejduk I., Zarządzanie wiedzą w przedsiębiorstwach, Warszawa, Publisher: Difin 2004, pp.73.

Goldman S. Nagel R. Preiss K., Agile competitors and virtual organizations, stratieges for enriching the customer, Publisher: Von Nostrand Reinhold, New York 1995, pp.7.

Kalinowski T., Innowacyjność przedsiębiorstw a systemy zarządzania jakością, Publisher: Oficyna, Warszawa 2010, pp.13.

Westland J., Global innovation management. A strategic approach, Palgrave, New York 2008, pp.37.

Morawski M., Zarządzanie profesjonalistami, Publisher: Polskie Wydawnictwo Ekonomiczne, Warszawa 2009, pp.16

Kotler P., Marketing Lateralny, Publisher: Polskie Wydawnictwo Ekonomiczne, Warszawa 2004, pp.16.

Perechuda K., Zarządzanie wiedzą w przedsiębiorstwie, Publisher: PWN, Warszawa 2005, pp.18.

Rzepka A., Inter-organizational relations as a one of sources of competitive advantage of contemporary enterprises in the era of globalization. PROCEDIA ENGINEERING [WOS] - 2017, nr 174, pp. 161-170

Rzepka A., Olak A., Wpływ relacji międzyorganizacyjnych na pobudzenie innowacyjności przedsiębiorstw, Przedsiębiorczość i zarządzanie., Łódź – Warszawa 2017, Tom 4, zeszyt 4, pp.61-72.

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.3908.
Ezirim, C. B., Ezirim, U. I., Eniekezimene, D., & Elike, U. (2017). Finametric Determination of Insurance Profitability: Analysis of The Nigerian Experience. *Archives of Business Research, 5(12),* 50-62.

SOCIETY FOR SCIENCE AND EDUCATION

Finametric Determination of Insurance Profitability: Analysis of The Nigerian Experience

Chinedu B. Ezirim
Professor of Finance, Banking and Finametrics
University of Port Harcourt, Nigeria

Ucheoma I. Ezirim
Research assistant in the Faculty of Management Sciences
University of Port Harcourt, Nigeria

Daniel Eniekezimene
University of Port Harcourt, Nigeria
Doctoral candidate in the Department of Finance and Banking
Faculty of Management Sciences

Uchenna Elike
Professor of Economics and Finance
Alabama A & M University, USA

ABSTRACT

The study set out to finametrically investigate the key determinants of insurance profitability in Nigeria using least squares and associated diagnostic tests, co-integration and the fully modified Phillips-Hansen estimation procedures. The results indicate that five variables namely premium ratio, level of economic activity (or simply, state of the economy), and investments ratio, and profitability in previous periods significantly and positively influenced current profitability of insurance companies in Nigeria. Only financial market conditions and claims ratio were found to exert significant but negative influence on current profitability. There also existed long-run equilibrium relationship between the variables such that the observed influences are likely to persist in the long-run, ceteris paribus.

INTRODUCTION

The insurance mechanism is a very unique one in that its industry is about the only one that exists purposely to ensure that other industries and sectors of the economy do not fail, should they solicit for its help in dealing with their risks. Both individuals, families, businesses and the economy in general benefit from the operational functions of insurance companies, if they approach them to assist in indemnifying them against the effects of risk of loss. Being assured of indemnification, these agents are rest assured and geared for gainful economic operations that eventually aggregate to the common good of the economy at large. Also, insurance companies, on their own part contribute directly to the growth and development of the economy by their sheer operations along the lines of premium generation, investments, and claims settlements, re-insurance, among others. It has been posited that these operations manifest in the areas of boosting aggregate savings, domestic investments and capital formation, financial intermediation, stemming capital flight, aggregate output, national income and overall improvement of living standards (Ezirim, 2004).

In view of these, it becomes a very important and in fact urgent fact that the insurance industry should be given the vital attention it deserves in order for a country to reap the amply benefits the industry promises. This need for attention has been dully recognized by developed countries of the world to the extent that they are constantly harnessing the benefits accruable from developing their insurance industries. It is of note that in the developed countries, the insurance industry appears to be more active, buoyant, booming, and perhaps more socio-economically relevant than even the over-dramatized banking industry. This may not be said of the developing countries of the world, and definitely not for poorer countries of Asia and Africa. These countries still have a long way to go as far as developing the full potentials of the insurance mechanism is concerned.

Notwithstanding, it is of note also that the developing countries are not resting on their oars in trying to make their insurance industries to be more socio-economically relevant and thus contribute their much needed quota in economic growth and development. To this end, the National Insurance Commission (NAICOM) attempted to revitalize and re-invigorate the Nigerian insurance industry and thus re-position it for more veritable and enhanced profitable performance, in a bid to make the respective companies compete favorably among the comity of other financial institutions operating in the country and beyond. Having appreciated the global village phenomenon, the re-capitalize insurance companies have been given fresh impetus to enhance their performance and to make them formidably strong players both nationally and internationally.

Despite this macro and other efforts by the companies themselves and the regulatory authorities, the revelation was that the corporate performance of the Nigerian insurance companies can only be described as suboptimal. For instance in 2014, the statistics showed that the industry contribute only 0.3% of overall GDP of Nigeria and 2.3% of Africa's total premium generated. By comparison, this is nothing to compare with what obtained in South African where the insurance industry contributed about 16% of the country's GDP and about 78.13% of total premiums generated by insurance companies the Continent (Daniel, 2015). This is a cause for worry, especially when the country is boasting of having the largest insurance market in Africa. What then could have been responsible to this development?

A number of internal and external factors has been identified to influence the profitability of insurance companies by different commentaries. The internal or company-specific factors include, risk defined as loss ratio or in terms of earnings volatility, liquidity, tangibility of assets, company or business growth, firm size and age, leverage and or capital base. The external factors include social, political, economic, legal and regulatory and general environmental factors. What is not yet clear from available studies is which of these factors are responsible for the present profitability status of insurance companies in Nigeria? It is in view this worry and poser that the present study attempts to uncover the most important explanatory factors determining insurance profitability in Nigeria, drawing empirical evidence from insurance companies listed on the Nigeria Stock Exchange.

EMPIRICAL BACKGROUND AND REVIEW OF RELATED LITERATURE

The banking sector, until recently, dominated studies on determinants of profitability. For instance, Abreu and Mendes (2001) studied banks in four European countries (German Portugal, France and Spain) for the period of 1986-1999 and provided evidence that equity to assets and loan to assets ratios had positive relationship with interest margins and profitability of the banks. In their analysis of external factors, inflation significantly related with profitability and interest margins of the banks while exchange rates did not exert strong influence on profitability. Staikouras and Wood (2003) examined the effect of internal and external factors on the profitability of banks operating in 13 different European countries using panel data methodology. It was found that internal factors exerted the strongest influence the performance of the banks than the external factor. More so, banks with greater levels of equity were found to be more profitable than those with greater levels of debt. Externally, GDP growth and interest rates were inversely related while with profitability of banks.

More recently studies on the insurance sector started surfacing in good numbers. For instance, Ahmed, Ahmed and Usman (2011) investigated the determinants of performance in life insurance sector of Pakistan by using panel data of five insurance companies from 2001-2007. The results showed that leverage, size of the firm and risk were the most important arguments in explaining insurance corporate performance while growth, tangibility, age of the firm, and liquidity did not associate significantly with performance of life insurance firms. Hifza (2011), in a study of 35 listed life and non-life Pakistani insurance companies attempted to unearth the key determinants of profitability for the period ranging from 2004-05 to 2008-09, found insignificant association between profitability and age of the company but a positive and significant association between firm size, volume of capital and profitability, while loss ratio and leverage were negatively linked to profitability. Amal et al. (2012) studied twenty five Insurance Companies in Jordan from 2002-03 to 2007-08 and found leverage, liquidity, firm, and managerial competence to be positively and significantly related to financial performance of the companies studied. The age of the company was not found to influential in determining performance.

Bilal, Khan, and Tufail (2013) studied the determinants of profitability of 31 Pakistani insurance firms Pakistan from 2006-2011 applying fixed effects and random effects models with associated Hausman's specification test. The results indicate that leverage, size, earnings volatility and age of the firm were significant determinants of profitability while growth opportunities and liquidity were not. Olajumoke (2012) studied the life companies in Nigeria from 2003-04 to 2007-08with results indicating profitability as being not so much affected by the ownership structure, leverage and size of firms. Instead, profitability associated negatively with the level of reinsurance, but positively affected by interest rates.

Mwangi and Murigu (2015) used the multiple linear regression to investigate the correlates of profitability for Kenya's general insurance companies from 2009-10 to 2012-13 and found profitability to be significantly and positively related to leverage, equity capital, management competence index, but negatively related to size and ownership structure. Loss retention ratio, liquidity, underwriting risk and age were not significant. It was uncovered that the contribution of the general insurance industry to the gross domestic product was only 2.08%. Ibrahim's (2016) study applied regression analysis to examine the factors determining the performance of insurance companies in Nigeria using both primary and secondary data for the years 2007 to 2014. The results indicate that the variables considered most significant are equity, gross written premium, liquidity, leverage, company's age, solvency and assets tangibility. In the order of contribution to performance economic factors ranked highest, followed by technological factors and lastly by environmental factors in that order. Equity capital was found to make the strongest contribution to insurance performance contrary to popular belief that favors gross written premium.

Berhe and Kaur (2017) examined the internal or firm specific variables (firm size, capital adequacy, leverage, liquidity, and loss ratio) and external or macro variables (market share, growth rate of GDP and inflation) in a bid to identify the key factors influencing insurance profitability in Ethiopia using the fixed effect model against panel data from 2005-06 to 2014-15 for seventeen (17) insurance companies. The findings showed that firm size, capital adequacy, liquidity ratio and growth rate of GDP were the major factors that significantly impacted the profitability of insurance companies. Conversely, leverage, loss ratio, market share and inflation were insignificant in their impact.

METHODOLOGY

The study utilizes the finametric approach that involves quantitative and statistical measurements, modeling, and estimation of financial relations among financial phenomena (in this case, endogenous and exogenous variables manipulations) that crystallizes in addressing defined financial problems.

Analytical Techniques

In carrying out the study, we adapted the models developed in (Ezirim, 1999) and applied in Ezirim and Isitor (2005). Accordingly, linear regression equations are derived. The least squares (LS) method for associated diagnostic tests, unit root test procedure for stationarity imperatives, cointegration test, and the fully modified Phillips-Hansen estimation procedure are adopted for estimating the variables. The study underlines that the use of the fully modified Phillips-Hansen estimation procedure requires that the variables are I(1) and that the predictors are not themselves cointegrated with each other. The Parzen lag window was employed to compute the Phillips-Hansen estimates using the parzen weights in the estimation of the long-run variance. However, the study tests the long-run equilibrium relationship between the dependent variable and the predictors using the cointegration procedure with unrestricted intercepts and no trends in the vector autoregression (VAR). Specifically, it undertook cointegration LR test based on maximal eigenvalue of the stochastic matrix and also based on trace of the stochastic matrix.

The study did a variety of diagnostic tests to confirm the global usefulness of the model. These include the Lagrange multiplier test of residual serial correlation, Ramsey's RESET Functional Form test using the square of the fitted values, Normality test based on a test of skewness and kurtosis of residuals, and Heteroscedasticity test based on the regression of squared residuals on squared fitted values. The Lagrange multiplier (LM) and Fisher’s (F-statistic) versions were computed and employed in the analysis. The relative impact of each explanatory variable was determined by employing the t-statistics and associated probability of the fully modified Phillips-Hansen estimates to test the relevant hypotheses. Preliminary analysis of data was done using relevant descriptive statistical measures of central tendency, variability, skewness and line charts.

The Model and Operational Definition of Variables

It is hypothesized that the overall profitability of the insurance industry represented by the profit after before tax is a positive function of their level of funds mobilization (represented by total premiums, which is an inflow in the intermediation process), investment decisions resulting in level of investment in the period, rate of growth of the economy representing the state of the economy, and profitability of operations in the previous period; but a negative function of claims payment (which is an outflow in the intermediation process), rate of return on government treasury investments, and the state of the economy. It is reasoned that since the insurance companies are in existence to indemnify other economic units against ‘bad times’, their operations can as well be boosted even when the economy is in down turn. Expectedly, their business would increase with turbulent times that plague other economic units who would run to them for cover against risk of loss. The inclusion of the rates on government’s treasury investment is predicated on the fact that much of insurance funds are constrained by law to be plunged into government securities in the money market. This in part captures the regulatory influences on their assets allocation and funds’ utilization.

This study would have considered the inclusion of the capital base as a major argument in the model since it is supposed to make funds available for operations. However, the tradition of insurance companies was not that of aggressive working capital management. More so, any available funds from the shareholders' fund would have been transmitted through the investment channel, so this study down-plays the capital base variable. Again, the regulatory environment ordinarily should be of remarkable influence in the profitability of insurance companies in view of the fact that their operations, especially investments, are heavily regulated in Nigeria. This would have suggested an inclusion of the government regulatory index (GRI) as a major argument in the model. However, since the model has captured most of these operations that are keenly regulated, its inclusion may be a mere repetition. Thus, with some amendments in the specifications of Ezirim (1999), we can write the relationship between the selected variables functionally as

$$ROA_t = f(INV_t, TP_t, RGE_t, CP_t, ROTI_t, ROA_{t-1}, U_t) \ldots\ldots\ldots\ldots\ldots\ldots\ldots..(1)$$

Where, $f_1 > 0$; $f_2 > 0$; $f_3 > < 0$; $f_4 < 0$; $f_5 < 0$; $f_6 > 0$
ROA = Current return on assets
INV = Investments
TP = Total premium
RGE =rate of economic growth
CP = Claims payment
ROTI = rate of return on treasury instruments
ROA_{t-1} = Previous return on assets
U_t = Error term

It is through the partial adjustment procedure that we have the return on assets of insurance companies of the previous periods entering into the model, and thus a hypothesized distributed lag effect is herein suggested. The detailed procedure follows the manipulations in Ezirim (1999). The study used total assets of insurance companies to divide the relevant variables to simplify the procedure and reduce possible finametric diagnostic problems. Thus, defining current profitability as profit before tax to total assets ratio (which is return on assets, ROA), investments as investment to total asset ratio (IVR), total premium as total premium to total assets ratio (TPR), rate of return on treasury investments (ROTI) as proxied by the rate of return on the treasury bills or treasury bills rate (TBR), RGE as the actual rate of economic growth, and claims payment as claims to total assets ratio (CPR); we rewrite expression (1) explicitly as:

$$ROA_t = {}_o + {}_1TRP_t + {}_2\,\mathrm{CPR}_t + {}_3RGE_t + {}_4INVR_t + {}_5TBR_t + {}_6ROA_{t\ 1} + U_t \qquad (2)$$

Where ${}_0$ = constants and ${}_i$ (i = 0, 1, …., 6) are coefficients. *A priori*, ${}_1 > 0$, ${}_2 < 0$, ${}_3 > < 0$, ${}_4 > 0$, ${}_5 < 0$, ${}_6 > 0$; and U_t is the stochastic disturbance term.

Expressions (1) and (2) are in the functional and linear forms, respectively. It is noteworthy that the first term in the RHS is the total premium ratio (TPR), the second term is the claims payment ratio (CPR), and the fourth is the investment ratio (INVR), while the sixth is the lagged ROA (ROA_{t-1}). The only term in LHS is the current return on assets (ROA). These would help to simplify the equations and handling thereof. The direction or nature of relationships existing between the explanatory variables and the explained variable has been hypothesized to follow the *a priori* reasoning as shown in the model above, while the relevant variables in the model are as hereunder defined:.

PBT= Profit before tax, where ROA is return on assets of insurance companies in Nigeria
TP= Total premium, where PR is the premium ratio; a ratio of premium to total assets
CP= Claims payment, where claims payment ratio (CPR) is ratio of total claims paid to total assets.
RGE= a measure of rate of growth of the economy or state of the economy and proxied by gross domestic product rate of change (GDPR)
INV= is the total investments, where IVR, the investment ration of Insurance companies in Nigeria is a ratio of investments to total assets
ROTI= Return on treasury instruments proxied by treasury bills rate (TBR); a proxy for money market yield rate.
ROA_{t-1}= Lagged return on assets of insurance companies
TA= Total assets

ANALYSIS OF ESTIMATION RESULTS

Descriptive Statistical Analysis

The data for this study were obtained from the Statistical Bulletins of the Central Bank of Nigeria (CBN) and National Insurance Commission (NAICOM). Computations were made to transform the level values into rates of growth and ratio where applicable. The descriptive statistics of the resultant values of each variable are depicted on Table 1. As can be seen, the mean scores of the variables were 3.6% for ROA, 3.3% for RGE, 85.1% for IVR, 54.3% for PR, 20.3% for CPR, and 11.7% for TBR. The standard deviation of each of the variables were 1.8 for ROA, 3.03 for RGE, 5.4 for IVR, 9.9 for PR, 13.8 for CPR, and 4.8 for TBR. These are indicative that the variables did not fluctuate violently but somewhat mildly. This can easily be confirmed from Figure 1, which shows the graphical presentation of the variables. All the variables, except IVR were positively skewed indicating that the distributions have long right tails. Thus the IVR being negatively skewed did have a long left tail. The Kurtosis statistic which measures the peakedness or flatness of the distribution of each of the series was calculated at 1.9 for ROA, 5.3 for RGE, 2.9 for IVR, 2.5 for PR, 2.0 for CPR, and 4.2 for TBR.

Table 1: Descriptive Statistics of Variables: ROA, RGE, IVR, PR, TBR, and CPR

Statistic	ROA	RGE	IVR	PR	CPR	TBR
Mean	3.639412	3.319006	85.06157	54.31062	20.39093	11.74735
Median	2.790000	2.942082	85.29817	51.10800	18.97810	11.75000
Maximum	7.000000	11.48400	92.96130	78.87300	50.99690	26.90000
Minimum	1.200000	-4.055140	72.50000	39.05000	0.375374	5.000000
Std. Dev.	1.814831	3.032996	5.371625	9.890309	13.77735	4.817905
Skewness	0.542495	0.562206	-0.682357	0.567757	0.228071	1.071958
Kurtosis	1.944784	5.254321	2.909318	2.536068	2.019783	4.236656
Jarque-Bera	3.245135	8.990541	2.650111	2.131550	1.655930	8.678070
Probability	0.197391	0.011162	0.265788	0.344461	0.436938	0.013049
Sum	123.7400	112.8462	2892.093	1846.561	693.2916	399.4100
Sum Sq. Dev.	108.6892	303.5691	952.1938	3228.001	6263.906	766.0029
Observations	34	34	34	34	34	34

As a rule, the kurtosis of the normal distribution is 3. If the kurtosis exceeds 3, the distribution is peaked (leptokurtic) relative to the normal; if the kurtosis is less than 3, the distribution is flat (platykurtic) relative to the normal. From the distribution, ROA, IVR, PR, CPR and were all platykurtic while RGE and TBR were leptokurtic. The Jarque-Bera statistic, tests whether or not a series is normally distributed; measuring the difference of the skewness and kurtosis of the series with those from the normal distribution. From the Table, a hypothesis of normal distribution can only be accepted for ROA, IVR, PR, and CPR but not for RGE and TBR which were not individually normally distributed. The Figure 1 indicated that many of the variables were more flatly distributed than violently fluctuated. The extent to which the independent variables relate with ROA is the burden of further analysis of estimation results.

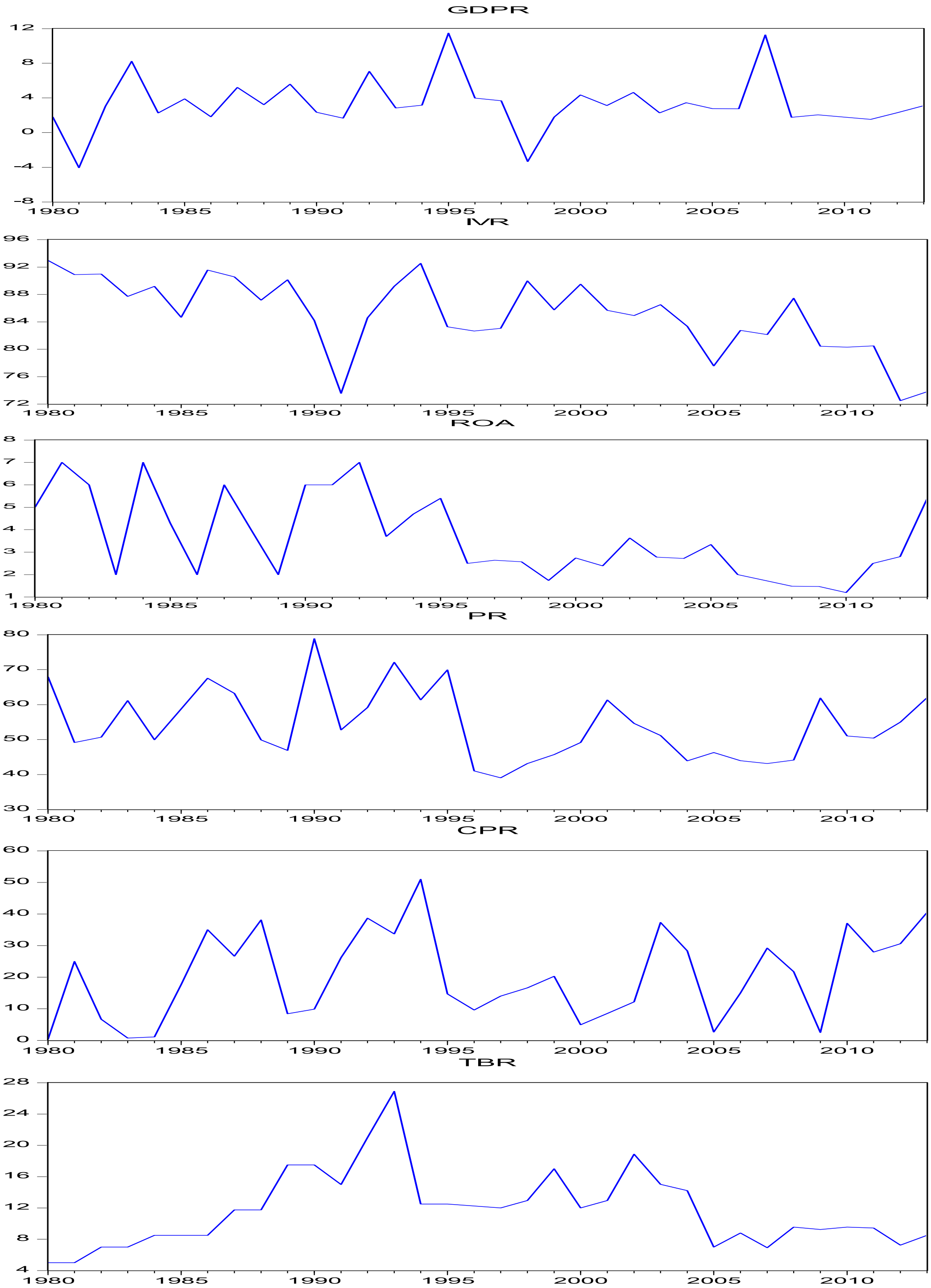


Figure 1: Graphical Presentation of the Variables: ROA, RGE, IVR, PR, TBR, CPR

Diagnosis of Specified Model

The first step undertook by the study was to diagnose the model by testing for serial correlation, functional form, normality and heteroscedasticity. As can be seen from Table 2, the test indicated that there was no need to worry about problems associated with serial correlation. The observed values of CHSQ (1) = 0.63805[.424] and F(1, 25) = .49291[.489] for the LM and F versions. As indicated, the observed probabilities in parenthesis are higher than the critical probability of 0.05 which suggested the rejection of the null hypothesis of presence of serial correlation. The functional form test also suggested that the linear specification is adequate, with the observed statistics of CHSQ (1) = .0076593[.930] and F (1, 25) = .0058039[.940].

Diagnostic Tests results of the Model

Test Statistics	LM Version	F Version
A: Serial Correlation	CHSQ (1) = .63805[.424]	F(1, 25)= .49291[.489]
B: Functional Form	CHSQ (1) = .0076593[.930]	F(1, 25)= .0058039[.940]
C: Normality	CHSQ (2) = 4.4532[.108]	Not applicable
D: Heteroscedasticity	CHSQ (1) = .11973[.729]	F(1, 31)= .11289[.739]

A: Lagrange multiplier test of residual serial correlation
B: Ramsey's RESET test using the square of the fitted values
C: Based on a test of skewness and kurtosis of residuals
D: Based on the regression of squared residuals on squared fitted values

Table 3: Unit Root Test Results Summaries

32 observations used in the estimation of all ADF regressions.

Variable	DF	ADF (1)	Inference
RGE	-4.5779	-3.2585	I (1)
IVR	-3.6442	-3.2766	I (1)
ROA	-4.8262	-3.5571	I (1)
TBR	-4.2451	-3.9865	I (1)
PR	-3.5231	-3.5068	I (1)
CPR	-5.2564	-3.5904	I (1)

95% critical value for the augmented Dickey-Fuller statistic = -2.9558

That the variables possess randomly distributed values that will permit acceptable statistical conclusions is a primary emphasis of the normality test. From Table 2, the observed statistics is CHSQ (2) = 4.4532[.108], and with the probability 0.108 being higher than the critical probability of alpha 0.05, the study cannot accept a null hypothesis of no normal distribution. Thus, the variables are jointly normally distributed. The heteroscedasticity test was also satisfactory with observed statistics of CHSQ (1) = .11973[.729] and F(1,31) = .11289[.739], which are not significant at alpha 0.05. Thus there is the absence of heteroscedasticity or the presence of monoscedasticity. These results lend credence to the global utility of the specified model.

The study also undertook to check the stationarity status of the variables using the Dickey-Fuller and Augmented Dickey-Fuller unit root tests. As shown from Table 3 all the variables achieved stationarity at the first difference showing that they are integrated at order 1; they are I(1) variables. These results are important in two ways. First, they permit that a further cointegration analysis can be done using the Johansen and Josellius approach. Second, they are amenable to the requirements of the estimation using the Phillips-Hansen approach. However, it is needful for the explanatory variables to be co-integrated with the dependent variable for the study to establish that long-run equilibrium relationships exist among them. It is to this effect that cointegration with unrestricted intercepts and no trends in the VAR was conducted in two lights; namely cointegration LR test based on maximal eigenvalue of the stochastic matrix and that based on trace of the stochastic matrix. When based on maximal eigenvalue of the stochastic matrix as shown on Table 4a, the null hypothesis zero cointegrating equation is rejected against the alternative, with the observed statistic of 49.7 against the 95% critical value of 39.8. Similarly, the null hypothesis of 1 cointegrating equation and 2 cointegrating equations were also rejected against the alternatives. By implication, there are 3 cointegrating vectors. Based on trace of the stochastic matrix, there are 4 conitegrating equations (observed statistics was 32.3 against the critical 95% value of 31.5). These evidenced that equilibrium long-run relationship existed among the variables.

Table 4a: Cointegration with unrestricted intercepts and no trends in the VAR
Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix

****

Order of VAR = 1.

List of variables included in the cointegrating vector:

ROA IVR RGE TBR PR

CPR

List of eigenvalues in descending order:

.78842 .69218 .58950 .40358 .26700 .16661

****

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r = 1	49.7006	39.8300	36.8400
r<= 1	r = 2	37.7039	33.6400	31.0200
r<= 2	r = 3	28.4918	27.4200	24.9900
r<= 3	r = 4	16.5380	21.1200	19.0200
r<= 4	r = 5	9.9395	14.8800	12.9800
r<= 5	r = 6	5.8322	8.0700	6.5000

****

Table 4b: Cointegration with unrestricted intercepts and no trends in the VAR
Cointegration LR Test Based on Trace of the Stochastic Matrix

****

Order of VAR = 1.

List of variables included in the cointegrating vector:

ROA IVR RGE TBR PR

CPR

List of eigenvalues in descending order:

.78842 .69218 .58950 .40358 .26700 .16661

****

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r>= 1	148.2061	95.8700	91.4000
r<= 1	r>= 2	98.5055	70.4900	66.2300
r<= 2	r>= 3	60.8016	48.8800	45.7000
r<= 3	r>= 4	32.3098	31.5400	28.7800
r<= 4	r>= 5	15.7718	17.8600	15.7500
r<= 5	r = 6	5.8322	8.0700	6.5000

****

Use the above table to determine r (the number of cointegrating vectors).

The results of the fully modified Phillips-Hansen estimation procedure showed that all the variables were significant at 1% and 5% levels as shown in Table 5. From the Table, it can be seen that the RGE variable representing the state of the economy positively and significantly influenced the profitability of insurance companies in Nigeria. This is evidenced by the fact that the observed coefficient of .059743 and a standard error of .0025839, and thus a t-statistic of 23.1217[.000], was significant at 5% level, so the study is at least 95% confident that a hypothesis of no significant relationship cannot be accepted in the place of alternative hypothesis. Thus, when the economy is healthy, insurance companies tend to increase their profitability, ceteris paribus. The relationship is positive and thus satisfies the *a priori* expectation of the model.

The premium ratio (PR) variable which was measured by the ratio of total premiums to total assets of insurance companies operating in Nigeria recorded a coefficient of .28434 and a standard error of .025524 and thus a t-statistic of 11.1402[.000]. This observed t - statistic is significant at 5% level, demonstrating at least 95% confidence that the PR variable positively and significantly related to insurance profitability. By implication, generation of higher volumes and levels of premium guarantees more funds to the companies which would be channeled into more profitable operations.

Table 5: Fully Modified Phillips-Hansen Estimates (Parzen weights, truncation Lag = 16, Non-trended Case)

****

Dependent variable is ROA

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
Intercept	3.0366	.23233	13.0700[.0 00]
GDPR	.059743	.0025839	23.1217[.000]
IVR	.021990	.0023314	9.4324[.000]
TBR	-.23278	.014035	-16.5863[.000]
PR	.28434	.025524	11.1402[.000]
CPR	-.017350	.6519E-3	-26.6137[.000]
ROA(-1)	.098072	.033389	2.9373[.007]

****

The investment ratio (IVR) variable expressed as total investments to total assets ratio recorded a coefficient of .021990 and a standard error of .0023314 and thus a t-statistic of 9.4324[.000]. The observed t - statistic is significant at 5% level and thus yields to an inference that, with at least 95% confidence level, the IVR variable significantly and positively related to insurance profitability. Thus, a hypothesis of no significant relationship cannot be accepted in the place of alternative hypothesis, implying that investments in the current periods positively and significantly affect the current profitability of insurance companies in Nigeria. The relationship is positive and thus satisfies the *a priori* expected sign of the model. This result agrees with theory that the critical objective criterion of an investment activity is to generate future returns for the investor. It also agrees with the findings in Ezirim and Isitor (2005) and Ezirim **xxxx.**

The insurance claims payment ratio (CPR), which is the ratio of claims to total assets of insurance companies operating in Nigeria posted a coefficient of -.017350 a standard error of .006519 and thus a t-statistic of -26.6137[.000]. This observed t - statistic is significant at 5% level and permit at least 95% confidence level that the CPR variable negatively but significantly related to profitability. This result is consistent with expected theoretical underpinning that claims payment is an outflow activity that would not directly support the generation of returns to the firm.

The state or level of activity in the country's financial market is represented by the yield's condition in the market and proxied by the market risk-free or treasury bills rate (TBR) variable. The study observed a coefficient of -.23278 and a standard error of .014035 and thus a t-statistic of -16.5863[.000]. The observed t - statistic is significant at 5% level, so the study suggests that the financial market (TBR) variable significantly but negatively related to insurance profitability. The hypothesis of no significant relationship cannot be accepted in the place of alternative hypothesis. The inference is that the state of the financial market negatively but significantly influenced the profitability of insurance companies in Nigeria. Thus when the financial markets are in bad conditions, insurance companies tend to increase in their profitability. This is not in line with a priori expectations but can find plausible explanation in the point that insurance companies are the created to cover the economy in bad times (other economic agents run to them in bad times or when such times are anticipated) and thus insurers would ordinarily perform well in such times.

The final variable in the estimated model is lagged return on assets (ROA_{t-1}) of insurance companies. From Table 5, this variable posted a beta coefficient of .098072, standard error of .033389 and t-statistic of 2.9373[.007]. The observed probability of .007 is much less that the critical probability of .05 and thus yield to a rejection of null hypothesis of no significant relationship. By implication, previous levels of profitability significantly and positively encourage current profitability. This had been argued to be possible through the partial adjustment mechanism of distributed-lag formulation (Ezirim, 2005).

CONCLUSION

From the analysis, five variables namely premium ratio, level of economic activity or simply state of the economy, and investments ratio, profitability in previous periods significantly and positively influenced current profitability of insurance companies in Nigeria. Only financial market conditions and claims payment ratio were found to exert significant but negative influence on current profitability. That the variables are co-integrated with profitability implies that the observed short-run influences will persist in the long-run, ceteris paribus. Thus, as they related in the short run, in terms of observed magnitude and direction, so are they likely to continue in the long-run. In the light of these results, the study recommends as follows

RECOMMENDATIONS

In a bid to boost profitability, the insurance companies would need to insist on improved premium mobilization machinery. To achieve this there may be need to cooperate with other financial institution such as banks to assist them in premium collection. Since profitability is found to improve as the economy grows and suffers when the economy is depressed, then every growth oriented policy - monetary, fiscal, stabilization, income alike- should be encouraged by the government Expansionary policies should be given preference to contractionary one for this purpose. Since profitability is naturally driven investment activities, then it is only proper for insurance companies to channel much of their mobilized funds to investments. This is only a rational economic behavior.

SUGGESTION FOR FURTHER STUDIES

It is the suggestion of the researcher the further work be carried out on the determinants of insurance portfolio to see whether a better understanding can be derived on the actual nature of relationship between the identified variables and investment behavior. There is also the need to further the analysis in this study to explore the possibility of partial adjustment behavior of insurance profitability and investments.

LIMITATIONS OF STUDY

It is the suggestion of the researchers that further work be carried out on the determinants of insurance investments to see whether a better understanding can be derived on the actual nature of relationship between investment behavior and its determinants. More so, there is need to further the present analysis to determine a possibility of partial adjustment behavior of insurance profitability, which this study could not carry out.

Table 1: Insurance Profitability and Determinants in Nigeria

Year	GDPR	IVR	ROA	PR	RI	TBR	MRR	CPR
1980	1.82434	92.9613	5	67.985	1	5	6	0.375374
1981	-4.05514	90.893	7	49.14987	1	5	6	25.00716
1982	3.044163	90.9738	6	50.69669	1	7	8	6.690653
1983	8.229385	87.7131	2	61.157	1	7	8	0.74899
1984	2.26788	89.17522	7	49.937	1	8.5	10	1.11479
1985	3.89746	84.6629	4.3	58.767	1	8.5	10	17.6683
1986	1.823688	91.55975	2	67.562	1	8.5	10	35.03712
1987	5.21727	90.563	6	63.23	1	11.75	12.75	26.66975
1988	3.218	87.17506	4	49.892	1	11.75	12.75	38.11843
1989	5.5874	90.13901	2	46.89	1	17.5	18.5	8.455
1990	2.341007	84.20086	6	78.873	1	17.5	18.5	9.88929
1991	1.6666	73.5686	6	52.765	1	15	14.5	26.21757
1992	7.0633	84.588	7	59.1865	1	21	17.5	38.68
1993	2.84	89.1984	3.7	72.118	1	26.9	26	33.7
1994	3.1584	92.5461	4.7	61.35	1	12.5	13.5	50.9969
1995	11.484	83.28	5.4	69.96	1	12.5	13.5	14.71823
1996	3.98	82.665	2.5	41.04	1	12.25	13.5	9.622157
1997	3.672355	83.0585	2.64	39.05	1	12	13.5	14.034
1998	-3.33842	89.98	2.57	43.155	1	12.95	14.31	16.63
1999	1.793	85.755	1.74	45.702	1	17	18	20.2879
2000	4.346	89.506	2.74	49.172	1	12	13.5	4.95781
2001	3.11992	85.6766	2.39	61.34	1	12.95	14.31	8.544245
2002	4.63	84.91974	3.63	54.635	1	18.88	19	12.20232
2003	2.278	86.505	2.78	51.186	1	15.02	15.75	37.32498
2004	3.4453	83.35028	2.72	43.905	1	14.21	15	28.34608
2005	2.7703	77.57095	3.34	46.297	1	7	13	2.634549
2006	2.749	82.76143	2	43.95	1	8.8	12.25	15.011
2007	11.27266	82.14054	1.74	43.14	1	6.91	10	29.2281
2008	1.762	87.45623	1.48	44.13	1	9.55	9.5	21.76413
2009	2.049319	80.44	1.47	61.90	1	9.25	8	2.5
2010	1.779	80.31	1.2	51.03	1	9.55	6	37.05481
2011	1.53	80.5	2.5	50.41	1	9.44	10	27.962
2012	2.3	72.5	2.8	55.00	1	7.25	11	30.6
2013	3.1	73.8	5.4	62.00	1	8.5	12	40.5

Source: Computed from Data from CBN Statistical Bulletin and NAICOM Bulletin (2014)

References

Abate, G. , & Yuvaraj, S. (2013). A Study on Performance of Insurance Companies in Ethiopia. *International Journal* *of Marketing, Financial Services and Management Research, 2*(7), 138 -150.

Abreu, M., & Mendes, V. (2001). Commercial bank interest margins and profitability: evidence for some EU countries.

Ahmed, N., Ahmed, A., & Usman, A. (2011). Determinants of Performance: A Case of Life Insurance Sector of Pakistan. International Research Journal of Finance and Economics (61), 123-128.

Al-Shami, H. A. A. (2008). Determinants of Insurance Companies Profitability in UAE. Master of Science in Finance, Universiti Utara Malaysia. Retrieved from http://ep3.uum.edu.my/256/

Amal, Y. , Sameer, A. , & Yahya, Z. (2012). Factors Affecting Jordanian Insurance Companies. *Journal of Management Research, 4*(2), 266 – 281.

Berhe, T. A. & Kaur, J. (2017) Determinants of insurance companies' profitability Analysis of insurance sector in Ethiopia. International Journal of Research in Finance and Marketing (IJRFM), Vol. 7 Issue 4, April - 2017, pp. 124~137

Bilal J., Khan, S. & Tufail, S. A. (2013) Determinants of profitability panel data evidence from insurance sector of Pakistan. *Elixir Financial Management (Elixir International Journal), 57 (A), 14377-14382.* Available online at www.elixirpublishers.com

Daniel, F. (2015). National Insurance Commission Report, on 17th February, 2015.

Ezirim, B. C. (2004) "Intermediation Operations and Profitability of Insurance Companies in Nigeria. A Comparative Analysis of ROE and ROA Performance Indices". Journal of Economics and Business Sciences. Vol. 2., No. 1, January, pp. 61 – 67.

Ezirim, B. C. (2004) *Risk and Insurance in Nigeria.* Port Harcourt: Markowitz Centre for Research and Development.

Ezirim, B. C. & Isitor, S. (2005) "Determinants of Insurance Investments in Nigeria: A Partial Adjustment Approach" The Union Digest (Official Blind-Reviewed Hard Print and Online Publication of the Research Department of Union Bank of Nigeria PLC, Lagos Nigeria), Vol. 9, Nos. 1 & 2, June, pp. 13 – 30.

Ezirim, B. Chinedu (1999) "Intermediation Functions of the Financial Superstructure: Evidence from Nigeria: *Doctoral Dissertation.* University of Port Harcourt.

Hifza, M (2011). Determinants of Insurance Companies' Profitability in Pakistan. *Journal of International Academic Research, 1*(3), 315-320.

Ibrahim, H. (2016) Assessment of Determinants of Insurance Companies' Performance in Nigeria. Unpublished Doctoral Thesis, Ahmadu Bello University Zaria, Nigeria

Mwangi, M., & Murigu, J. (2015). Determinants of Financial Performance in General Insurance Companies in Kenya. *European Scientific Journal,* 11(1).

Staikouras, C. K., & Wood, G. E. (2011). The determinants of European bank profitability. International Business & Economics Research Journal (IBER), 3(6).

Staikouras, C., & Wood, G. (2003). The Determinants of Bank Profitability in Europe. Paper presented at the European Applied Business Research Conference, Venice, Italy,

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.3902.
Ajala, A. O. (2017). Sexual Violence against Women in Marital Dyads, Prevalence, Correlates, and Consequences: Among the Ijesa of South-Western Nigeria. *Archives of Business Research, 5(12),* 63-77.

Sexual Violence against Women in Marital Dyads, Prevalence, Correlates, and Consequences: Among the Ijesa of South-Western Nigeria

Adebayo Olukunle Ajala
Nigerian Institute of Social and Economic Research
Ojoo, Ibadan, Nigeria;

ABSTRACT
Sexual violence is of a global public health concern. However, population-based studies of its determinants and reproductive health consequences remain scarce in Nigeria. The paper therefore sets to fill this gap. The results showed that 42.7% of all female respondents experienced sexual violence. The logistic regression results showed that religion, occupation, type of marital union, desire for another child, age at marriage, knowledge of husband's extra-marital relationship, the husband's education, occupation, spousal age difference, sleeping together with husband on same bed, couple sharing secrets are factors that significantly affects the chances of experiencing violence. Women who have experienced sexual violence significantly have more births, had higher prevalence of STIs than those who never experienced sexual violence. Endurance is the main coping strategy employed by women who have experienced sexual violence. In sum, sexual violence has negative reproductive health consequences on women. The results underscore the need to prevent its incidence.

Keywords: Sexual violence, Women, Ijesa, Marital Dyads

BACKGROUND OF THE STUDY

Violence against females is a major health and human rights concern. It is a global plague that takes place in public and private spaces [1]. Violence against women and girls occurs in every country and culture, and is rooted in social and cultural attitudes and norms that privilege male over female [2]. Partner violence is the most common form of violence against women globally [3]. It is estimated that 3 out of every 10 women above 15 years have some form of violence by an intimate partner at least once in their lifetime [4]. The reality is that there may be differences in the type and actual level of incidence of intimate partner violence across the various settings women may find themselves [5]. Intimate partner violence (IPV) in sub-Saharan Africa affects 36% of the population [6]. Nigeria is reported as being part of the countries with high incidence of gender-based violence in sub-Saharan Africa [7]. In Nigeria every woman can expect to be a victim of one form of violence at some point in her life [8].

The United Nations defines violence against women as 'any act of gender-based violence that results in, or is likely to result in physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or private life' [4]. Intimate partner violence refers to behaviour by an intimate partner or ex-partner that causes physical, sexual, or psychological harm, including physical aggression, sexual coercion, psychological abuse and controlling behaviours [4]. Thus, intimate partner violence (IPV)could be physical, emotional, sexual, psychological, or financial in nature and it occurs between intimate partners [9]. The focus of this paper is on sexual violence. Sexual violence is any sexual act, attempt to obtain a sexual act, or other act directed against a person's sexuality using coercion, by any person regardless of their relationship to the victim, in any setting. It includes rape, defined as the physically forced or otherwise coerced penetration of the vulva or anus with a penis, other body part or object [4]. At its most fundamental, sexual violence describes the deliberate use of sex as a weapon to demonstrate power over, and to inflict pain and humiliation upon, another human being.

Indeed, in an unspoken fashion, violence against women has been generally accepted as "understandable behaviour" with patriarchy lending credence to it through the continuous perpetuation of male dominance [10, 11]. The nature or severity of the effects of violence can be influenced by context-specific factors such as: poverty; gender inequality; cultural or religious practices; access to health, legal and other support services; conflict or natural disaster; HIV/AIDS prevalence; and legal and policy environments [2].

Anecdotal evidence suggests that in general intimate partner violence in Ijesaland is a malignant social phenomenon. Consequently, this paper explores the nature and prevalence of sexual violence in Ijesaland and the reproductive health consequences on women. Factors found to be associated with intimate partner and sexual violence occur within individuals, families and communities and wider society [4].

The consequences of violence against women generally cuts across age, culture, or socio-economic status, it is a public health problem [12, 13, 14]. Despite the increasing recognition that intimate partner violence is a global public health concern, population-based studies of intimate partner violence against women, its determinants and consequences remain scarce in developing countries [15]. Furthermore, the determinants of sexual violence against Nigerian women in marital dyads in general and the Ijesa women, as well as its consequences on reproductive health, are yet to be established. There is much that remains to be understood about the total set of possible negative reproductive health outcomes associated with intimate partner violence, especially in developing countries [16].

The importance of establishing the prevalence of intimate partner violence in general and associated patterns of risk is very crucial to addressing women's health and development [17]. There is increasing evidence to suggest that marital violence revolves around cultural definitions of appropriate sex roles and partners' expectations of each other's roles within relationships, particularly those related to wifely obedience and domestic service [18].

Some of the risk factors for perpetrating and experiencing intimate partner and sexual violence include: lower levels of education, exposure to child maltreatment, witnessing family violence, harmful use of alcohol, attitudes that are accepting of violence and gender inequality [4]. There is likely to be intimate partner violence in marital unions in which there is marital discord and dissatisfaction as well as couples that are having difficulties in communicating [4].

Violence against women by their male partners is widely condoned by many African societies because of the belief that men are superior and that the women with whom they live together are their possessions to be treated as the men considered appropriate [19, 20]. In Nigeria, women are often encouraged to stay in abusive relationships because of the cultural beliefs that a woman's place is with her husband and because divorced and separated women are not held in high social regard compared to women who remain in marriage [21].

The specific aims of the paper are to: explore the nature and prevalence of sexual violence against women; investigate the factors enhancing it; identify the reproductive health consequences of sexual violence on women; examine the strategies adopted by victims to avoid or cope with sexual violence; and make policy recommendations on ways of mitigating the incidence of sexual violence.

Materials and Methods

Data were drawn from a larger study of intimate partner violence and women's reproductive health carried out in Ijesaland, Osun State, Nigeria. The study population consists of ever married women between 15 to 49 years of age and ever married men in Ijesaland. The Ijesa is one of the sub-ethnic groups within the Yoruba ethnic group. The Ijesa people can be found in the south-eastern part of Osun State. Osun State is located in the South-west of Nigeria. The Ijesa can be found in seven LGAs namely; Atakumosa-East, Atakumosa-West, Boluwaduro, Obokun, Ilesa-East, Ilesa-West and Oriade. The traditional political centre of ijesaland is Ilesa [22]. The Ijesa are known in Yorubaland to be a brave and courageous people and are popularly called "Osomaalo". They are great traders, reputed to have introduced the hire-purchase system into the Nigerian business several years ago.

The sexual violence was captured with six items captured from the modified conflict tactics scale, which includes the woman being "verbally pressured or forced to have sex", "denied of sex as a form of punishment", "pressured for sex more often than would like to", "spouse become angry if the woman do not want to go along with his request for sex", "spouse forced her to have sex when her judgement was impaired", and "spouse infected her with a sexually transmitted infections". The female respondents were asked if their husbands had perpetrated any of the acts against them in the past 12 months preceding the survey. A score of 1 is given for the perpetration of each of the items capturing sexual violence, and zero if the act was not perpetrated. An index of sexual violence against women was computed by adding the scores for each of the items capturing sexual violence. There is said to be a case of sexual violence against women if there was at least a perpetration of any of the items capturing sexual violence. When there is a case of sexual violence a new variable measuring incidence of sexual violence is given a code 1 and zero otherwise. The analyses in this paper focuses on sexual violence and are based on information elicited from respondents from a population-based cross sectional survey. The prevalence of sexual violence in the past year before the survey is adopted. This is often thought to be a more accurate assessment of sexual violence because it reduces the assumption of less recall bias on the part of the respondent [23]. The unit of analysis consists of ever-married women. This is because a cross-sectional measure of sexual violence based solely on current intact relationships would under-represent shorter-term violent relationships, which may also involve more frequent or severe violence [15]. A sample size of 1,613 ever married females and 808 ever married men was drawn. The data being used in this paper are the female data set. After data cleaning 1,441 responses were analysed.

Conceptual Framework

The ecological model of factors associated with intimate partner violence helps in understanding the interplay of personal, situational, and socio-cultural factors that combine to cause intimate partner violence [24]. The innermost ellipse represents the biological and personal history that everyone brings to his or her behaviour in relationships. While the second shows the immediate context in which abuse takes place, the third represents the institutions and social structures in which relationship are embedded: neighbourhood, social networks, peer groups, and the workplace among others. The fourth outermost ellipse is the economic and social environment, including cultural norms. It should be mentioned that violence against women results from the interaction of various factors at different levels of the social environment.

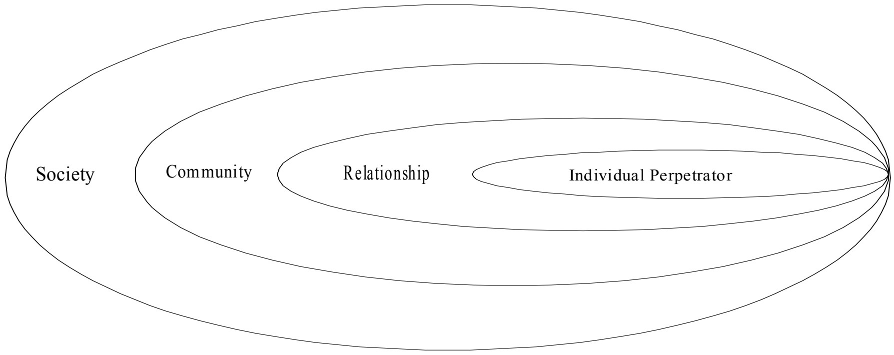


Fig 1: ECOLOGICAL MODEL OF FACTORS ASSOCIATED WITH intimate partner violence (Adapted from Heise (1998))

Studies have shown that younger age places women at relatively higher risk for intimate partner violence [25, 23, 13, 16, 26]. It is believed that delay in marriage by a woman would reduce her chances of experiencing intimate partner violence. Women who are separated, divorced, or widowed are more likely to experience intimate partner violence than currently married women [25, 23]. Childlessness has also been found to be associated with a significant higher risk of intimate partner violence [27]. Some studies have also shown that having 3 or more children is associated with intimate partner violence [25, 15, 17]. This may be explained by the fact that women with many children may be in relationships where negotiation about sex and birth control are difficult or practically impossible [2]. It may also be that such women have unintended pregnancies. Intimate partner violence and sexual violence can lead to unintended pregnancies and sexually transmitted infections, including HIV [4]. Unions that are either explicitly or implicitly polygamous[1] are more likely than monogamous unions to be characterized more by intimate partner violence [17].

Many studies have revealed a negative relationship between education of both partners and intimate partner violence [13, 26, 28]. There is a complex relationship between a woman's employment and intimate partner violence. An unemployed woman is significantly likely to experience sexual violence [25]. There are situations in which a woman's employment might increase marital conflict and violence against her [13], this happens more in unions where the man feels threatened of his perceived role as a "bread winner" as a result of the contributions of the woman to household maintenance. There also may be less violence when the woman is working, and the man is not, because in such situations the woman is responsible for the family needs and as such this may be a form of protection for her against intimate partner violence.

Marital duration has a significant effect on the chances of a woman experiencing intimate partner violence [27]. This is predicated on the fact that the length of stay in a union by a couple would enhance their ability to understand one another and would have been able to evolve a process of internal conflict resolution. Intimate partner violence is more common in urban areas than rural areas [13, 29].

[1] because of extramarital relationships on the part of the men

Marital intimacy[2] will reduce the chances of occurrence of intimate partner violence in general [15]. Family structure is a potentially important factor associated with intimate partner violence. Extended family residence is inversely associated with risk of intimate partner violence [27, 26]. There is likely to be less intimate partner violence where the living structure is nuclear. The presence of in-laws in the household may give rise to some conflict, but at the same time may also prevent violence [13].

Higher levels of education among husbands were significantly negatively associated with intimate partner violence [27]. Spousal age difference is an important variable in patriarchal settings, the larger the spousal age difference, the more difficult it may be for wives to express views contrary to their husband's and where this happens it engenders intimate partner violence [30].

Witnessing of violence between parents as a child emerges a strong predictor of subsequent intimate partner violence. This could be the result of poor emotional development or simply because of learning strategies to cope with conflict [27, 13, 15]. It is expected that past exposure to familial violence would be a significant determinant of intimate partner violence against women. Such women who witnessed violence between parents may construct attachment models along dominance-subordination and victim-perpetrator dimensions [15]. Women in unions where the man or the woman believes that a man has justifications for wife abuse will experience intimate partner violence. It is an important correlate of sexual violence [15]. Intimate partner violence has serious reproductive health consequences, including increased levels of STI and HIV/AIDS [31, 32, 33, 34, 35].

This paper tested the relationship between women's background characteristics on the chances of a woman experiencing sexual violence. It also tested if women who experienced sexual violence do not have more births than women who have not experienced sexual violence. Finally, the paper tested to see if there is a significant difference in the prevalence of sexually transmitted infections between women who have experienced intimate partner violence and those who have not.

FINDINGS

Socio-Demographic characteristics of the respondents

The proportion of men with at least secondary education is higher than the proportion of women with at least same level of education. Table 2.1 shows that a higher proportion of females than males do not have any formal education. Despite the differences in the level of education, a higher proportion of women than men are currently working. At least four out of every ten of the female respondents are into trading/business. A ranking of the proportion of respondents by their occupation shows that generally most of the men included in this study are artisans (28.7 per cent), farmers (19.3 per cent), traders/business men (16.1 per cent) and civil servants (16.1 per cent).

Majority of the male respondents are in monogamous unions while at least one-fifth of the female respondents are in polygynous unions. A good majority of the male and female respondents live together with their spouse.

The information on who decides on use of earnings of the respondent can be used as a measure of the status of the woman (her autonomy) and can also be an indication of level of patriarchal

[2] Marital intimacy was measured by asking the respondents whether she eats together with her husband; sleeps on the same bed with her husband; shares leisure with her husband; shares secrets with her husband.

control women are subjected to. Only 25.7 per cent of the female respondents have the final say on the use of their earnings, while 46 per cent take the decision on the use of their earnings jointly with their husbands. More than one-fifth of the female respondents still rely on their husbands to make the final decision on the use of their earnings. The situation is different among the male respondents only 4 per cent of the men rely on their wife to make the final decision on the use of their earnings. Even the proportion of men who jointly make decision on use of earnings with their wives is lower than the proportion of women who jointly make similar decision with their husbands.

Table 2.1Percent distribution of respondents by selected background characteristics

Characteristics	Women (1441)	Men (743)
Education level attained		
No formal	15.6	8.3
Primary	26.3	20.3
Secondary	31.5	36.1
Tertiary	24.9	33.8
Others	1.7	0.3
No response	-	1.2
Currently working	95.1	92.2
Occupation[3]		
Trading/Business	43.6	16.1
Farming	7.3	19.3
Professional[4]	5.6	5.0
Artisans	12.2	28.7
Teaching	13.6	9.0
Civil servants	10.2	16.1
Others	1.8	2.5
No response	5.7	3.4
Type of marriage		
Monogamy	78.1	90.3
Polygyny	21.9	9.7
Living pattern with spouse[5]		
Living together	81.5	93.0
Living separately	18.5	7.0
Decision on use of earnings		
Self	25.7	55.5
Partner	24.4	4.0
Jointly with partner	46.0	38.1
Someone else	0.5	0.3
No response/Missing	3.4	2.1
Total (N)	100.0 (1441)	100.0 (743)

Source: Field Survey, 2004

Prevalence of Sexual violence by Background Characteristics of the Respondents

The results in Table 2.2 show that 42.7 per cent of the respondents experienced sexual violence. The prevalence of sexual violence cuts across the various age groups but highest among women who are 35-39years and those 45-49years. The prevalence of sexual violence is higher among those residing in the urban areas relative to those in the rural areas. Women in polygynous unions experienced higher prevalence of sexual violence relative to those in monogamous unions. The results also show that prevalence of sexual violence reduces with delay in marriage. Prevalence of sexual violence is least among Muslim women, and highest among Catholic faithfuls. The result also show that prevalence of sexual violence increases

[3] This includes only those currently working
[4] This includes bankers, lawyers, doctors, nurses, accountants
[5] For widows, the response is while the late spouse was alive

with higher children ever born (CEB). Women who have been married for at least 10 years, experience more sexual violence than women who have been married for less than 10years[6]

Prevalence of sexual violence is highest among women in unions where the couple are not educated and union in which only the husband is educated (Table 2.3). The level of education of the woman does appear to reduce the chances of her experiencing sexual violence. The higher the age difference between the husband and his wife the higher the chances of women in such unions experiencing sexual violence. Women in unions in which the couple eats together or sleeps on the same bed have slightly higher chances of experiencing sexual violence than unions in which the couple shares leisure or secrets together.

Table 2.2: Background Characteristics of respondents who have experienced sexual violence

Characteristics		Percentage	Total Number of women
Age	Below 25yrs	37.5	120
	25-29yrs	38.9	347
	30-34yrs	38.9	375
	35-39yrs	50.4	270
	40-44yrs	43.1	202
	45-49yrs	55.9	118
	Don't know	11.1	9
Place of residence	Urban	47.6	1169
	Rural	22.1	272
Highest level of education	No formal	50.2	225
	Primary	44.1	379
	Secondary	38.3	454
	Tertiary	41.8	359
	Others	50.0	24
Job status	Currently working	43.2	1370
	Not working	33.8	71
Marital status	Currently married	41.3	1328
	Divorced/separated	68.6	86
	Widowed	33.3	27
Type of marital union	Monogamous	38.7	1126
	Polygynous	57.1	315
Age at current marriage	15-19years	39.7	131
	20-24years	42.9	473
	25-29years	40.9	492
	30+ years	36.0	125
	Don't know	52.3	220
Religion/Denomination	Catholic	55.9	374
	Protestant	30.3	277
	Pentecostal	44.0	423
	Islam	34.7	291
	Others	47.4	76
Total number of children ever born	None	41.3	63
	1-2	34.2	558
	3-4	47.6	609
	5+	51.7	211
Marital duration	0-4years	37.1	342
	5-9years	38.1	378
	10-14years	40.9	269
	15+ years	53.1	226
	No response	50.9	226
TOTAL		42.7	1441

Source: Field survey, 2004

[6] This may be due to a failure of the couples to realise the fact that marriage is not just for procreation

Table 2.3: Couple Characteristics of women who have experienced Sexual Violence

Characteristics		Percentage	Total Number of women
Educational disparity	Couple not educated	51.7	89
	Wife only educated	39.4	66
	Husband only educated	50.4	131
	Couple educated	41.4	1124
Spousal age difference	0-4years	35.8	516
	5-9years	43.8	514
	10-14years	55.6	135
	15+ years	49.5	95
	No response	43.6	181
Employment Disparity	Husband alone works	32.4	68
	Wife alone works	26.4	72
	Couple works	44.3	1293
	Couple not working	66.7	3
	No response	0.0	5
Couple eats together	Yes	42.3	822
	No	43.3	619
Couple sleeps on same bed	Yes	42.2	983
	No	43.9	458
Couple shares leisure together	Yes	41.7	964
	No	44.9	477
Couple shares secrets together	Yes	40.4	1090
	No	50.1	351

Source: Field survey, 2004

Factors Enhancing Sexual Violence

Logistic regression[7] is used to determine the factors that have effect on a woman's risk of experiencing sexual violence. The results of the Logistic regression show that women residing in the rural areas are significantly less likely to experience sexual violence relative to those who reside in the urban areas. The incidence of sexual violence cuts across the different age strata. A woman's odds of experiencing sexual violence increases with age, peaking at age 35–39 years. It should be noted that it is within the age range 25 to 39 that issues of contraception, when to have sex and choice of having more children are prominent, which may explain why women in this age range have significantly higher odds of experiencing intimate partner violence (Table 2.4).

Women who are currently married are significantly less likely to experience sexual violence relative to women who have been separated or divorced. The odds of experiencing sexual violence decreases with delay in marriage. Incidence of sexual violence increases as the spousal age difference increases and with every additional child. Women who do not want more children are twice and two fifth times as likely to experience sexual violence as women who want more children.

Women in unions where the couple are not educated are the least likely to experience sexual violence, the reverse is the case when the couple is educated. Women in unions where only the husband is working are more likely to experience sexual violence. The incidence of sexual violence is higher in polygynous unions than in monogamous unions. The odds ratio of a woman experiencing sexual violence declines with marital duration.

Women who eat together with their husbands are less likely to experience sexual violence relative to those who do not eat together, even though it is not statistically significant. Sleeping

[7] The Logistic regression is useful for situations in which one wants to be able to predict the presence or absence of a characteristic or outcome based on values of a set of predictor variables.

on the same bed and having leisure together significantly enhance the chances of a woman experiencing sexual violence relative to a woman who does not sleep on the same bed with her husband or does not share leisure together with her husband. The chance of experiencing sexual violence is significantly reduced in unions where there are 'no secrets' between husband and wife.

Table 2.4: Multivariate Analysis of the Predictors of Intimate Partner Violence

Characteristics	Categories	B	Odds Ratio
Age	Below 25 (r)		
	25-29	0.53*	1.704
	30-34	0.64*	1.889
	35-39	0.90+	2.460
	40-44	0.51	1.659
	45-49	0.65	1.914
Age at current marriage	15-19 (r)		
	20-24	0.12	1.125
	25-29	-0.01	0.989
	30+	-0.22	0.804
Marital Status	Separated/Divorced (r)		
	Currently married	-0.90*	0.408
	Widow	0.53	1.700
Parity		0.10	1.100
Type of marriage	Monogamous	-0.61+	0.543
	Polygamous (r)		
Highest level of education	No formal (r)		
	Primary	-0.55	0.575
	Secondary	-0.48	0.617
	Tertiary	-0.39	0.678
Occupation	Agriculture (r)		
	Trading	-0.58*	0.559
	Professional	0.34	1.405
	Artisan	-0.51	0.603
	Teaching	-0.75*	0.475
	Civil Servant	-0.51	0.604
	Other	-0.42	0.658
Religion	Pentecostal (r)		
	Catholic	-0.11	0.899
	Protestant	-0.30	0.738
	Islam	-0.22	0.801
	Other	-0.55	0.579
Partner's involvement in extramarital relationship	Yes (r)		
	No	-1.75+	0.174
Desire for more children	Yes (r)		
	No	0.875+	2.398
Husband's education level	No formal (r)		
	Primary	-0.33	0.721
	Secondary	-0.35	0.707
	Tertiary	-0.45	0.637
Husband's occupation	Agriculture (r)		
	Trading	-0.17	0.847
	Professional	0.67*	1.956
	Artisan	0.26	1.298
	Teaching	-0.20	0.823
	Civil Servant	0.19	1.211
	Other	0.16	1.174
Spousal age difference	0-4 (r)		
	5-9	0.30*	1.353
	10-14	0.52*	1.678
	15+	1.07+	2.907
Spousal educational difference	Wife only educated (r)		
	Both no education	-0.29	0.745
	Husband only educated	0.02	1.021
	Both educated	0.76	2.148

Spousal occupational difference	Both not working (r)		
	Wife only working	-1.23	0.292
	Husband only working	0.13	1.142
	Both working	0.08	1.080
Marital duration	0-4 (r)		
	5-9	-0.36	0.700
	10-14	-1.05^{+}	0.349
	15+	-0.71*	0.490
Marital intimacy	eat together	-0.20	0.816
	sleeps on same bed	0.67^{+}	1.948
	have leisure together	0.54^{+}	1.708
	share secrets	-0.71^{+}	0.492
Residence	Urban (r)		
	Rural	-0.58^{+}	0.559
Family structure	Non-nuclear (r)		
	Nuclear	0.63*	1.886
People residing in the household	Sibling-in-law	0.55*	1.728
	Siblings	0.46	1.582
	Parent-in-laws	1.02^{+}	2.774
	Parent	0.13	1.143
	Other relatives	0.28	1.319
	Non relatives	0.56	1.748
Witnessing of violence while growing up	Yes (r)	0.71^{+}	2.027
	No		
Gender attitude	Gender positive (r)		
	Gender Negative	0.29*	1.341
Constant			1.962
-2 log likelihood			1455.85^{+}
Nagelkerke R square			0.344^{+}
Number of women			1441
Classification			75.1

Source: Field Survey, 2004
(r) – reference category

Incidence of sexual partner violence is higher in households in which no person outside the nuclear family members resides with the couple, relative to households in which there is at least a person outside the nuclear family. The results in the Logistic regression show that women who are not aware of their husband's involvement in extra marital relationships are significantly less likely to experience sexual violence relative to those who know that their husband are involved with extra marital relationships. Women who witnessed physical violence between their parents are more likely to experience sexual violence in their unions than the women who never saw any act of physical violence between their parents while growing up.

Reproductive Health Consequences of Intimate Partner Sexual Violence

Sexual violence has serious reproductive health consequences, but those examined in this paper include; number of births, and infection with STIs. The direction of causality between sexual intimate partner violence and higher fertility is unclear even though research has shown that there is an association between intimate partner violence and higher fertility [36]. Women who experience physical intimate partner violence or forced sexual intercourse by any perpetrator appear to be at greater risk of unintended or unwanted pregnancy than women with no history of abuse, both in the short term and over the course of their reproductive lives [2].

The results in Table 2.5 show that ever-married women age 15-49 years who have experienced sexual violence have a higher number of children ever born relative to those who never experienced sexual violence.

Overall, the data suggests that fertility for women who have ever experienced sexual violence is higher than that for women who have never experienced sexual violence, irrespective of their age. An independent samples t-test was carried out to test the null hypothesis that women who have experienced sexual violence do not have more births than women who have never experienced sexual violence. The results show that there is a significant difference in the number of births between women who have experienced sexual violence and those who have never experienced sexual violence (Table 2.6). This implies that reduction of sexual violence (or a more harmonious partner relationship) may facilitate or engender fertility decline over time.

Table 2.5: Mean number of children ever born to ever-married women age 15-49 by age in years, according to whether they have ever experienced sexual violence by their husband or not

Experience of violence	Age groups							Ever married women 15-49
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
Ever experienced	1.00	1.56	2.17	2.98	3.56	3.89	4.32	3.09
Never experienced	1.00	1.49	1.97	2.68	3.44	3.77	2.63	2.73

Source: Field Survey, 2004

Table 2.6: Mean Number of Children to Women by whether or not they experienced Sexual Violence and summary of Independent Samples test comparing the means

	Mean Number of Children	Std Deviation
Experienced Intimate Partner Violence	3.09	1.63
Never experienced Intimate Partner Violence	2.73	1.53
t-test	-4.358^{***}	
degree of freedom	1439	

Source: Field Survey, 2004
***** $p < 0.01$**

Research suggests that there is a positive association between sexually transmitted infections(STIs) and sexual violence resulting from forced sex among women who are abused by their male partners, and relative inability to negotiate and use condoms [37, 38]. Research has also shown that women who had been physically or sexually abused were 1.5 times more likely to have a sexually transmitted infection compared to women who have not experienced partner violence [4]. Every woman was asked whether they had been infected with a STI in the last 12 months by their husband. Table 2.7 shows how this self-reported prevalence of STIs varies by the violence status of women. The prevalence of STIs among women who have experienced sexual violence is much higher than among women who have never experienced sexual violence. In testing the relationship between the prevalence of STIs and sexual violence, it was hypothesized that there is no significant relationship between sexual violence and STIs. The results as in Table 2.8 show that the Pearson Chi-square of 90.457 is statistically significant ($p< 0.01$), thus the null hypothesis that there is no significant relationship between sexual violence and STIs was rejected, while the alternate hypothesis which states that there is a significant relationship between sexual violence and STIs is accepted.

Table 2.7: Percentage distribution of ever-married women who reported having an STI according to whether they have ever experienced sexual violence in the past 12 months or not

Experience of violence by husband	Percentage who had an STI	Number of women
Ever experienced	24.4	616
Never experienced	0.5	825

Source: Field Survey, 2004

Table 2.8: Relationship between Having a Sexually Transmitted Infection and Experiencing of Sexual Violence

Had STI infection in the past 12 months	Victimization of Sexual violence	
	Never victimized	Victimized
No	99.5 (821)	75.6 (466)
Yes	0.5 (4)	24.4 (150)
Total	100.0 (825)	100.0 (616)

Source: Field Survey, 2004 Pearson
Chi-Square= 210.45 p=0.000

Coping Strategies

The results in Table 2.9 show that endurance is the main coping strategy adopted by women who have experienced sexual violence. The next two coping strategies employed are resorting to prayers and resolution of the issue. The endurance approach is premised on three basic assumptions namely; the incidence of violence will cease one day; for the sake of her children a woman should stay in a violent relationship, and the couple should be patient with each other.

Table 2.9: Percentage distribution of respondents by the Coping Strategies generally adopted by victims of intimate partner sexual violence in the 12 months preceding the survey

Strategies	Percentage
Endure	40.1
Separate	2.8
Physical violence	0.5
Reporting to elders/religious clerics	0.8
Verbal violence	0.3
Resolving the issue	4.2
Indifferent	1.8
Prayer	10.7

Source: Field Survey, 2004

Limitations

The experience of sexual violence was measured in the context of the 12 months before the survey and not for the life time of the respondents. The fact that a woman did not experience sexual violence in the past 12 months does not imply that such a woman has never experienced any acts of sexual violence, or that she is precluded from experiencing sexual violence soon. Also, like in many studies of this nature, the study may not have accurately measured the number of women who have been abused, but rather the number of women who are willing to disclose abuse. The fact that the data for this study are cross-sectional, temporal relationship between sexual violence and a covariate measuring an event that clearly predates its occurrence cannot be established. Also, the cross-sectional design of the data required relying on respondents' ability to recall violent experiences and on respondents' willingness to disclose this information.

CONCLUSION

The findings confirm the fact that sexual violence is prevalent in the study area and it cuts across age, status, and education as in many other places. The chance of experiencing sexual violence decreases with delay in marriage. This could be because a woman who married late would have been exposed to the methods of handling conflicts in intimate relationships. Part of the reasons why sexual violence is high in marital unions where the husband and wife are educated could be due to cultural stereotypic attitudes and expectations on the part of the man about the subservience of woman to man. Thus, patriarchy is at the core of the reasons for the incidence of sexual violence. The presence of in-laws enhances the incidence of sexual violence. This is because most in-laws have the tendencies of passing negative comments about the wife of their son or sibling. The negative comments often serve as catalysts to intimate partner violence.

The reason the fertility of women who had experienced sexual violence is higher than those who never experienced sexual violence may be that such women have discontinued use of contraception. This is because the woman turning down the husbands' sexual advances is one of the commonest acts of sexual violence. The higher prevalence of STIs among women who have experienced sexual violence may be linked to the husbands being involved in extra-marital relationships. The conclusion to be drawn from the findings is that sexual violence has negative reproductive health consequences on women.

RECOMMENDATIONS

The focus of the recommendations is the prevention of the incidence of sexual violence and reducing the severity of its consequences. The issue of sexual violence in intimate relationships need be tackled at different levels. At the individual level, there is the need to encourage educational programmes that provide adolescents and young adults with vocational training and educational support, or social development programmes to teach very young person social skills, anger management and conflict resolution, to prevent violence later in life. This should be targeted at changing the beliefs and behaviours of individuals. Indeed, parents should endeavour to give their daughters education to the tertiary level. This would also ensure that women do not go into marriage at an early age, to reduce their chances of experiencing sexual violence. At the relationship level, there could be training on effective communication skills; there should also be mentoring programmes to match young persons with caring adults to prevent antisocial behaviour; and home visitation programmes.

At the community level efforts should be geared towards raising public awareness about violence, stimulating community action and providing care and support for victims. These could include media campaigns to target entire communities or educational campaigns for settings such as schools, workplaces, and other institutions. Such programmes may be enhanced by appropriate training for health professionals to help them identify and respond better to different types of violence. At the community level also, women should be encouraged to marry men who are of the same age bracket with them.

References

United Nations Women (2015). Infographics: Violence against Women. Retrieved from http://www.unwomen.org/en/digital-library/multimedia/2015/11/infographic-violence-against-women

World Health Organization (2012) Understanding and addressing violence against women www.who.int/reproductivehealth/publications/violence/en/index.html retrieved July 24, 2017

Heise, L. (2011) What Works to Prevent Partner Violence? An Evidence Overview. London: Department for International Development (DFID).

World Health Organization (2014) Violence against women: Intimate partner and sexual violence against women Fact Sheet. Department of Reproductive Health and Research, World Health Organization Avenue Appia 20, CH-1211 Geneva 27, Switzerland.

Fulu, E and L. Heise (2015) What works to prevent violence against women and girls evidence reviews Paper 1: State of the field of research on violence against women and girls. What works to Prevent Violence

McCloskey, L.A., Boonzaier, F., Steinbrenner, S.Y. and T. Hunter (2016) Determinants of Intimate Partner Violence in sub-Saharan Africa: A Review of Prevention and Intervention Programs. Springer Publishing Company http://dx.doi.org/10.1891/1946-6560.7.3.277

Amnesty International (2005). Unheard Voices. Retrieved May 21, 2007 at http://web.amnesty.org/library/index/engafr440042005

Okemgbo C.N., Omideyi A.K, and Odimegwu C.O. (2002) "Prevalence, patterns and correlates of domestic violence in selected Igbo communities in Imo State, Nigeria". African Journal of Reproductive Health, 6 (2002): 101-114

Sprague S, Slobogean GP, Spurr H, McKay P, Scott T, Arseneau E, Memon, M, Bhandari, M and A, Swaminathan. (2016) A Scoping Review of Intimate Partner Violence Screening Programs for Health Care Professionals. PLoS ONE 11(12): e0168502. doi:10.1371/journal. pone.0168502

Dickstein, L.J. (1988): "Spouse abuse and other domestic violence." Psychiatric Clinics of North America, 11(4):611-628

Inter-African Committee on Traditional Practices affecting the Health of Women and Children Newsletter 1995. Violence against women 17:5.

Cherniack, D., Grant, L., Mason, R., Moore, B. and R. Pellizari (2005) "Intimate Partner Violence Consensus Statement" Journal of Obstetrics and Gynaecology April 157: 365-388.

Naved, R.T. and L. A. Persson (2005) "Factors associated with spousal physical violence against women in Bangladesh". Studies in Family Planning, 36(4):289-300.

Krug, E.G., Dahlberg, L.L., Mercy, J.A., Zwi, A.B. and R. Lozano [eds.] (2002) World report on violence and health. Geneva: World Health Organization.

Gage, A.J. (2005) "Women's experience of intimate partner violence in Haiti" Social Science and Medicine, 61(2005):343-364.

Parish, W.L, Wang, T, Laumannn E.O, Luo, Ye, and Pan S. (2004) "Intimate partner violence in China: National prevalence, risk factors and associated health problems" International Family Planning Perspectives 30(4):174-181.

McCloskey, L.A., Willaims, C, and Larsen U. (2005). "Gender inequality and intimate partner violence among women in Moshi, Tanzania". International Family Planning Perspectives, 31(3): 124-130.

Ezeh, A.C. and Gage A.J. (1998): "The Cultural and Economic Context of Domestic Violence in Uganda". Paper presented at the 1998 Annual Meeting of the Population Association of America, Chicago, Illinois, April 1-4.

Kiragu, J. (1995): "HIV Prevention and Women's Rights: Working for One Means Working for Both". AIDScaptions, November Vol II. No. 3

United Nations Centre for Social Development and Humanitarian Affairs [UNCSDHA] (1993), Strategies for confronting Domestic Violence: A Resource Manual, New York: United Nations.

Odujinrin, O. (1993): "Wife battering in Nigeria". International Journal Of Gynecology And Obstetrics, May; 41(2)159-64.

Aluko, J. O. (1993). Osomalo: The early exploits of the Ijesa entrepreneur. African Book Builders Ltd. Ibadan.

Xiao, X, Zhu, F., O'Campo, P., Koenig, M.A., Mock, V. and J. Campbell (2005) "Prevalence of and risk factors for intimate partner violence in china". American Journal of Public Health, 95(1):78-85.

Heise, L. Ellsberg, M. and Gottemoeller, M. (1999): Ending violence against women Population Reports, Series L, No 11. Baltimore, Maryland: Johns Hopkins University School of Public Health, Population Information Program.

Ruiz-Perez, I. J. Plazaola-Castano, M. Alvarez-Kindelan, M Palomo-Pinto, M. Analte-Barrera, A. Bonet-Pla, M.L. De Santiago-Hernando, A. Herranz-Torrubiano, and L.M. Garralon-Ruiz (2006) "The Gender Violence Study Group". American Epidemiology Journal, 2006(16):357-363.

Koenig, M.A., Ahmed, S.R, Hossain M.B., and A.B. M.K.A. Mozumder (2003). "Individual and community-level determinants of domestic violence in rural Bangladesh" Demography, 40: 269-288

Koenig, M.A., Stephenson R., Ahmed, S. R., Jejeebhoy, S.J. and J. Campbell (2006). "Individual and Contextual Determinants of Domestic Violence in North India" American Journal of Public Health, 96(1):132-138

Haj-Yahia, M.M. (2000) "The Incidence of wife abuse and battering and some sociodemographic correlates as revealed by two national surveys in Palestinian society" Journal of Family Violence, 15(4) 347-374.

Hindin M.J and L.S. Adair (2002): "Who's at risk? Factors associated with intimate partner violence in the Philippines". Journal of Social Science and Medicine 55(2002):1385-1399.

Oyediran K. A. and U.C. Isiugo-Abanihe (2005) "Perceptions of Nigerian Women on Domestic Violence: Evidence from 2003 Nigeria Demographic and Health survey". African Journal of Reproductive Health, 9 (2005): 38-53

Diop-Sidibe, N. Campbell, J.C. and Stan Becker (2006) "Domestic violence against women in Egypt – wife beating and health outcomes" Journal of Social Science and Medicine 62 (2006) 1260-1277.

Stephenson, R. Koenig, M.A and S. Ahmed (2006): "Domestic Violence and Contraceptive Adoption in Uttar Pradesh, India". Studies in Family Planning, 37(2): 75-86.

Pallitio, C.C. and O'Campo, P. 2004. The relationship between intimate partner violence and unintended pregnancy: Analysis of a national sample from Colombia. International Family Planning Perspectives 30.4:165-173.

Pallitio, C.C. and O'Campo, P. 2005. Community level effects of gender inequality on intimate partner violence and unintended pregnancy in Columbia: Testing the feminist perspective. Social Science and Medicine 60: 2205-2216.

Hathaway, J.E, Willis, G., Zimmer, B and J.G. Silverman (2005) "Impact of Partner Abuse on Women's Reproductive Lives" Journal of the American Medical Women's Association, 60(1) 42-45.

Kishor, S. and K. Johnson (2004) Profiling Domestic Violence A Multi-Country Study. Calverton, Maryland: ORC Macro

Campbell, J.C. (2002): "Health consequences of intimate partner violence". Lancet 359: 1331-1336.

Cohen, M., C. Deamant, S. Barkan, J. Richardson, M. Young, S. Holman, K. Anastos, J. Cohen, S. Menick. (2000). "Domestic violence and childhood sexual abuse in HIV-infected women and women at risk for HIV". American Journal of Public Health Vol. 90, No. 4:560-565.

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.3909.
Paulinus, E. C., & Jones, A. S. (2017). Financial Risk Management And Corporate Performance Of Deposit Money Banks In Nigeria. *Archives of Business Research, 5(12),* 78-87.

Financial Risk Management And Corporate Performance Of Deposit Money Banks In Nigeria

Ezelibe Chizoba Paulinus
Department of Accountancy
Nnamdi Azikiwe University, Awka, Anambra State, Nigeria

Aniefor Sunday Jones
Department of Accountancy
Delta State Polytechnic, Ozoro, Nigeria

ABSTRACT
Effective risk management system will minimize the complexities involved in planning, executing and controlling overall running of a business which is critical to success and this maximizes profitability in a business. This study examined the effect of financial risk management on the corporate performance of deposit money banks in Nigeria. In order to achieve the objective of the study, data were extracted from annual reports and accounts of fifteen (15) deposit money banks quoted on the Nigerian stock exchange, the period covered in the study is 2012-2016. Data for financial risk management proxied by bank size was extracted and corporate performance was represented by return on equity. In testing the research hypothesis, the study adopted both descriptive statistics and simple regression techniques analyzed with the aid of Statistical Package for Social Sciences (SPSS) version 20. The findings revealed that bank size have insignificant effect on the return on equity of deposit money banks in Nigeria during the year under review. Consequent upon this study, it was recommended that the CBN and other regulators should endeavor to enforce risk identification, assessment, measurement and control mechanism, in line with best global practices in other to avoid financial crisis and also improve on banks' performances.

Keywords: Financial risk, bank size, returns of equity, financial performance

INTRODUCTION

The complexity of business operation in the modern world is not as simple; because financial institutions are faced with various types of risk that threatened their existence and the miss-management or the poor management of risk has a greater influence on the financial performance of any financial institution (Olalere& Wan 2016). As a developing country, many banks has failed in Nigeria since the inception of banking and financial institutions, and the main problem in the sector has been identified as poor risk management practices. As a result of this, the integration of risk management into the commercial bank systems, processes and culture is of crucial importance.

Banks that manage their risks have a competitive advantage. They take risks consciously, anticipate adverse changes and protect themselves from such changes. According to the Basel committee on banking supervision (2001), risk management comes with setting appropriate risk environment to protect the banks from adverse outcome or risk exposure. These can be achieved through, the identification of events into one or more broad categories of market, credit, operational and other risks, assessment of risks using data and risk model, monitoring and reporting of the risk assessments on a timely basis and the control of these risks by senior management. Therefore, risk is the chance of something or an event happening that will have an effect upon set goals that is unexpected and unforeseen. Put differently risk is the possibility of deviation from a planned outcome or goal (Olalere & Wan 2016). However, financial institutions that embed risk management practices into business planning and performance management are more likely to achieve strategic and operational objectives. Conducting an enterprise risk assessment can help to prioritize and identify opportunities for improvement.

Banks and other financial intermediaries are at the heart of the world's recent financial crisis. The deterioration of their asset portfolios, largely due to distorted credit management, was one of the main structural sources of the crisis (Fries, Neven and Seabright, 2002; Kashif, 2008 and Sanusi, 2010) as quoted by Uwuigbe (2011). To a large extent, this problem was the result of poor corporate governance in countries' banking institutions and industrial groups. Quoting Schjoedt (2000) in (Uwuigbe 2011) observed that this poor corporate governance, in turn, was very much attributable to the relationships among the government, banks and big businesses as well as the organizational structure of businesses.

Banking crisis in Nigeria has shown that not only do banks often take excessive risks, but also the risks differ across banks (Joel 2013). Al-Tamimi and Al-Mazrooei (2007) notes that in today's dynamic environment, all banks are exposed to a large number of risks such as credit, liquidity risk, foreign exchange risk, market risk and interest rate risk, among others- the risk which may create some source of threat for a bank's survival and success. Against this background, the pertinent research question is, what level of effect does financial risk have on the corporate performance of deposit money banks in Nigeria? It is the aim of this study to provide an answer to this research question.

LITERATURE REVIEW

Conceptual Framework

Risk is often defined as a probability or threat of damage, injury, liability, loss, or any other negative occurrence that is caused by external or internal vulnerabilities, and that may be avoided through preemptive action. Risk is a function of the likelihood of something happening and the degree of losing which arises from a situation or activity. Losses can be direct or indirect. For example, an earthquake can cause the direct loss of buildings. Indirect losses include lost reputation, lost customer confidence, and increased operational costs during recovery. The chance of something happening will impact the achievement of objectives (Basel Committee on Banking Supervision 2005).

Risk management is simply a practice of systematically selecting cost effective approaches for minimizing the effect of threat realization to the organization. All risks can be never fully avoided or mitigated simply because of financial and practical limitations (Moteff, 2005). Risk management is defined as the identification, assessment, and prioritization of risks followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events or to maximize the realization of opportunities Risks can come from uncertainty in financial markets, project failures, legal liabilities, credit risk, accidents, natural causes and disasters as well as deliberate attacks from an adversary. The strategies to manage risk include transferring the risk to another party, avoiding the risk, reducing the negative effect of the risk, and accepting some or all of the consequences of a particular risk (Hubbard, 2009).

Effective risk management system will minimize the complexities involved in planning, executing and controlling overall running of a business which is critical to success and this maximizes profitability in a business. A customer is happy and secure when he/she invests in a risk free business and wants to be equally happy on each further occasion. Therefore, risk management and profitability are closely related aspects and need to be handled with extra emphasis if a business is to hit high profitability over a given period (Gizycki, 2001).

Generally, the financial system is more than just institutions that facilitate payments and extend credit. It encompasses all functions that direct real resources to their ultimate user. It is the central nervous system of a market economy and contains a number of separate, yet co-dependent, components all of which are essential to its effective and efficient functioning. These components include financial intermediaries such as banks and insurance companies which act as principal agents for assuming liabilities and acquiring claims. The second component is the markets in which financial assets are exchanged, while the third is the infrastructural component, which is necessary for the effective interaction of intermediaries and markets. The three components are inextricably intertwined (Adeoye & Amupitan2015).

Increasing shareholders' return epitomizing bank performance is one major objective of bank management. The objective often comes at the cost of increasing risk. Bank faces various risks such as interest risk, market risk, credit risk, off balance risk, technology and operational risk, foreign exchange risk, country risk, liquidity risk, and insolvency risk (Tandelilin, Kaaro, Mahadwartha, & Supriyatna, 2007). The bank's motivation for risk management comes from those risks which can lead to bank underperformance. Issues of risk management in banking sector have greater impact not only on the bank but also on the economic growth (Tandelilin et al, 2007).

Tai (2004) concludes that some empirical evidence indicates that the past return shocks emanating from banking sector have significant impact not only on the volatilities of foreign exchange and aggregate stock markets, but also on their prices, suggesting that bank can be a major source of contagion during the crisis. Banks which better implement the risk management may have some advantages: (i) It is in line with obedience function toward the rule; (ii) It increases their reputation and opportunity to attract more wide customers in building their portfolio of fund resources; (iii) It increases their efficiency and profitability. Cebenoyan and Strahan (2004) find evidence that banks which have advanced in risk management have greater credit availability, rather than reduced risk in the banking system. The greater credit availability leads to the opportunity to increase the productive assets and bank's profit.

Risk Management Process

The banking industry is no doubt a regulated sector as a result of the riskiness of its operation. Consequently, risk management in banks is fast becoming a discipline that every participants and players in the industry need to align with. Risk management process as noted by Soyemi, Ogunleye and Ashogbon (2014) involves:

i. Risk identification: In order to properly manage risks, an institution must recognize and understand risks that may arise from both existing and new business initiatives; for example, risks inherent in lending activity include credit, liquidity, interest rate and operational risks. Risk identification should be a continuing process, and should be understood at both the transaction and portfolio levels.
ii. Risk Measurement: Once risks have been identified, they should be measured in order to determine their impact on the banking institution's profitability and capital. This can be done using various techniques ranging from simple to sophisticated models. Accurate and timely measurement of risk is essential to effective risk management systems. An institution that does not have a risk measurement system has limited ability to control or monitor risk levels. Banking institutions should periodically test

their risk measurement tools to make sure they are accurate. Good risk measurement systems assess the risks of both individual transactions and portfolios.

iii. Risk Monitoring: Institutions should put in place an effective management information system (MIS) to monitor risk levels and facilitate timely review of risk positions and exceptions. Monitoring reports should be frequent, timely, accurate, and informative and should be distributed to appropriate individuals to ensure action, when needed.

iv. Risk Control: After measuring risk, an institution should establish and communicate risk limits through policies, standards, and procedures that define responsibility and authority. These limits should serve as a means to control exposure to various risks associated with the banking institution's activities. Institutions may also apply various mitigating tools in minimizing exposure to various risks. Institutions should have a process to authorize and document exceptions or changes to risk limits when warranted.

Banking Risks

Basel II is the second of the Basel Accords, recommendations on banking laws and regulations issued by the Basel Committee on Banking Supervision. In accordance with Basel II, the following are types of risks (alongside their measurement and management techniques) usually found in the banking organization. They include:

a) Credit risks: Also known as default risk, is one of the oldest. It is the most vital forms of risk faced by banks as financial intermediaries (Broll, Pausch, &Welzel, 2002). It is the potential loss arising from the failure of a borrower to meet its obligations in accordance with agreed terms.
b) Market risks: It is risk in volatility in the market that affects the bank's return. It is the risk of loss from adverse movement in financial market rates (interest and exchange rate) and bond, equity or commodity prices. A bank's market risk exposure is determined by both the volatility of underlying risk factors and the sensitivity of the bank's portfolio to movements in those risk factors (Hendricks & Hirtle, 1997 in Zahangir & Masukujj, 2011).
c) Operational risk: Is the potential financial loss as a result of breakdown in day to day operational processes. It can arise from failure to comply with policies, laws and regulations, from fraud or forgery (Njogo, 2012). These include direct and indirect laws resulting from inadequate of fail internal processes, people and systems or from external event (note operational risk in relation to the control environment is accesses within the relevant control sections).

Other risks that is consequent upon the second pillar of the Basel II and which provides a framework for dealing with all the other risks. According to Njogo, 2012, these risks among others include liquidity risk (is the ability of a bank to fund increases in assets and meet obligation as they come due, without incurring unacceptable losses. The fundamental role of banks in the maturity transformation of short-term deposit into long-term loans makes banks inherently vulnerable to liquidity risk. Effective liquidity risk management helps ensure cash flow obligations, which are uncertain as they affected by external events and other agents behavior.), interest rate risk (risk borne by an interest –bearing asset, such as a loan or a bond, due to variability of interest rates), legal risk (arises from the potential that enforceable contact, lawsuits, or adverse judgments can disrupts or otherwise negatively affect the operations or condition of a banking organization), and reputational risk (any risk that is likely to destroy shareholder value and attracts negative publicity, examples are loss of revenue, litigation, loss of clients and partners, exit of key employees, share price decline, difficulty in recruiting talent).

Theoretical Framework

Financial risk is one among many factors with a substantial influence on the stability of a banking system. It is important to measure and control the determinants of the financial risk, especially at the aggregated level (Misker, 2015). Generally, macroeconomic, banking sector and also microeconomic level variables are the most important for analysis of financial risk. Hence the following theories;

Commercial Loan Theory

The oldest theory of banking is the commercial loan theory, also called the real bills doctrine. The commercial loan theory holds that banks should lend only on short term, self-liquidating, commercial paper. According to Hosna and Manzura, (2009), the commercial loan theory is geared to influence persuasively both the bank lending and the general economic activities. Strict adoption of this theory will reveal that it is expected to serve as a monetary supply to changes in aggregate economic activity. The popularity of this doctrine among Deposit-Money Banks (DMBs) in Nigeria is evident. Nigerian bankers believe that since their resources were repayable at short notice, such depositors' monies should be employed accordingly in short-term loans. Kargi,(2011) posited that the strong tie to this conception is rather orthodox if consideration is given to the fact that at the time of the supremacy of the theory, there were little or no secondary reserve assets, which could have served as a liquidity buffer for the bank.

More so, this theory fails to consider the credit needs of Nigeria's developing economy. It has not encouraged banks to fund the purchases of plants, equipment, land, and home-ownership. For a theory to maintain that all loans should be liquidated in the normal course of business shows its failure to recognize the relative stability of bank deposits. Whereas, demand deposits are on demand, all depositors are not likely to demand payment at the same time. Thus, stability of deposits enables a bank to extend funds for a reasonable long period without danger of illiquidity. Though, with its flaws, the commercial loan theory, or real bills doctrine has been a persistent theory of banking. Vestiges of it still remain in the structure of bank regulatory agencies, bank examination procedures and the thinking of many bankers. One cannot understand contemporary banking without an understanding of our banking history, and cannot understand banking history without an understanding of the commercial loan theory.

Credit Risk Theory

Credit risk according to Anderson, and Salas & Saurina, (2002) refers to the risk that a borrower will default on any type of debt by failing to make required payments. The risk is primarily that of the lender and includes lost principal and interest, disrupt loss may be complete or partial and can arise in a number of circumstances, such as an insolvent bank unable to return funds to a depositor. To reduce the lenders risk, the lender may perform a credit check on the prospective borrower, may require the borrower to take appropriate insurance, such as mortgage insurance or seek security or guarantees of third parties. In general, the higher the risk, the higher will be the interest rate that the debtors will be asked to pay on the debt. (Owojori, Akintoye & Adidu, (2011).

Empirical Review

Adeusi, Akeke, Adebisi and Oladunjoye (2013) conducted a study which focuses on the association of risk management practices and bank financial performance in Nigeria. Using a panel of secondary data for 10 banks and for four years reported an inverse relationship between financial performance of banks and doubt loans, capital asset ratio was found to be positive and significant. Similarly it suggests that the higher the managed funds by banks, the higher the performance. The study concludes a significant relationship between banks performance and risk management. Hence, the need for banks to practice prudent risks management in order to protect the interests of investors.

Moti, Masinde, and Mugenda, (2012) investigated the impact of bank's specific risk characteristics, and the overall banking environment on the performance of 43 commercial banks operating in 6 of the Gulf Co-operation Council (GCC) countries over the period 1998-2008. Using regression analysis, he observed that bad debts or credit risks, liquidity risk and capital risk are the major factors that affect bank performance when profitability is measured by return on assets while the only risk that affects profitability when measured by return on equity is liquidity risk.

Boland (2012) in their work examined bank performance in the presence of risk for Costa-Rican banking industry during 1998-2007 using regression analysis. The result of their study showed that performance improvements follow regulatory changes and that risk explains differences in banks and non-performing loans negatively affect efficiency and return on assets (ROA) while the capital adequacy ratio has a positive impact on the net interest margin.

Furthermore, Chen and Pan (2012) in their work examined the credit risk efficiency of 34 Taiwanese Commercial banks over the period 2005- 2008. Their study used financial ratios to assess the credit risk and was analyzed using Data Envelopment Analysis (DEA). The result of their study indicated that only one bank is efficient in all types of efficiencies over the evaluated periods.

Alshatti, (2015) revealed that the variables of credit risk management influenced banks' profitability. This research improves on some of the existing studies, in that it investigates the sub-total and overall effect of credit risk management and its indicators on the lending ability of Nigerian deposit money banks by combining certain credit risk management indicators and other financial indicators to determine which variables influence bank profitability and loan creation in broader scope.

METHODOLOGY

Data for this study was secondary in nature and was gathered mainly from the annual reports and accounts of the selected fifteen (15) quoted deposit money banks (see appendix I). Banks financial risk was proxied using the Bank size, are gotten through appropriate ratio computation using figures as contained in the financial statements for the period 2012 to 2016. This serves as the guide of conducting the content analysis. This is contrary to studies that uses questionnaire which is distributed to target respondents as the means of gathering practices of risk management (Ariffin & Kassim, 2009). In addition, the financial performance was represented by Return on Equity (ROE) of selected banks.

Beside the use of descriptive statistics, to among others include simple average, median and standard deviation, to describe the variables, regression analysis is also adopted to test for the relationship between the independent variable of financial risk management practices and dependent variable corporate performance.

The econometric form for the model is specified as:

$$\mathrm{ROE} = a_0 + a_2\mathrm{BS} + u_{\mathrm{it}}$$

Where:
ROE = Return on Equity

BS = Bank Size
a_0 = constant
u_{it}= error term

TEST OF HYPOTHESIS

H_0: Financial Risk, proxy by bank size does not significantly affect the return on Equity of Deposit Money Banks in Nigeria

Table 4.1.1 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.215[a]	.046	.012	.4884731

a. Predictors: (Constant), TA

Source: Researcher's Computation using SPSS version 20 software, 2017

Table 4.1.2 ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.323	1	.323	1.355	.254[b]
	Residual	6.681	28	.239		
	Total	7.004	29			

a. Dependent Variable: ROE
b. Predictors: (Constant), TA

Source: Researcher's Computation using SPSS version 20 software, 2017

Table 4.1.3 Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.111	1.963		-1.076	.291
	TA	2.967	2.549	.215	1.164	.254

a. Dependent Variable: ROE

Source: Researcher's Computation using SPSS version 20 software, 2017

The result obtained from table 4.1.1 above shows the model summary results which sought to establish the explanatory power of the independent variable (bank size) for explaining and predicting the dependent variable (return on equity). R, the correlation coefficients, (i.e. the linear correlation between the observed and model predicted values of the dependent variable) showed a value of 0.215.R square, the coefficient of determination (i.e. the squared value of the correlation coefficients) showed a value of 0.046 or 4.6% of the variation in the dependent variable (return on equity) is explained by the model. This means that the total variation in return on equity is explained by 4.6 in BS.

The result of the analysis of variance (ANOVA) and ordinary least square regression analysis showed in table 4.1.2 and 4.1.3 respectively to evaluate the level of significance of the influence of bank size on return on equity revealed that return on equity is explained by -2.111 constant factor and 2.967 of the bank size as demonstrated in the regression model used to test the level of effect that bank size has on return on equity as shown below;

ROE = -2.111 + (2.967) BS

This means that every unit change in bank size will lead to 2.967 changes on return on equity. This shows a positive relationship and signifies that bank size has a positive impact on return on equity. The P-value from the ANOVA and coefficient table was used to determine the significance of the influence that the bank size has on return on equity. The contribution of bank size to the model is insignificant because p- value (0.254) is greater than the alpha value of 0.05. Hence, we accept the null hypothesis which states that bank size does not significantly affect the return on equity of deposit money banks in Nigeria.

CONCLUSION

This paper examines financial risk management practices among deposit money banks in Nigeria with a view to relating these practices to their financial performance for 2012 to 2016 financial year. The year is peculiar to banks in Nigeria, as it is the year that signifies the beginning of the post adoption and implementation of IFRS in their annual report and financial reporting, alongside with other significant public entities. This trend has predominately improves on the content of such reports. The annual accounts are now bulky containing relevant and timely information including management discussions on usage of estimates and risk management profiles. This practice is in compliance with the second pillar of the Basel II, which empowers banks to review, monitor, manage and report their risk management system (including risk appetites and strategy) in other to achieve the desired objectives.

Risk management in banking designates the entire set of risk management processes and models allowing banks to implement risk-based policies and practices. They cover all techniques and management tools required for measuring, monitoring and controlling risks. The CBN and other regulators should endeavor to enforce risk identification, assessment, measurement and control mechanism, in line with best global practices in other to avoid financial crisis and also improve on commercial banks' performances.

References

Adeoye, A. &Amupitan, M. D. (2015). Corporate governance in the Nigerian Banking sector: Issues and challenges. *European Journal of Accounting Auditing and Finance Research, 3* (5).

Adeusi, S. O., Akeke, N. I., Adebisi, O. S. &Oladunjoye, O. (2013). Risk management and financial performance of banks in Nigeria. *Journal of business and management.14*(6).

Alshatti, A. (2015). The effect of credit risk management on financial performance of the Jordanian Commercial Banks". *Investment Management and Financial Innovations*, *12*(1).

Al-Tamimi, H., & Al-Mazrooei, M. (2007). Banks risk management: A comparative study of UAE national and foreign banks, *The Auditing: Research and Practice.*

Ariffin, N. M. &Kassim, S. H. (2009). Risk management practices and financial performance of Islamic banks: Malaysian evidence. Being a paper presented at the 8th international conference on Islamic economics and finance

Basel committee on Banking Supervision (2001). The new capital accord. Bank for international settlement.

Basel committee on Banking Supervision (2005). Core principles for effective banking supervision.

Boland.O. (2012). Managing Risk on Global basis. *Journal of accounting and Finance*,*12*(1).

Broll, U., Pausch, T. &Welzel, P. (2002). Credit risk and credit derivatives in banking. Volkswirtschaftliche Diskussionsreihe, BeitragNr.228, Institutfur Volkswirt schaftslehre, Universit at Augsburg.

Cebenoyan, M. &Strahan, (2004). Risk management, capital structure and lending at banks. *Journal of Banking and Finance, 28*

Chen, K & Pan, C. (2012). An empirical study of credit risk efficiency of banking industry in Taiwan. *Web Journal of Chinese management Review, 15*(1).

Gizycki, M. (2001). The effect of macroeconomic condition on banks risk and profitability.

Hosna, A. &Manzura, B. (2009). Credit Risk Management and Profitability in Commercial Banks in Sweden, University of Gothenburg, Graduate School of Business, Economics and Law, Master of Science in Accounting.

Hubbard, D. (2009). The failure of risk management: Why it's broken and how to fix it. *John Wiley & sons.*

Joel, G. W. (2013). The effect of financial risk management on financial performance of commercial banks in Kenya. A published research project. University of Nairobi.

Kargi, H.S. (2011). Credit risk and the performance of Nigerian Banks, Ahmadu Bello University, Zaria.

Misker, B. (2015). The impact of credit risk on financial performance of banks in Ethiopia. A thesis submitted to Department of Accounting and Finance, College of Business and Economics Addis Ababa University, Ethiopia.

Moti, H.O, Masinde, J.S.&Mugenda, N.G. (2012). Effectiveness of credit management systems on loans performance: Empirical evidence from micro finance Sector in Kenya. *International Journal of Business, Humanities and Technology,2*(16).

Motteff, J. (2005). Risk management and critical infrastructure protection: Assessing intergrading and managing threats, vulnerabilities and consequences (report). *Washington DC; Congressional research service.*

Njogo, B. O. (2012). Risk management in the Nigerian banking industry. *Kuwait Chapter of Arabian Journal of Business and Management Review.1*(10).

Olalere, O. E. & Wan A. B. O. (2016). Risk management and the financial performance of Commercial Banks in Nigeria: A literature review revisited. *IOSR Journal of Economics and Finance, 7*(2)

Owojori, A. A., Akintoye I. R., &Adidu, F. A. (2011). The challenge of risk management in Nigerian banks in the post consolidation era. *Journal of Accounting and Taxation, 13*(2).

Salas, V. &Saurina, J. (2002). Credit risk in two institutional regimes: Spanish commercial and savings banks. *Journal of Financial Services Research, 22*(3).

Soyemi, K. A., Ogunleye J. O., &Ashogbon F. O., (2014). Risk management practices and financial performance: evidence from the Nigerian deposit money banks (DMBs). *The Business & Management Review, 4*(4).

Tai, C. (2004). Can bank be a source of contagion during the 1997 Asian crisis? *Journal of Banking & Finance.*

Tandelilin, E., Kaaro, H., Mahadwartha, P. A. &Supriyatna, S. (2007). Corporate governance, risk management and bank performance: Does type of ownership matter? *EADN working paper.*

Uwuigbe, O. R. (2011). Corporate governance and financial performance of banks: A study of listed banks in Nigeria. Covenant University, Ota.

Zahangir, A. & Masukujj, A. (2011). Risk management practices: A critical diagnosis of some selected commercial banks in Bangladesh. *Journal of business and technology, VI*(1)

APPENDIX I

List of Deposit Money Banks quoted in the Nigerian Stock Exchange

Zenith Bank
First Bank
Guaranty Trust Bank
UBA Bank
Diamond Bank
Access Bank
Fidelity Bank
FCMB
Union Bank
Wema Bank
Unity Bank
Skye Bank
Sterling Bank
Eco Bank
Stanbic IBTC Bank

Source: Nigerian Stock Exchange (2017)

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.3933.
Poernomo, D., Wahono, P., & Puspitaningtyas, Z. (2017). The Role Of Knowledge Absorption In The Mediation Of The Effect Of Social Network On The Competitive Advantages Of "Batik" Micro Company. *Archives of Business Research, 5(12),* 88-100.

SOCIETY FOR SCIENCE AND EDUCATION

The Role Of Knowledge Absorption In The Mediation Of The Effect Of Social Network On The Competitive Advantages Of "Batik" Micro Company

Poernomo Djoko
Lecturer of Business Administration Studies Program
Faculty of Social and Political Sciences, University of Jember

Puji Wahono
Lecturer of Business Administration Studies Program
Faculty of Social and Political Sciences, University of Jember

Zarah Puspitaningtyas
Lecturer of Business Administration Studies Program
Faculty of Social and Political Sciences, University of Jember

ABSTRACT

"Batik" cloth is one of Indonesia's pride product. When a micro company of batik fails to compete with similar products, then the pride is lost. Therefore, the existence of batik needs to be maintained. The purpose of the study explains the role of knowledge absorption in mediating the influence of social networks on entrepreneurship orientation, product innovation, and competitive advantage of micro company of batik. Research location in Regency of Banyuwangi, East Java Province, Indonesia. The study population is 154 craftsmen. Sampling technique using simple random sampling method. Number of respondents 111 micro company of batik or craftsmen. The data collection instrument used questionnaires. Data analysis using structural equation modeling with Smart PLS 3 software. The research findings show social network have a significant positive effect on the knowledge absorption, the knowledge absorption of mediates the significant positive effect of social network on entrepreneurship orientation and product innovation, positively significant to entrepreneurship orientation and product innovation but no significant positive effect on competitive advantage. While the influence of other research variables can be studied further on this scientific work.

Keywords: ***Social Network, Knowledge Absorption, Entrepreneurship Orientation, Product Innovation, Competitive Advantage.***

INTRODUCTION

Globalization has made the business environment change so fast and become unstable. The single market of the ASEAN Economic Community is a form of free competition at the regional level demanding that Indonesian micro enterprises of batik improve competitive advantage in order to continue to exist in the market through social networking activities, absorb new knowledge and utilize it optimally. Exploiting new social networks and knowledge for micro enterprises of batik will enable the establishment of an entrepreneurial orientation, product innovation, which ultimately improves competitive advantage. However, new knowledge is determined by the ability to absorb knowledge from its social network. Without the ability to absorb knowledge, undoubtedly there will be nothing new created by micro companies of

batik. The ability to absorb knowledge is linked to almost all micro company operations including increased entrepreneurial orientation, new products, and competitive advantage. Without it all, companies will get knocked out and lost.
Social networks are an important means for micro-enterprises of batik to absorb knowledge. Social networks can be interpreted as a number of elements that exist in the environment outside the company such as customers, suppliers, clients, consultants, educational institutions, social institutions, economic institutions and internal environment of micro enterprises such as employees. Every micro company of batik needs to have a social network because all that is needed is there. Social networking is a fundamental prerequisite for micro enterprises of batik to exist in the marketplace.

Absorbing knowledge can be done in the external and internal environment of micro-enterprises. Both are important because they generate new knowledge. But more important is to absorb knowledge from outside the micro-enterprise environment because there is new value that can be brought into the company and make the company as a knowledgeable company. If a micro company of batik is not able to create competitive advantage it is feared they will go bankrupt. Therefore, this research explains the role of knowledge absorption in mediating the effects of social networks on competitive advantage on micro enterprises of batik.

The purpose of this study to analyze the influence of social networks on the knowledge absorption; the influence of knowledge absorption on entrepreneurship orientation, product innovation, and competitive advantage; the influence of entrepreneurial orientation on product innovation and competitive advantage; the effect of product innovation on competitive advantage; and the role of knowledge power in mediating the effects of social networks on entrepreneurial orientation, product innovation, and competitive advantage.

LITERATURE REVIEW

Social Network

Social networks are instrumental in supporting the flow and sharing of organizational knowledge to solve complex problems, encouraging and planning innovations, learning processes, and information sources (Abrams et al., 2003; Bosua & Scheepers, 2007; Hansen, 2002), source of competitive advantage (Swan et al. (2007). Social networks can be interpreted as ways of connecting many people and tools to achieve goals (Evans & Bosua, 2016) or guidelines that are essential to the flow of knowledge (Easterby-Smith, 2008), which exist in social networks will seek to maintain their contacts (Rejeb-Khachlouf et al., 2011). Social networks are a medium of internal and external actor knowledge flow such as clients, customers, suppliers, consultants, educational institutions, research institutions.

Organizational leadership is a key factor in building social networks. There are four important leadership factors that can develop social networks: a) peer-based leadership networks, b) organizational leadership networks, c) policy-based leadership networks in the field, and d) collective leadership networks (Hope & Reinelt, 2010). These four types of leadership can shape the company's competitive advantage.

Knowledge Absorption

Knowledge is one resource of intangible resources (Barney and Clark., 2007). It is attached to an individual or company. Other experts incorporate into the concept of intellectual capital (Mar, 2006; Pierre et al., 2011). Knowledge is a very important factor for anyone as a source of innovation, the growth of entrepreneurial values (Drucker, 1985), competitive advantage (Teece, 2007). This type of knowledge can be differentiated into tacit knowledge and explicit knowledge (Nonaka and Takeuchi, 1995). Knowledge characteristics can be measured, transferred, and cumulative (Kerste et al., 2002).

The concept of knowledge absorption was introduced by Cohen and Levinthal (1989). They define the capacity to absorb knowledge as the ability to recognize new values of external information / knowledge, assimilate, apply, and be able to predict future technological advancements for commercial purposes (Cohen & Levinthal, 1994). Zahra and George (2002) improved the concept by incorporating transformation capability elements. They claim there are four dimensions of the capacity to absorb knowledge: acquisition, assimilation, transformation, and exploitation. The acquisition of knowledge and capability to assimilate is categorized as "potential absorbing capacity" while the transformation of knowledge and capabilities exploits it as "real absorbing capacity" (in Zornoza & Julian, 2006). They define acquisitions as the ability to recognize value and acquire critical external knowledge for the company. Assimilation is defined as routines and processes that enable a company to understand, analyze, interpret and include information from external sources. Transformation refers to a company's ability to build and redefine routines that facilitate the transfer and combination of knowledge existence with the acquisition and assimilation of new knowledge. The main goal of this ability is to find solutions to adapt or reconfigure new knowledge to specific, real-world needs. Exploitation refers to a company's ability to apply new commercial knowledge externally to realize organizational goals or to refer to routines that enable a company to redefine, expand and leverage existing competencies or create new ones by combining acquired and assimilated knowledge into company operations.

The absorption power of knowledge depends on the type of knowledge environment. In a stable type of knowledge environment, the focus of absorptive knowledge is exploiting; high efficiency; scope and flexibility is low. In such a chaotic type of knowledge environment, the focus of absorptive knowledge explores while its efficiency is low and its scope and flexibility are high (Van Den Bosch et al., 2003).

Entrepreneurial Orientation

Entrepreneurship can be interpreted as an activity that refers to the discovery and exploitation of opportunities for the realization of goods and services in the future (Shane & Venkataraman, 2000) while entrepreneurs are those who bear the risk of their work in realizing their goals and developments (Griffin et al. (2004). The concept of entrepreneurial orientation is more oriented towards a strategic orientation. The entrepreneurial orientation is the strategic orientation of the entrepreneur or company, capturing the specific aspects of entrepreneurship such as decision-making styles, methods and practices (Lumpkin & Dess, 1996). Entrepreneurial orientation that is innovativeness, proactiveness, risk-taking, competing aggressiveness, and independent or autonomy (Lumpkin & Dess, 1996). The five elements of entrepreneurial orientation can be found in individuals/workers, business founders, and companies that already exist but with different emphasis on each element (Certo et al., 2009).

Product Innovation

Product innovation is a new or improved product or service and introduces it to the market (Camison et al. 2010). Product innovation is related to the company's main activity. Product innovation is seen as an important source that can improve competitive advantage. Product innovation reflects solutions to threats and market opportunities, creating what is called the survival base and success of the company into the future. On the other hand, product innovation contains cost and risky activities.

Product innovation is often created to cope with increasingly fierce competition (Ellitan et al, 2009), creating entry barriers for old competitors and/or new entrants, establishing the company's position as a market leader, opening new distribution channels, and gathering new customers to improve market position which exists. Product innovation occurs because of the successful exploitation of new ideas. Therefore, product innovation contains two conditions: novelty and usefulness.

Competitive Advantages

Competitive advantage is the ability to profit from investments made by companies above the average in an industry (Porter, 1985). Companies have a competitive advantage when implementing value creation strategies not simultaneously by competitors and when competitors can not duplicate the benefits of that strategy (Barney, 1991).

Competitive advantage results from strategic assets (Meso and Smith, 2000, in Kamukama et al., 2011). The assets are controlled by the company and formulated into strategy and implemented effectively and efficiently and depend on valuable resources, rare, hard to imitate and hard to substitute (Barney et al., 2007). Competitive advantage will be obtained when firms are able to meet: a) what is difficult for competitors to imitate, b) exploit something commercial with current capabilities, c) provide significant value to customers, and d) timely (Hitt et al., (2001).

Micro Company

The criteria of micro enterprises can be seen from two things: a) influences coming from the external environment, and b) the limitations of the owner or manager (Kelliher et al., 009). External influences can be identified five things: power relationships, diseconomies of scale, externality enforced change, perfect competition, negative regulatory impact.

Power relationships, micro enterprises generally have a small size that can be interpreted as having no great power to build relationships with other external parties, while the manager or owner style is usually paternalistic. Diseconomies of scale, micro enterprises are typically incapable of playing strategies on economies of scale so the strategy used is a niche strategy, a very specific strategy in market niches that is relatively difficult to penetrate by non-micro firms, while the authority and control of managers or owners him. Externally enforced change, the micro company makes incremental changes while the manager or owner acts as the ultimate decision maker. Perfect competition, micro enterprises are vulnerable to short-term perspectives, while managers or owners play an informal strategic planner. Negative regulatory impact, micro enterprise structure is generally simple or even no structure, poor resources, informal communication, and increased knowledge, skills or skills gained from the training that followed, while the value system or corporate culture centered on the manager or owner and near with interested parties.

Relationship between Variables

There is a relationship between social networks with knowledge, product innovation, competitive advantage, and performance (Evans et al., (2013). The relationship is illustrated by the two images below.

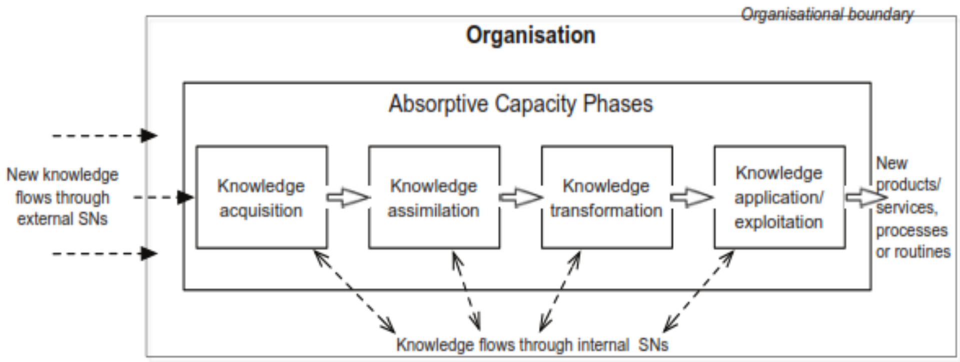


Figure 2.1: The Relationship of Social Network, Knowledge Absorption, and New Product
Source: Evans et al., (2013).

Based on the picture above can be interpreted social network has a relationship with the capacity or the ability to absorb knowledge. The result of absorbing knowledge is the increase of new knowledge of the old knowledge of the organization. Based on the description, the first hypothesis of research (H1) is the social network affect the knowledge absorption.

Increased knowledge is intended to improve organizational operations by redefining existing routines or processes to new things (Cohen and Levinthal, 1989; Zahra and George, 2002 in Zornoba and Julian, 2006). This indicates if more knowledge is absorbed from the social network, the greater the capacity of knowledge owned by individuals or organizations that are likely to encourage innovation (including product innovation) and competitive advantage.

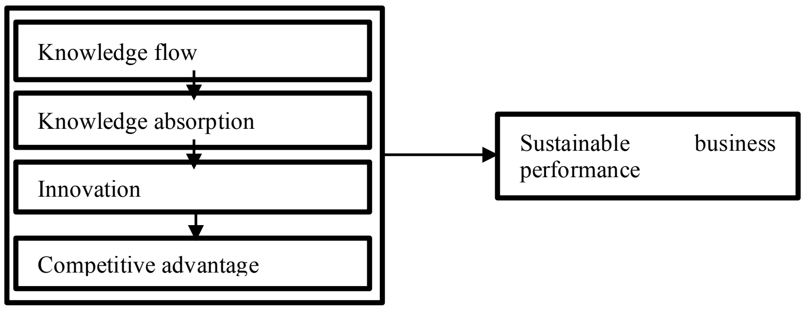


Figure 2.2: The Knowledge-Capacity, Competitive Advantage, and Performance
Source: Evans et al., (2013)

The findings of Poernomo et al (2014) show that knowledge absorption has a significant positive effect on product innovation. Based on the above description, the second hypothesis of research (H2) is the knowledge absorption to affect product innovation. On the other hand, the findings of Poernomo et al (2014) also show the ability to absorb knowledge has a significant positive effect on entrepreneurial orientation. Based on above descriptions, the third hypothesis of research (H3) is the knowledge absorption to affect the entrepreneurial orientation. The findings of Kaveh et al (2015) show that knowledge management (in which there is knowledge absorption) is positively related to competitive advantage. The findings of Adriansyah and Afif (2015) show that knowledge absorption influences the competitive advantage. On the basis of these findings, the fourth hypothesis of the study (H4) is that knowledge absorption influences the competitive advantage.

Morales et al., (2006); Harper (2003), Griffin et al., (2004), Lumpkin and Dess (1996), Certo et al., (2005) stated entrepreneurship involves the creation of new resources or a combination of existing resources in new ways of building and commercialize new products, enter new markets, and / or new customer services. There is a relationship of entrepreneurial orientation with product innovation. The findings of Poernomo et al (2014); Madhoushi M. et al., (2011) stated that entrepreneurial orientation has a significant positive effect on product innovation performance. Starting from the description above, the fifth hypothesis of research (H5) is the entrepreneurial orientation effect on product innovation.

Changhanti and Changhanti (1983), Figenbaum and Karnani (1991), and Meredit (1987) in Wright et al. (2005) suggest innovation (process, organizational, product) as the primary source of competitive advantage. Statement Cooper and Kleinschmidt, 1987; Damanpour and Evan, 1984; Damanpour and Gopalakrishnan, 2001; Damanpour et al., 1989; Hitt et al., 1997; Kleinschmidt and Cooper, 1991; Rogers, 1983; Subramanian and Nilakanta, 1996, in Valencia et al., (2010) suggest today innovation is considered the key to achieving competitive advantage and business success in the market. Camison et al. (2010) views product innovation as an important source of competitive advantage that can lead to improved organizational performance. There is a product innovation relationship with competitive advantage. Based on the above description, the fifth hypothesis of research (H6) is that product innovation has an effect on competitive advantage.

Model concept of research.

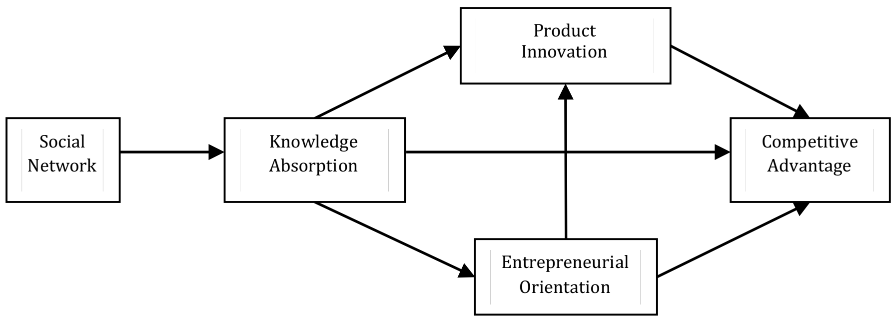


Figure 2.3: Model of research

RESEARCH METHODS

Population

The research population is a micro batik company totaling 154 in Banyuwangi Regency.

Samples and Sampling Techniques

The sampling technique applies simple random sampling method. The number of decisions using the Slovin formula (Umar, 2010). as follows.
n = N / (N.d ^{2} + 1). Where: n = number of samples, N = total population, d = percentage of inaccurate tolerance due to intolerable sampling error of 5% (d = 0.05). n = 154: (154 x 0.0025 + 1) = 111, 19 rounded = 111. Total sample 111 micro company of batik / craftsmen.

Operational Definition of Variables

Social Networks are a number of elements in an external environment such as customers or consumers, suppliers, consultants, clients, banks, cooperatives, schools, colleges, local governments, NGOs that have already established relationships with respondents. Knowledge Ability is the ability to absorb new information from outside the company by the respondents, unify with existing knowledge, generate new knowledge that gives new value, and apply it for the purpose of making a profit. Indicators: a) acquisition of new knowledge, b) assimilation of new knowledge, c) transformation of new knowledge, and d) exploitation of new knowledge applications.

Entrepreneurial Orientation is an individual behavior that leads to new things. Indicators: a) proactiveness, (b) innovativeness, (c) risk taking, (d) competing aggressiveness, and (e) independence/autonomy. Product innovation is a new product. Indicators: a) quantity, b) type, c) the quality of new products produced. Competitive Advantage is the company's product is absorbed by the market or consumer. Indicators: a) cost reduction, b) exploitation of market opportunities, and c) surviving the threat of competition.

Measurement Instruments

This study measures the attitudes of respondents. Measurable measuring instruments use the Likert Scale (Black and Champion, 2001). The Likert Scale research uses five alternative answers, examples "strongly disagree" identical value 1, "disagree" value 2, "neutral" value 3, "agree" value 4, and "strongly agree" value 5. Scale of measurement used research this is the Ordinal scale. Data collection using questionnaires.

Test Reliability and Validity of Research Instruments

Before the questionnaire was distributed, the researcher did reliability test and questionnaire validity. Test of reliability and validity of research instrument conducted on 40 batik craftsmen outside the respondents. The test is conducted to get the certainty of the questionnaire can be understood or not before the spread to the respondent. The result of reliability test item questionnaire indicates that all items have Corrected Item-Total Correlation> value (r table value, n = 40, α = 0,05), so that all questionnaire items can be declared reliable (worth) to be distributed.

Processing and analysis of data

Data processing using structural equation modeling (SEM) with the help of Smart PLS software 3 (Garson, G.D., 2016; Hair et al, 2014). The use of SEM is based on thought a) the number of samples (it would be better if the amount is at least 100 because with increasingly many samples then the Maximum Likelihood (ML) method increases the sensitivity to detect differences between data, b) the influence of independent variables with some non-free variables partially or simultaneously, c) the structural effect model is complicated (Ferdinand, 2005).

Hypothesis Testing Results

Testing of research hypothesis on Smart PLS 3 is done by applying structural model calculation with bootstrapping method, on two-sided test with significance level (α = 0.05). The reported value is the value of t. The result, it is known that the value of the indicator variable in relation to the latent variable is significant.

The significance of the indicator variable value based on outer loading does not automatically drive the value of the latent variable to the latent variable is also significant. This is due to the absence of normal distributed data assumptions as described above. In the testing of hypothesis shows that the latent variable of social network has t value equal to 8,345 to the knowledge absorption. Meanwhile, the knowledge absorption has a t value of product innovation of 2,164; against the entrepreneurial orientation of 8.942, to the competitive advantage of 1.403. Detailed results of hypothesis test research can be seen in the table below.

Table 1. Hypothesis Test Results

Research Hypothesis	T Statistic	P Values	Evaluation
Social network -> Knowledge absorption	8.345	0.000	Significant Positive
Knowledge absorption -> Product innovation	2,164	0.023	Significant Positive
Knowledge absorption -> Entrepreneurial orientation	8,942	0.000	Significant Positive
Knowledge absorption -> Competitive advantages	1,403	0.161	Positive, Not Significant
Product innovation -> Competitive advantages	2,290	0.022	Significant Positive
Entrepreneurial orientation -> Product innovation	3,802	0.000	Significant Positive
Entrepreneurial orientation -> Competitive advantage	3,738	0.000	Significant Positive

Source: research data, 2015

RESEARCH RESULT AND DISCUSSION

Description of Respondents

The number of respondents of male sex is less than female respondents, that is by 20% difference. Male respondents amounted to 40%, while female respondents amounted to 60% of a total of 111 respondents. The number of respondents by tribe, 60,36% of respondents came from Java tribe, and 2.70% of mixed ethnic respondents.

Number of respondents aged under 25 years, 27.03% of respondents aged 26-35 years, 27.93% of respondents aged 36-45 years, 9.01% of respondents aged 46 - 55 years old, and 3.60 % of respondents aged over 55 years. The number of respondents has worked for less than 5 years, 17.12% of respondents have worked for 5 to 10 years, and 4.50% of respondents have worked for more than 10 years.

DISCUSSION

The Influence of Social Networks on Knowledge Absorption

This finding confirms the first hypothesis of research (H1) that states social networks have an effect on the knowledge absorption received. These findings reinforce previous theories that suggest a social network linkage to the knowledge absorption (Evans et al., 2013). This finding is a new finding because there has been no such findings before. This finding means that the more extensive social network owned by micro companies of batik the greater the opportunity the company is absorbing new knowledge. But it will happen otherwise, if the social network owned by a micro-batik company is not or yet wide then the opportunity to absorb new knowledge will not be big.

The Influence of Knowledge Ability of Product Innovation

This finding proves the second research hypothesis (H2) that states the ability to knowledge absorption positively affect the product innovation is acceptable. These findings reinforce the theory of Evans et al., (2013) which states there is a relationship between the knowledge absorption with product innovation. These findings support the findings of Poernomo et al (2014) that product innovation is positively influenced significantly by the knowledge absorption. These findings can be interpreted the higher the ability to absorb the knowledge of micro companies of batik the greater the opportunity the company produces new products. Conversely, if the absorption of knowledge of micro companies of batik low then the opportunity to create new products will be low as well. Based on the statement, micro companies of batik need to realize that the ability to absorb new knowledge is very important to give birth to new products. The ability to absorb new knowledge will be easier and faster if the micro companies of batik open themselves to the outside world, willing to continue to learn in their external environment, and understand that the eternal in this world is change.

Influence of Knowledge Absorption on Competitive Advantage.
These findings show that the knowledge absorption has no effect on competitive advantage. This finding rejects the third research hypothesis (H3) which states that knowledge absorption has an effect on competitive advantage. Many strategy management experts claim that knowledge absorption has a positive effect on competitive advantage because with increasing knowledge it will be easier to build competitive advantage. But the problem is not that easy, the increased knowledge of company personnel may not necessarily create or strengthen competitive advantage. Competitive advantage can only be realized if the company's knowledge is able to produce products that are valuable, rare, inimitable, non-substitutable (Barney, 2007). In other words, increasing the knowledge of the company through the absorption of knowledge will positively affect the competitive advantage if the resulting product meets the criteria of value, rare or unique, not easily imitated, and not easily replaced as introduced by Barney. According to Omerzel, D.G. & Gulev, R.E., 2011, the source of competitive advantage is dependent on knowledge but knowledge alone is not sufficient. Therefore, they argue need to be explored through future in-depth study of different capability relationships, specific knowledge, and different measures of competitiveness.

This finding can be interpreted that the knowledge absorption has not been able to make competitive advantage in the micro company of batik to be better. The absorption of knowledge does not necessarily make the competitive advantage to be better because of logical thinking still needed variables between which can bridge or as a medium of relationship between the absorption of knowledge with competitive advantage. On the other hand, batik products produced by micro enterprises that have existed have not been able to create entry barriers for competitors. The ease of existing competitors and new comers to create similar products will erode the competitive advantage of the old comers. In other words, the unavailability of valuable, rare, inimitable, non-substitutable (VRIN) on batik products of respondents has been suspected to be another factor that causes the third research hypothesis to be rejected. The strengthening of VRIN's values is also thought to be caused by the majority of respondents (78 percent) having work experience in micro company of batik for 5 years at the most. So, it can be concluded that micro enterprises lack experience in running their business.

Influence of Knowledge Absorption to Entrepreneurial Orientation
These findings attest to an entrepreneurial orientation strongly influenced positively significant by the ability of knowledge absorption. These findings support the fourth research hypothesis (H4) which states that knowledge absorption has an effect on entrepreneurial orientation.

These findings reinforce the theory that more knowledge is controlled by individuals or organizations increasingly allow for entrepreneurial orientation (Zornoba & Julian, 2006). These findings support the findings of Poernomo et al (2014) which states that knowledge absorption has a significant positive effect on entrepreneurship orientation. These findings can be interpreted the higher absorption of knowledge owned by the micro company of batik the greater the chance of creating an entrepreneurial orientation in the company. But it will happen otherwise, if the lower the absorption of knowledge of micro companies of batik, the lower the entrepreneurial orientation in the company.

Effect of Entrepreneurial Orientation on Product Innovation

These findings prove that entrepreneurial orientation has a significant positive effect on product innovation. This finding supports the sixth research hypothesis (H6) which states that entrepreneurial orientation has a positive effect on product innovation. These findings reinforce the theory that there is a relationship between entrepreneurial orientation and product innovation (Morales et al. (2006), Harper (2003), Griffin et al. (2004), Certo et al. (2005), Lumpkin & Dess (1996). This study supports the findings of Poernomo et al (2014) which states that product innovation is positively influenced by entrepreneurial orientation. This finding can be interpreted the higher the entrepreneurial orientation of the micro companies of batik the higher the creation of new products, but on the contrary, the lower the entrepreneurial orientation found in the micro companies of batik the lower the yield of new products.

Field facts are seen all the micro company of batik is quite innovative in producing the product. Almost all micro business of batik is very memorized with every product produced. This is evident when the production of all micro businesses of batik is collected into one, each micro enterprise of batik can know and show correctly that what they choose is their own production. But that is quite difficult is when consumers or customers are asked to show batik cloth is one by one production of micro business where. This is a challenge that is still faced by the micro business of batik because consumers or customers have not recognized exactly who the manufacturer of batik cloth when there are many new products batik cloth in "Gallery of Batik" except go directly to the production site.

The Effect of Entrepreneurial Orientation on Competitive Advantages

This finding proves entrepreneurial orientation to have a significant positive effect on competitive advantage. This finding accepts the seventh research hypothesis (H7) which states that entrepreneurship orientation has an effect on competitive advantage. These findings reinforce the theory that entrepreneurial orientation is related to competitive advantage (Valencia et al., 2010. Covin et al., 1999). This finding is a new finding because no previous research findings. These findings can be interpreted the greater the entrepreneurship orientation of micro companies of batik the greater the company's competitive advantage. On the contrary, the lower the entrepreneurship orientation of the micro batik companies the lower the company's competitive advantage.

The Influence of Product Innovation on Competitive Advantages

These findings prove that product innovation has a significant positive effect on competitive advantage. This finding accepts the eighth research hypothesis (H8) which states that product innovation has an effect on competitive advantage.

These findings reinforce theories that explain a positive relationship between product innovation and competitive advantage (Changhanti & Changhanti, 1983; Figenbaum & Karnani, 1991; Ed., 1987: in Wright et al., 2005); Cooper & Kleinschmidt, 1987; Damanpour & Evan, 1984; Damanpour & Gopalakrishman, 2001; Damanpour et al., 1989; Hitt et al., 1997; Kleinschmidt & Cooper, 1991; Rogers, 1983; Subramanian & Nilakanta, 1996; in Valencia et al., 2010). These findings support the findings of Camison et al. (2010) which express product innovation as a source of competitive advantage. These findings can be interpreted more and more product innovation by micro companies of batik increasingly large competitive advantage in the company. But the opposite will happen, the lower the product innovation made by the micro companies of batik the lower the competitive advantage in the company.

The Role of Knowledge Absorption in mediating the Social Network's effects on Competitive Advantages

Based on the result of the analysis of the influence of research variables, it is known that the knowledge absorption mediates the significant positive effect of social network on entrepreneurial orientation and product innovation but does not mediate the influence of social network on competitive advantage. The findings of this study do not support the findings of Wu & Chen (2012) which suggest that the social bonding effect of the leader is mediated positively by the ability to acquire knowledge that is essentially identical to the absorption of knowledge or the ability to absorb knowledge.

CONCLUSIONS AND SUGGESTIONS

Conclusion

The knowledge absorption has a very important role because it has a significant positive direct effect on entrepreneurial orientation and product innovation and is also able to mediate significant positive social network influences on entrepreneurial orientation and product innovation.

Suggestion

Micro companies of batik need to increase their knowledge absorption effectively in order to improve competitive advantage.

BIBLIOGRAPHY

Abram LC, Cross R, Lesser, E & Levin, DZ, 2003, Nurturing Interpersonal trust in knowledge sharing network, *Academy of Management Executive*, 17(4), 64-76.

Adriansyah, Ahmad & Afif, Adi Zakaria., 2015, Organizational Culture, Absorptive Capacity, Innovation Performance and Competitive Advantage: an Integrated Assessment in Indonesian Banking Industry, *The South East Asian Journal of Management*, Vol. 9. No.1. p.70-86.

Barney, Jay B., Clark, Delwyn N., 2007, *Resource-Based Theory: Creating and Sustaining Competitive Advantage*, Oxford University Press.

Black, James A., & Champion, Dean J., 2001, *Metode dan Masalah Penelitian Sosial*, terjemahan, Penerbit PT. Refika Aditama, Band[1]ung.

Bosua R., & Scheepers R., 2007, Towards a model to explain knowledge sharing in complex organizational environment, *Knowledge Management Research & Practice*, 5(2) 93-109.

Camison, Cesar; Lopez, Ana Villar, 2010, An examination of the relationship between manufacturing flexibility and firm performance: The mediating role of innovation, *International Journal of Operations & Production Management* 30 (8): 853-878.

Certo, S. Trevis; Moss, Todd W.; Short, Jeremy C., 2009, Entrepreneurial orientation: An applied perspective, *Business Horizons* 52: 319-324.

Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35 (1), 128 - 152.

Drucker, Peter F., 1985, *Inovasi dan Kewiraswastaan: Praktek dan Dasar-dasar*, terjemahan, Penerbit Erlangga, Jakarta.

Ellitan, Lena & Anatan, Lina., 2009, *Manajemen Inovasi: Transformasi Menuju Organisasi Kelas Dunia*, Penerbit Alfabeta, Bandung.

Evans, Nina & Bosua, Rachelle., *Knowledge Absorption in Organization – Development of a Conceptual Process Model*, unduh 15/01/2016.

Ferdinand, Augusty, 2005, *Structural Equation Modeling Dalam Penelitian Manajemen*, Badan Penerbit Universitas Diponegoro, Semarang.

Frank, Herman, Kessler, Alexandes, Fink, Matthias, 2010, Entrepreneurial Orientation and Business Performance – A Replication Study, *Strategic Business Review* 62: 175-198.

Easterby-Smith M., Lyles MA, Tsang., 2008, Inter-organizational knowledge transfer: Current themea and future prospects, *Journal of Management Studies*, 45(4), 661-674.

Garson, G.D., 2016, *Partial Least-Square: Regression and Structural Equation Models*, Statistical Associates Publishing, NC-USA

Griffin, Ricky W.; Ebert, Ronald J., 2004, *Business*, terjemahan Molan, Benyamin (2010), PT. Indeks Kelompok Gramedia, Jakarta.

Hair, Joseph F., Jr.; Hult, G. Tomas M.; Ringle, Christian M.; & Sarstedt, Marko, 2014. *A primer on partial least squares structural equation modeling (PLSSEM)*. Thousand Oaks, CA: Sage Publications.

Hitt, Michael A., Ireland R. Duane, Hoskisson, Robert, 2001, *Strategic Management: Competitiveness and Globalization Concepts*, Thomson Learning Asia 60 Albert Complex, Singapore.

Hoppe, Bruce., & Reinelt, Claire., 2010, Social network analysis and the evaluation of leadership networks, *The Leadership Quaterly* 21, 600-619.

Kamukama, Nixon; Ahiauzu, Augustine; Ntayi, Joseph M., 2011, Competitive Advantage: Mediator of Intellectual Capital and Performance, *Journal of Intellectual Capital*. 12: 152-164.

Kaveh, Davood; Bamipour, Ehsan Moshkinasab; Far, Mahsa Salari; Far, Mona Salari; 2015, The Relationship between Knowledge Management and Competitive Advantage: A Case Study in Small and Medium-Sized Companies in the Packaging Industry of Khorasan Razavi, *European Online Journal of Natural and Social Sciences*; Vol. 4. No. 1 Special Issue on New Dimensions in Economics, Accounting and Management, ISSN 1805-3602.

Kelliher, Felicity; Reinl, Leana., 2009, A resource-based view of micro-firm management practice, *Journal of Small Business and Enterprise Development* 16 (3):521 – 532.

Kerste, Richard; Muizer, Arnoud., 2002, *Effective knowledge transfer to SMEs Lessons from marketing and knowledge management*, EIM Business Policy Research.

Lumpkin, G.T., Dess, G.G., 1996, Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance, *The Academy of Management Review* 21 (1):135-172.

Mehrdad Madhoushi, Abdolrahim Sadati, Hamidreza Delavari, Mohsen Mehdivand and Ramin Mihandost, 2011, Entrepreneurial Orientation and Innovation Performance: The Mediating Role of Knowledge Management, *Asian Journal of Business Management* 3 (4): 310-316, 2011, ISSN: 2041-8755.

Marr, Bernard., 2006, *Strategic Performance Management: Leveraging and Measuring Your Intangible Value Drivers*, published by Elsevier Ltd.All rights reserved.

Morales, Vi'ctor J. Garci'a; Montes, Francisco J. Llorens, Jover, Antonio J., Verdu', 2006, Antecedents and consequences of organizational innovation and organizational learning in entrepreneurship, *Industrial Management & Data System* 106 (1): 21-42.

Omerzel, D.G. & Gulev, R.E., 2011, Knowledge Resources and Competitive Advantage, *Managing Global Transitions* 9 (4): 335-354.

Nonaka, Ikujiro.; Takeuchi, Hirotaka., 1995, *The Knowledge Creating Company: How Japanesse Company Create Dynamic of Innovation*, Oxford University Press, New York.

Pierre, Josee St.; Audet, Josee., 2011, Intangible assets and performance: Analysis on manufacturing SMEs, *Journal of Intellectual Capital* 12 (2): 202-223.

Poernomo, Djoko., 2013, *Pengaruh Sumber Daya dan Kapabilitas Perusahaan Terhadap Orientasi Kewirausahaan, Inovasi Produk, Keunggulan Bersaing dan Kinerja Bisnis (Studi pada Usaha Mikro Batik di Pulau Madura* Provinsi Jawa Timur, *Disertasi*, FIA UB, Malang.

Poernomo, Djoko., Wahono, Puji., Puspitaningtyas, Zarah., 2015, *Daya Serap Pengetahuan Pengrajin Batik Gajah Oling: Melestarikan Nilai-nilai "Mistis" Masyarakat Using dan Akselerasinya Pada Pertumbuhan Usaha*, Laporan Penelitian, Lembaga Penelitian Universitas Jember.

Rejeb-Khachlouf N., Mezghani L., & Quelin B., 2010, Personal network and knowledge transfer in inter-oragnizational networks, *Journal of Small Business and Entreprise Development*, 18(2), 278-297.

Ringle, C. M., Wende, S., and Becker, J.-M. 2015. "SmartPLS 3." Boenningstedt: SmartPLS GmbH, http://www.smartpls.com.

Teece, David J., 2007, Explicating Dynamic Capabilities: The Nature and Microfoundations of (Sustainable) Enterprise Performance, *Strategic Management Journal* 28: 1319-1350.

Van Den Bosch, Frans A.J.; Wijk, Raymond van., Volberda, Henk W., 2003, Absorptive Capacity: Antecedents, Models and Outcomes, ERIM REPORT SERIES *RESEARCH IN MANAGEMENT,* ERS-2003-035-STR. p. 1-54.

Wright, Robert E., Palmer, John C., Perkins, Debra, 2005, Type of Product Innovations and Small Business Performance in Hostile and Benign Environments, *Journal of Small Business Strategy* 15 (2): 33-44.

Wright, Peter., Kroll, Mark J., Parnell, John., 1996, *Strategic Management: Concepts and Cases*, by Prentice Hall, Inc., New Jersey.

Wu, Jie & Chen, Xiaoyun, 2012, Leaders' social ties, knowledge acquisition capability

and firm competitive advantage, *Asia Pac J Manag*, 29:331–350, DOI 10.1007/s10490-011-9278-0.

Zornoza, Cesae Camison., Julian, Beatriz., 2006, *Virtual Networks as Enablers of Knowledge Absorptive Capacity Development*, Jaume I University, Spanyol.

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.3939.
Qu, T., Qiu, L., & Qu, Y. (2017). Comparison of Mode and Channel from Operation and Investment Perspective-Case Study of Cross - border Electric Retailers. *Archives of Business Research, 5(12),* 101-125.

Comparison of Mode and Channel from Operation and Investment Perspective-Case Study of Cross - border Electric Retailers

Tao Qu
Project Leader: Female, from Changsha Hunan, Ph.D.,
Guangdong University of Finance and Economics, Professor of National Economic Research Center, mainly engages in transnational operation and management research.

LI-yin Qiu
Project Leader: Female, from Changsha Hunan, Ph.D.,
Guangdong University of Finance and Economics, Professor of National Economic Research Center, mainly engages in transnational operation and management research.

Yan Qu
Project Leader: Female, from Changsha Hunan, Ph.D.,
Guangdong University of Finance and Economics, Professor of National Economic Research Center, mainly engages in transnational operation and management research.

ABSTRACT
This paper takes Amazon, Wal-Mart, Jingdong and Alibaba as examples to study the international operation mode and investment path of retail electric business. The research shows that the transition from B2C to B2B2C is the best way to avoid institutional barriers. Based on their respectively comparative advantages, it is the key to construct the service support which the supplier (B) → the businessman (B) → the customer (C) all need, such as logistics, payment and finance. Amazon and Wal-Mart's FBA openness and infrastructure sharing model are conducive to consolidate the supply chain to ensure the genuine sources of products and their low prices ; Alibaba uses strong relationship-building capacity and integration of external resources to create a fourth party logistics platform; increases customer stickness through making use of Alipay to collect large amount of leisure funds to do consumer finance innovation. Regardless of the path, countries with close geographical and psychological distance or with good infrastructure are preferred in case enterprises' overseas investment. The fighting focus of the next step is to remodel the business under the premise of following the existing business structure and based on cloud computing.

Key words: B2B2C; internationalization; investment path; operation mode

This preliminary research is funded by the National Social Science Fund Project (14BGL015) and the Guangdong Provincial Department of Education Project (Z99942020704).

INTRODUCTION

Since 2012, China has taken three major measures to promote the development of cross-border electric business. First, it promotes the facilitation of trade customs clearance by establishing cross-border electric business comprehensive test area in 13 cities. Customs specially sets the regulatory code 9610, allowing electric business enterprises to take the approach "examine and release the list, summarize to declare", that is, firstly clear the customs, secondly regularly collect by customs to form the customs declaration and then apply for foreign exchange settlement and tax rebates[1].Second, it develops bonded logistics. Based on historical sales of the hot-sale products, electric business enterprises can stock up in the bonded warehouse in advance,so that they can directly deliver products from the bonded warehouse after the customers make orders, changing the international sales to domestic sales. Since the establishment of Nansha Free Trade Area, the number of cross-border electric business enterprises has increased from more than 10 to 916[2].Third, the cooperation between enterprises and governments to strengthen the quality control supervision[3]. In 2016, Guangdong Inspection and Quarantine Bureau, Danone, Mead Johnson, Yihua, Midea, Tmall, Jingdong, Vipshop and other 18 companies signed to build a global quality tracing system. Through using the mobile phone APP to scan goods' two-dimensional code, the information about goods in transit, origin and others are available. Between 2008 and 2016, the contribution rate of cross-border electric business to China's foreign trade increased from 7.6% to 20%, of which B2C, C2C-based[4] cross-border retail electric business accounted for more than 10%, and imports grew faster than exports (see Table 1). China has become the focus of global cross-border retail electric business.

The development of cross-border retail electric business has three characteristics: (1) monopoly market structure has become increasingly prominent. Due to centralized procurement, large enterprises have more advantages at bargaining, supply chain management and large-scale operation, being able to effectively reduce the marginal cost, gain effect of scale. Small electric business enterprises choose to be alliance with large enterprises, or they will face exit. (2) B2C mode is gradually evolving to B2B2C model. Due to directly connecting factories with consumers, the cost advantage of B2C model is significant[5], but it forms a market squeeze effect to the traditional retailers. Countries are cautious about B2C imports. Therefore, the evolution from the B2C to B2B2C and building brand operators → channel providers (wholesalers or retailers) → consumer electric business path (B2B2C) protect the existing ecological consumption chain and is more in line with the fundamental interests of each country. (3) Traditional stores began to transform to full channel (O2O). During the period from 2010 to 2015, the sales share of foreign retail enterprises in China's top 100 retail enterprises decreased from 23.2% to 9.9%. Best Buy and Revlon have withdrawn from

[1] Cross-border electric business logistics mainly manages postal items (express) with "multi-frequency, low volume" features, which are different from traditional trade "low frequency, large quantities". The key is how to clear customs quickly. Customs set a regulatory channel especially for "cross-border electric business", aimed at accelerating customs clearance. The current tax rebate rate is about 13%.

[2] from Nansha Free Trade Area in January 2014 - August 2016 statistics.

[3]The majority of platform companies lack direct purchasing capacity, causing to be at a disadvantage in terms of quality control, and the agent-caused fake problem has been difficult to solve.

[4] According to the mode of operation, cross-border electric business can be divided into cross-border wholesale (B2B) and cross-border retail (B2C, C2C), in which B2B leads. For example, China-made network and global resources are mainly based on the B2B model, relying on releasing information and advertising and earning membership fees and marketing promotion fees. Single transaction volume is huge and orders are relatively stable under B2B.B2B mostly uses the approach of "online information release and search, offline transactions". This paper focuses on the internationalization path of retailers in the B2B2C whole channel (O2O) strategy

[5]When China sells a 1,000 yuan mobile phones to India, the cost of overseas agents, stores and other channels accounts for 20% of the price, while online sales cost only accounts for 6% to 7% of the price, whose cost advantage is remarkable, causing electric business enterprises to expand rapidly. China Vipshop which set up only a year and a half ago, has established buyer team in 11 countries and regions, 12 overseas warehouses and 11 domestic bonded warehouse. In 2015, its market share is over 15%, entering the top three among the Chinese self-B2C imports electric business enterprises.

China.The first store of E-MART (Korea)[6]in China will be closed soon. In 2016, Wal-Mart announced the closure of 269 stores worldwide (25 in China). For the transformation of O2O, the supermarket chose to cooperate with the electric business platform, or build their own electric business channels. Carrefour started "online mall" and Metro's (Germany) official flagship store settled in Tmall International; RT-Mart built Feiniu network in cooperation with Midea online. Yonghui supermarket will transfer 10% equities to Jingdong. China Resources Group will make its retail resources such as China Resources Vanguard, Suguo supermarket, Pacific Coffee, China Resources Care and others be on-line in 新关大 and Meituan take-away ... ... In this context, the global retail industry has changed dramatically, and the concept of "global buy, global sell "gradually deepens in the people. The retail giants speed up the international layout. But countries have different base and the development path of cross-border retail will be different. US supermarkets have strong capacity with sound brand management, supply and distribution channels and credit finance system. Cross-border electric business enterprises mainly follow the development path from bottom to top (from offline to online) : the offline supermarket (resources) →online mall →platform.However,China owns strong platforms but weak supermarkets.The third-party platform enterprises such as Jingdong and Alibaba take the lead in development, while traditional department store such as Guangbain Department Store, Xinguang Department Store and the new Dah Sing have lag behind and have been forced to follow, which determines the Chinese electric business to follow the reverse path: the platform → online mall → offline resources from top to bottom (from online to offline).It can be seen that the cross-border electric business development paths of China and the United States are complementary: China's electric business enterprises are good at "commercial application of mobile device technology ", "technology promotion" and "stimulating customer interest in shopping at App end", while Europe and the United States electric business enterprises do well in supply chain management and logistics control, which makes retail power to realize the global investment and cooperation and competition possible. But what basic conditions are related to the difficulty of integration of global resources? In China, platform develops first, and then e-businessman, so how to link the offline and online resources and make them jointly develop? When Wal-Mart entered into China, does it directly launch War-mart.com platform, or sell its own products on third-party platform? Does it cooperate with pure platform enterprises or with the e-businessman? Does it build its own overseas warehouse, or connect self-run international logistics with China's local logistics to solve the last one km distribution problems? In 2015, the total retail sales of China and the United States respectively accounted for 13% and 8% of the total online retail sales[7], becoming the world's two most important retail market. In this paper, we take the global retail giant Amazon, Wal-Mart and China's largest retail business enterprise Alibaba, Jingdong as examples to study its internationalization path in different regions[8] in order to find out its strategic differences and influencing factors.

[6]Korea New World Group's large supermarket, entering in China 1997.

[7] Data from: internationalization road of Ma Yun's Taobao: Ali battles Amazon in Southeast Asia, Qihuang's analysis, 2016-12-02.

[8] here internationalization refers to the process of enterprises expanding its business areas from the local to the global, developing from local enterprises to a multinational one through investment, trade, etc...

Table 1 2008-2016 Cross-border Electric Business Transactions

Index	2011	2012	2013	2014	2015	2016	2017
The total size of import and export transactions (trillion yuan)	23.6	24.2	25.8	26.43	29.5	32	34.6
The proportion of cross-border electric business quotient (%)	7.60	9.50	12.00	15.90	17.60	20.30	23.10
The size of cross-border electric transactions (trillion yuan)	1.8	2.3	3.1	4.2	5.2	6.3	7.5
The proportion of B2C	3.20	4.60	6.10	7.60	9.20	10.40	11.10

Data from: "the development report of 2016 China cross-border electric business (export B2B)"; BSD international freight corporation published " market analysis and development trend forecast of 2017 China's cross-border electric business" in January 25, 2017

THE CASE ENTERPRISES' BACKGROUND COMPARISON

This part compares the commonness and individuality of the case enterprises from the aspects of entrepreneurial spirit, operation mode, market position and ownership structure. The founders of Amazon and Jingdong have the common quality: they dare to be first in the world, are good at long-term layout, and believe that technology will win.

Table 2 Case Enterprises' Background and Overview

	Amazon	Wal-mart	Alibaba	Jingdong
Founder	Jeff Bezos	Sam Waltom	Ma Yun	Liu Qiangdong
Listing time	1997-5-15 (20 years)	1972-8-25 （45 years）	2014-9-19 （3 years）	2014-5-22 （3 years）
Listing place	US NASDAQ Stock Exchange	New York Stock Exchange	New York Stock Exchange	US NASDAQ Stock Exchange
Registration place	Seattle, Washington, USA (later moved to Delaware)	Arkansas (later moved to Delaware)	Cayman Islands	Cayman Islands （Jingdong's predecessor）
Registration time	1995year （22years）	1962year （55years）	1999year （18years）	1998year （198years）
Mode of operation	mainly based on self-run B2C	O2O	B2B and B2C	B2B and B2C
Market price[9] （USD / share）	789.82	69.52	101.69	25.95
Share capital （100 million shares）	4.75	30.73	24.95	28.41
Market value (100 million dollars)	3,751.65	2,136.35	2,537.17	737.24
Revenue (100 million dollars)	922.46	3,515.67	1196.94	1,799.32
Number of employees	230,800	2,300,000	36,446	105,963
Earnings per share (USD / share)	3.43	3.17	13.32	Loss
Price Earning Ratio	230.27	21.93	7.63	Loss

Note: (1) data from: Wal-Mart's electric business started to have effectiveness with an 30% increase of net sales which first exceed Amazon, GJSAY, 2014-05-07;
(2) Wal-Mart's financial data is from its three quarterlies of 2016((Feburary 1, 2016 - October 30, 2016;
(3) Jingdong's financial data is from its three quarterlies of 2016 (January 1, 2016 - September 30, 2016);
(4) Amazon's financial Data is from its three quarterlies of 2016 (January 1, 2016 - September 10, 2016);
(5) Alibaba's financial data is from its three quarterlies of 2016 (January 1, 2016 - September 30,2016)

Case enterprises are the United States's and China's retail giants, are listed in the United States, and establish overseas finance platform, but their operation histories in capital market are different. Wal-Mart and Amazon, respectively, have 45 years and 20 years of listing history; Jingdong and Alibaba have only 3 years in the capital market, a short time. In addition to Wal-Mart which gets development from offline retail entity based on hypermarkets, Sam's Club, shopping center, the other three enterprises are starting in the electric business.

[9] Price: refers to the closing price of straight flush on October 31, 2016.

From the operating indicators, Jingdong's operating income (179.932 billion) is higher than Alibaba (119.694 billion), but due to focusing on logistics infrastructure construction, its operating expenses are huge, causing the operating loss. Alibaba has strongest profitability. Its earnings per share (13.32 yuan / share) is about 4 times as much as Wal-Mart and Amazon. But the number of employees (3.64 million) is also the least. Operating scale is much smaller than the US retail giant. Wal-Mart relies on a strong offline retail sales capacity[10].Operating income reaches 354.937 billion yuan, 2.97 times as much as Alibaba, 3.84 times as much as the Amazon. Personnel size (2.3 million people) is 63 times as much as Alibaba, 10 times as much as Amazon. But the market value ($ 213.6 billion) is only 58.78% of Amazon ($ 363.4 billion), and the price-earnings ratio (21.93) is only 9.52% of Amazon (230.27), indicating that the market is more bullish on Amazon's profitability and looks forward to Internet companies higher.

Table 3 Case Enterprises' DuPont Financial Analysis

Case enterprises	Amazon	Alibaba	Jingdong	Wal-mart
① The tax retained rate （NI/EBT） =1-rate	0.5434	0.6065	1.0385	0.6942
② Interest burden （EBT/EBIT） =1-Interest burden	0.8824	0.9216	1.1269	0.8928
③ Gross profit rate （EBIT/SALES）	0.0324	0.2125	-0.0086	0.0473
④ Net profit margin =①*②*③	0.0155	0.1188	-0.01	0.0293
⑤Asset turnover = sales income/total assets = efficiency （SALES/ASSETS)	1.3011	0.2438	1.2477	1.6996
⑥ Return on assets （ROA=Net profit/sales revenue） =④*⑤	0.0202	0.0290	-0.0125	0.0498
⑦Asset interest rate (leverage)=ASSETS/EQUITY	3.987	1.5857	3.4079	2.5705
ROE=NI/EQUITY=⑥*⑦	0.0805	0.0459	-0.0427	0.1281

Note: calculated by financial data from case enterprises' three quarterly reports in 2016 released by straight flush software listed companies.

Using DuPont financial indicators, Amazon's and Wal-Mart's tax and interest burden is relatively heavy, which affected their net profit margin (less than 3%). Wal-Mart has highly efficient distribution and the fastest asset turnover (1.70). Return on asset(ROA) and return on equity (ROE) were the highest (4.98% and 12.81%). Ali's gross margin (21.25%) was the highest, with the highest profit margin, the highest net profit margin (11.88%) and the fastest asset turnover (0.2438). Jingdong profitability was the weakest with its operating margin being negative (-0.86%). Amazon and Jingdong have higher leverage (3.99 vs. 3.40), but Amazon's ability to use leverage is stronger than Jingdong, with higher return on equity (ROE) (8.05% VS.-4.27%).

[10] Wal-Mart's revenue exceeded 400 billion US dollars in six consecutive years, more than the sum of Apple, Microsoft, Google's revenue.

From the market position, Alibaba and Jingdong are the leaders in Chinese electric business. Ali controls 50% of the B2C market in China, of which international business accounts for 9.31%, domestic retail business accounts for 80.14%[11]. Taobao, Tmall and other retail platform are Ali's core assets, but they need to go a long way to get internationalization. Jingdong is China's largest self-operated electric business, which owns the Jingdong Mall, Jingdong Finance (to provide consumer loans), pat network O2O, Jingdong Intelligent NSNG (Jingbao)[12]and other businesses. In addition to profit from Jingdong Mall, the other new businesses face losses, and have not yet reached the scale of output. In November 2016, Jingdong was forced to spin off the financial business, transfroming the Jingdong finance to an investors holding enterprise with the purpose of giving it more autonomy. Wal-Mart is the world's largest offline retailer who had strong global procurement bargaining power and is proficient in supply chain management. Its goods not only have all categories (selling several millions of SKU), but also do "every day parity."However in China, it subjected to institutional barriers[13]. Low store coverage, the lack of economies of scale, high logistics costs are becoming its weakness in the expansion of Chinese market. Amazon is the US electric business seller and logistics distributor. In 2013, its sales amount exceeded the total of the nine companies which rank after it[14].

From the business model, the four companies are integrated electric business enterprises. Amazon prefers B2C, whose platform is responsible for commodity sales and who builds its own logistics to finish distribution. Alibaba has both B2B and B2C models, mainly providing a platform to the sellers, not focusing on marketing and logistics. As a platform enterprise, the key issue to Alibaba's internationalization is: how to connect its own platform with local logistics and payment resources? Jingdong's advantage lies in: being good at supply chain management, having a large number of users and rich experience in domestic logistics. Selling genuine products with integrity, self-built logistics, and providing integrated access program are the development path Jingdong upholds. Wal-Mart, like Jingdong, has a huge number of offline self-brands and logistics system.

From the ownership structure, Alibaba and Jingdong Group (Jingdong's predecessor) registered in the Cayman Islands, and used VIE mechanism to control the mainland company[15].

---

[11] Data from: Alibaba 2014 second quarterly.

[12] Jingdong smart:set up in 2014 , focusing on intelligent hardware market and nurturing the industrial chain.

[13] In accordance with the " business management approach of foreign investment (China) " (implemented on June 1, 2004). According to the relevant provisions of Article 7 and Article 10, the operating period of foreign retail enterprises generally does not exceed 30 years (it does not exceed 40 years in midwest area). Foreign investors who set up electric retail enterprises,should report to the Ministry of Commerce for approval. If its business does not involve in the Internet,the total number of shops does not exceed 30, the area of a single store does not exceed 3,000 square meters; or if the total number of shops does not exceed 300, the area of a single store does not exceed 3,00 square meters. foreign retail enterprises should be approved by the provincial commerce authorities and report to the Ministry of Commerce for the record.

[14]Data from: Wal-Mart's electric business started to have effectiveness with an 30% increase of net sales which first exceed Amazon, GJSAY, 2014-05-07.

[15] VIE mechanism is short forVariable Interest Entities, is a mechanism for avoiding which is derived from the administrative constraints of the institutional barriers of foreign investment to telecommunications business in the mainland(including the Internet and electricity business).The process is:(1) Overseas set up an offshore company A controlled by foreign or domestic investors (listed company) (2) A sets up a foreign-owned enterprises B in China, engaged in technical consulting and other non-restrictive industries. Through the way of company B offering funds to company B (VIE agreement), A controls the company C which has the operating license in the territory,indirectly entering the foreign limited industry. In June 2015, the Ministry of Industry released the proportion of foreign equity restrictions on business class e-commerce (online data processing and transaction processing business). The foreign ownership ratio can increase to 100%. This means that Amazon can wholly operate e-commerce. With the system being open, VIE can gradually withdraw.

Ali's three top shareholders are Japanese Softbank (holding 34.4%), the United States Yahoo (holding 22.6%) and Ma Yun (holding 8.9%). Jingdong's three top shareholders are Tencent (accounting for 21.25%), Liu Qiangdong (accounting for18.2%) and Wal-Mart (accounting for10.8%)[16].The founders of two companies all use A / B shares voting structure, having enough voting right which can control the board of directors through the partners holding B shares[17].This means that Alibaba and Jingdong are foreign direct investment companies that are deeply cultivated in China[18]. They are Internet companies with their market in China, their users in China, the profit mainly from China, the helmsmen from China, but also with foreign holding and overseas listing. As China's largest online trading platform, although it enjoys tax incentives for high-tech enterprises in China and its annual net profit is over 300 billion yuan, a lot of incomes export to overseas.

Table 4 Revenue of Case Companies in 2015

	Electric Business' Annual Revenue	Annual Membership Fee	Operating Income	The Proportion of Electric Business' Annual Revenue
Wal-Mart	13.7 billion dollars	49 dollars	482 billion dollars	2.84%
Amazon	107 billion dollars	99 dollars	88.988billion dollars	1.20 times

Note: Data from www.fortunechina.com

INVESTMENT LOCATION COMPARISON BETWEEN CASE ENTERPRISES

Different regions have cultural differences and different access to resources, so that their building paths of regional brand will be different. But no matter what paths they choose, they need to solve the logistics and platform issues, whose strategic core lies in logistics, consumer finance and supply chain control. Case enterprises' overseas investment preferred countries with close psychological and geographical distance. Southeast Asia's markets with a population of 620 million people, the rapid development of the Internet and the potential for the development of electric business have been greatly favored by the Chinese electric business enterprises. But most areas lack transport and payment infrastructure, becoming fragmented markets which are extremely difficult to tame. Thailand, as the region's most developed country, due to its population of over 60 million, geographical proximity and many overseas Chinese and Chinese, becomes the springboard of hitting the market for Chinese technology giants. Amazon prefers Singapore and India whose economy is relatively small and who have closer consumption and cultural habits with United States (close psychological distance).

[16] Data from: documents submitted to US SEC by Alibaba and Jingdong respectively on May 6, 2016 and on 6 February,2017.

[17] Also known as double-tier ownership structure. The company issues A and B two types of shares with different voting rights to ensure that the founder and the management maintain sufficient control after the company is listed. The enterprise issues A shares to external investors, 1 share 1 right; the management holds the B shares, 1 share N rights. But the two types of shares have the same dividends. B shares are not publicly traded but may be converted into A shares at a ratio of 1: 1. In this way, even if the founder has only 1/3 of the B shares, he does not worry about the loss of control. Liu Qiangdong only holds 18.2% stakes in Jingdong, but has 80.9% of the voting rights. NYSE and NASDAQ are subject to the companies with such ownership structure. But stock exchanges in London and Hong Kong refuse them because the structure is not conducive to protecting the interests of investors.

[18]According to international practice, foreign investment exceeding 10% of the shares is recognized as international direct investment. The purpose of international direct investment is to obtain control of the target company.

In the regions with remote psychological and geographical distance, case enterprises preferred North America, Dubai and other areas with good infrastructure. From 2007 to 2015, the proportion of European population who do online shopping increased from 30% to 53%. UK (81%), Denmark (79%), Luxembourg (78%), Germany (73%), the Netherlands (71%), Finland (81%), Finland (71%), Finland (71%), Finland (71%) and Sweden (71%)are the most enthusiastic countries with doing online shopping[19]. The Netherlands with its high level of industrialization, leading technology, universal education, multilingual citizens, high labor skills, stable politics and economy, strong economic radiation to European inland, developed logistics network is reviewed as "the best place for business in the world" by the Economist Intelligence Department. In addition, the Netherlands has signed a wide range of tax treaties (double tax exemption), allowing foreign investors to participate in shares, exempting the withholding tax on remittance interest and royalties. It is a better place for tax avoidance in transnational tax investment planning. The Netherlands is a loyal member of the European Union, locates at the junction of the North Atlantic route and Continental Europe's channel to the sea, with 170 million consumer population within a radius of 500 km, accounting for about 50% of the EU market, and is known as the "European gateway". When goods enter into the Netherlands, they can be delivered to Western European inland within 4 to 48 hours.

THE COMPARION BETWEEN CASE ENTERPRISES' BUSINESS STRATEGY AND INTERNATIONALIZATION PATH

For the rapid occupation of the market, the cross-border electric business enterprises try to avoid weakness and seek to play their own advantages in the internationalization path.

[19] Data from: Eurostat's survey report on online shopping people from 16 to 75 years old during 2007and 2015.

Table 5 Wal-Mart's International Path and Strategic Objectives

Investment area	**Investment Behavior**	**Review**	**Period**
The US market	1996： built the website Walmart.com. 1997： went listed and raised $ 54 million. 2000： divested Walmart. com, co-financed 100 million US dollars with Silicon Valley venture capital to get independent operation.	Electric business started early, but developed slowly	21years
	2010： The Sam's Club launched an online mall which first used its own platform and then stopped. 2014： built Sam's APP mobile client. 2015： In Shenzhen, introduced hypermarket's O2O "Shugoo" platform, "Wal-Mart" mobile App, "quick purchase service center" for customers' delivery from the store, mobile electronic payment tools, the likely unity of online and offline prices.	1、developed its own Internet business platform and App mobile client. 2、Self-built platform business experienced the progressive testing path of Sam's online mall → supermarkets O2O shugoo.	
	2015/7： announced that the Sam's membership shop settled in third-party platform – xiachufang.com.	1、copied the China's mode of “third-party platform +self-run direct purchasing and supply chain” in the United States. 2、Since 2014, payed attention to data digging, independently developed search engine tools, centralized online and offline consumption data, and used large data to do precise marketing.	
	2014: developed its own web search tool to improve the conversion rate by 20%; bought search marketing software company Adchemy to optimize the use of words.		
	2016/9: used $ 3.3 billion in cash plus $ 300 million in equity to buy the US local electric business company Jet.com		
Chinese market	2012： increased the holdings of No. 1 shop[20] to 51% 2015： spent $ 760 million to wholly take over the "No. 1 Shop". 2016/6 ：merged "No. 1 shop" into Jingdong, in exchange for145 million shares of Class A common stock issued by Jingdong, for 5.9% stake (through swap). later spent nearly $ 2 billion to increase the holdings to 10.3%. 2016 ：Wal-Mart's first cross-border shop in China - the official flagship of “global buy” store entered Jingdong; more than 20 Wal-Mart stores entered Jingdong Imdada's O2O platform "daojia.Jd.com", in which Dada is responsible for providing 2 hours' delivery service. 2016/10: used 50 million US dollars to (equivalent to 336 million yuan) do strategic investment on Jingdong's Imdada to integrate O2O business.	Through the progressive equity investment of equity participation → adding capital to increase holding → full acquisition, got access to brand, website, APP and its distribution logistics of China "No. 1 shop" in Beijing and Shanghai; And then sold "No. 1 shop" to Jingdong ,becoming the third largest shareholder of Jingdong through the way of swapping shares → increasing holdings → strategic investment ; sold self-run categories	4years

[20] No.1 shop mainly based on East China and South China, focusing on operating household goods, groceries and food category, with the advantages of owning specific categories and specific markets.

		in Jingdong, relied on Jingdong platform and strategically invested Imdada and integrated Jingdong O2O Logistics to complete the last one km distribution.	

Cooperating with third-party electric company platform or logistics companies to effectively dilute the cost of is the business model of network business's internationalization. Warlmart, as the world's largest offline retail business, its distribution system penetrates into the major cities in the United States, with 4,500 stores and 102 distribution centers and has capacity of supply chain management and global procurement bargaining power. Although electric business starts earlier, but it develops slowly. Electric business accounted for only 2.84% of 2015 operating income, much lower than the 1.2 times of the Amazon (see Table 4). A large number of physical store customers have not yet converted into electric business customers, so that online sales potential is huge. How to make the huge number of offline physical stores and supply chain advantage work well online, and how to establish offline logistics and distribution capabilities which match online transactions? In 2006, Wal-Mart built its electric business channel, trying to switch to electric business, but soon giving up. On June 2011, it started China's electric business trip, outsourced the "platform + local logistics"to Chinese enterprises. From 2011 to 2012, Wal-Mart got all the resources of No.1 shop through the way of holding equity → purchasing the majority of shares → the full acquisition. Wal-Mart sells its own brands in No.1 shop, implementing the strategy of "third-party platform + self-owned logistics", trying to cooperate deeply with No.1 shop in the goods procurement and logistics. But their online and offline categories are too different from consumer preferences: No.1 shop focuses on female customers (accounting for 2/3), and its categories are about "hot mother" (covering maternal and child supplies, home furnishings and small appliances) and "Beauty" (covering beauty, department stores, fashion electronic products), mainly for major cities' white-collar workers while Wal-Mart is mainly for high-income men. Although Wal-Mart's directly selling products in No.1 shop can effectively expand the goods SKU, in short term, it is difficult to support No.1 shop's urban expansion demand in first- and second-tier cities, because 80% of its more than 400 offline stores are distributed in second-,third- and fourth-tier cities. The volume of "No. 1 shop" (hundreds of SKU) is also difficult to support Wal-Mart (millions of SKU) O2O closed-loop integration requirements. In order to speed up the penetration of the Chinese market, Wal-Mart quickly adjusted its strategy. In 2016, it sold No.1 shop to the Chinese retail giant Jingdong and held 5.3% →10.5% stakes of Jingdong through the process of exchanging equity and increasing capital. Jingdong has always been based in the north. The acquisition of No. 1 shop is conducive to enriching the home supplies, food and miscellaneous goods and to expanding its electric business territory of South China and Nouth China. Wal-Mart and Jingdong's strategic cooperation is along the path evolving from linking category with platform→ capital injection → member marketing → food safety management → brand marketing. Wal-Mart makes use of Jingdong's platform operating capacity and regional brand influence to quickly penetrate into the Chinese market and achieve the model leap of "international logistics + local distribution + local platform + local payment". In 2016, Sam's Club and Wal-Mart flagship store have been online of Jingdong. Wal-Mart strategicly invested Jingdong's Imdada and improved its logistics and distribution chain, in order to enhance China's last one km distribution efficiency. In Shenzhen, Wal-Mart also tested self-built O2O "Sugoo" platform, the ultimate goal of which is to master the initiative of "platform + payment + logistics".

It can be seen that Wal-Mart's investment in China has undergone a strategic shift from self-supporting to cooperation, from choosing small-scale electric company (No. 1 shop) to choosing comprehensive leading electric company (Jingdong) to achieve cooperation. Wal-Mart followed the path of holding shares→increasing capital and holding→full acquisition to get business platform, brand and channel of "No. 1 shop". After the failure of integration, through integrating brands→replacing equity→increasing capital and expanding shares, and carrying out in-depth strategic cooperation with the Chinese retail giant Jingdong, which has similar business model and an united one of logistics, payment, platform functions, Wal-Mart effectively avoids the restrictive institutional barriers on China's foreign-funded enterprises and the expansion scale of foreign-funded stores. Jingdong's platform, service, and reputation provide support for Wal-Mart's direct sales in China. At the same time, Wal-Mart deeply involved in the transformation of Jingdong logistics system to optimize China's local distribution capacity, so that "Chinese distribution" and Wal-Mart "international distribution" can be effectively linked, an effective solution to the last one kg distribution problem. In 2015, Wal-Mart will copy the model of "third-party platform + self-logistics + self-supply chain" in the United States, with Sam's membership stores entering the kitchen market under third-party platform. In 2016, Wal-Mart got the acquisition of the United States' local electric company jet.com[21].Wal-Mart integrates online shop with Jet electric business system to achieve low cost and fast performance.

[21] Jet.com set up only 1 year ago, with more than 100 million US dollars of operating income, more than 400 million customers and providing one day service to more than 50% of US households for free.

Table 6 Alibaba's International Path and Strategic Objectives

Investment area	International investment behavior	Objectives	Period
Chinese market	2009/8：launched the Aliexpress platform. 2010/3：invested 70 million yuan in Stars Express, holding 30% stakes. 2007：invested Best Logistics；2010/7：Best Logistics got the 70% of Xuntong Express's shares. 2013/12：invested Haier Electronics by 2.822 billion Hong Kong dollars to build strategic partnership.	Built its own cross border electric business platform.	6years
The US market	2013/10: set up an overseas investment team led by Michael Zeisser. 2014/3：invested $ 215 million in Tango（an instant messaging application company） 2014：participated in the sports souvenir online retailer Fanatics' new round financing of $ 170 million. 2014/5：Invested to hold 39% of ShopRunner's stakes (express service provider). 2014/8：injected 120 million US dollars to Kabam (video game company)	Invested the Internet start-ups to gain the potential source of growth.	1year
	2014/9：Alibaba went listed on the New York Stock Exchange. Compared with the issue price of 68 US dollars, on the first day the closing price of 93.89 US dollars rose 38.07%. 2014/6: launched online boutique market site 11Main in the United States, aiming at the US online retail market.	Got listed in the US market for access to overseas capital; launched self-run website to test US retail market.	2years
European market	2015：announced the expansion in Europe, setting up offices in Italy (Milan), Germany (Munich) and France (Paris). 2016：set up an office in the Netherlands (Amsterdam), focusing on promoting the Beilu Lu products in the Chinese market [food, children's products, daily luxury goods]. 2016：Ant Financial Services Group cooperated with BNP Paribas S.A., London Barclays PLC (BCS), UniCredit Bank and SIX Payment Service. 2016：worked with Vodafone, a telecom operator, to set up a data center in Frankfurt and provide cloud computing services with the German data center.	1．established an office in Western Europe and cooperated with government departments to help SMEs enter the Chinese market. 2. worked with financial institutions in Britian, France and Italy to solve the payment problem and expand Alipay's global application. 3. established the European data center in France and Germany.	2years
Southeast Asian market	2014/5：invested $ 249 million to acquire 10.35% stakes of Singapore Post. 2016/4：invested $ 1 billion to acquire acquisition of Southeast Asian electric company Lazada and got its Singapore online store Redmart. This has been the largest foreign investment for Ma till now.	entered the Southeast Asian market with regarding India, Thailand and Singapore as the	2years

	2007：founded the Indian Channel to help Indian companies seek global buyers. 2008： built strategic partnership with Infomedia, India's largest B2B media company. 2014：bought some shares of Indian Venture Company PayTM[22] and Snapdeal's shares. 2016：Negotiate the acquisition of one of India's largest online trading platform Snapdeal[23].	cores. In India and Singapore with the relatively good infrastructure, it mainly used the way of "self-building +holding shares or the acquisition of competitors" to develop localized platform; participated in the post company to solve overseas distribution problems. In Thailand with the relatively weak infrastructure, signed with the government , relying on government resources to deepen cooperation; and cooperated with Thailand's payment company to promote Alipay applications.	
	2016/11：cooperated withThailand's largest consortium's Chia Tai Group. Ant Financial Services Group invested Ascend Money, starting from 7-11, to promote Alipay in Thailand.		
	2016/12：Thailand's political and business delegation reached a comprehensive cooperation agreement with Ali [involving telecom business, small- and medium-sized enterprise development, personnel training, logistics supply chain, etc.], to help boost the development of Thai electric business and build "Thailand 4.0" and "no cash community."		
the Middle East market	2016：Ali cloud cooperated with Saudi data services provider Detecon.	worked with local real estate giants or telecom operators or data service providers to build data centers in Dubai in order to enter the Middle East market.	1year
	2015/12：Ali jointly set up YVOLV with Dubai Real Estate Group Meraas. 2016/11：YVOLV built data centers in Dubai.		

At the beginning, Alibaba was founded to serve as a global B2B website. In September 2014, the company successfully listed on the NYSE in the United States, opening its internationalization. Ali’s strategy is "global purchasing, global selling." On the one hand, it

[22] Paytm holds more than 70% of India's market share.
[23] Snapdeal: founded in 2010, has received 627 million US dollars (2014) from Softbank, 500 million US dollars (2015) from Softbank, Ali and Foxconn and others, 12 rounds of financing in total with total scale of $ 1.76 billion. In India, the three giants Snapdeal, Flipkart and Amazon respectively accounted for 26%, 45% and 12% of the market share.

makes self-run platform Aliexpress[24] to get through with Taobao background, then selling Taobao goods overseas. On the other hand, it establishes Alibaba International Station and makes the Chinese consumer market as a catalyst to attract overseas businessmen to enter and meet the needs of Chinese consumers' cross-border online shoppinghttp://dict.youdao.com/w/cross-border%20online%20shopping/javascript:void(0);.

Alibaba involves in the logistics, finance, electric business, brand, investment, cloud computing and other fields to build a complete Ali zoology. Through the establishment of rookie network, it cooperates with local postal and logistics suppliers to build loose network organization and strategic cooperative relations; It has access to Macy's and other world retail giants and finishes the acquisition of Southeast Asia's largest electric business company Lazada (2016), and gradually develop into an international business platform. By investing venture companies in Silicon Valley, Ali has gained complementary resources and potential growth sources. Its Alibaba YunOS Auto named World Club Cup, using sports marketing to expand the brand influence.Its Ant Financial Services Group invested Ascend Money(Thailand), SIX Payment Service (Switzerland), K-Bank (South Korea Internet Bank), Paytm (Indian version of Alipay) and other financial institutions and reached a strategic cooperation with the Lotte (Japan's largest electric business platform), Stripe (American online payment company) and the Swiss Global Blue (European tax rebate agencies) to expand Alipay's global application.At present, Alibaba establishes data centers in Singapore and the Middle East, designing to build cloud computing-based core competitiveness.Ali hopes to transplant the entire Ali ecology overseas, so it pays attention to overseas high-level cooperation in the expansion[25]. It prefers to cooperate with the government to use its social resources to increase brand recommendation and supervision, promulgate customs clearance law and solve the problem of local payment. For example, it signed a memorandum with government agencies of the United Kingdom, France, Italy, to promote their local businesses to be online in Taobao and Tmall and use the Chinese platform to enter the Chinese market. And it works with Singapore and Brazilian postal companies to take advantage of local resources to improve customs clearance efficiency and solve the delivery problem of front-end's100 meters (import) and back-end's 1 km (export). In Russia, Alibaba mainly copies Chinese model, that is, Aliexpress cooperates with the local mobile phone operators to develop APP services. In March 2015, Aliexpress with Russia's four major mobile phone operators MTC, Megafon, Beeline and Tele2 launched mobile phone bill payment service to facilitate online shopping for consumers outside Moscow and St. Petersburg. In July, Russia's B2C electric business platform with annual turnover of more than 100 million US dollars collectively settled into Aliexpress.

As for different regional markets, Ali has different investment strategy. In Europe, Ali will be positioned as a gateway for European companies to enter the Chinese market. As the emerging

[24] Aliexpress: Alibaba in 2010 established Aliexpress, initially aiming at getting through with Taobao background, then selling Taobao goods overseas. In 2012, it shifted the target market from the United States to Russia and Brazil, in order to avoid the competition with Amazon, eBay in the main battlefield in the United States and expand its influence on the countries along One Belt One Road, gradually becoming a platform with tens of millions of goods. The number of daily visiting users of Aliexpress in Russia reaches to millions, 5 times ebay , 9 times the Amazon, becoming Russia and China's largest cross-border electricity business platform. In order to solve the logistics problems, Aliexpress at first cooperated with the International Postal Union. But with the business development, postal's bottleneck highlighted. Then in France, Australia, Singapore, Italy and other countries, Aliexpress signed a series of agreements with local governments and logistics suppliers to open up cross-border logistics by using the local forces.

[25] In 2016, Ma proposed the eWTP (World Electronic Trading Platform) initiative at the G20 summit, was awarded by the United Nations for senior official and red pass, and was responsible for building a global electric business platform.

market is complex and changeable, it is difficult for western multinational companies to enter, who hope to rely on Ali ecology, get all-round service support from the transaction → payment → finance → logistics and expand the Chinese market with low cost. From 2015 to 2016, Ali has offices in Italy (Milan), Germany (Munich), France (Paris) and the Netherlands (Amsterdam), and plans to upgrade the UK office in London's financial district to the European "strategic center". Since 2011, Alibaba has launched 10 localized business platform in the world. By 2013 Alibaba has established online operation centers in Texas, Pennsylvania and Brazil; by November 2016 it has set up more than 70 offices in China, India, Japan, South Korea, Europe and the United States, operating in more than 200 Countries and regions. Ant Financial Services Group cooperated with three European banks and a payment company to launch **online remote** and APP payment business. By September 2016, nearly 100,000 businessmen in 70 countries could use Alipay.

Table 7 Jingdong internationalization path and strategic objectives

Investment area	International investment behavior	Objectives	Period
European market	2015/02 : started Jingdong "French Pavilion", and set up overseas direct purchasing team.	established European direct procurement system through the group procurement, setting up overseas joint ventures and other ways.	1year
	2015/11 : established Zitra Corporation with Otto Group (holding 50% shares respectively) which headquartered in Germany. Otto is responsible for regional service (website establishment and maintenance, operations, IT system processing, payment, logistics, customer service, etc.) to assist European and American brands to enter China through Jingdong platform (not the only).		
Chinese market	2016/6：Warlmart emerged its "No. 1 shop" into the Jingdong, in exchange for 5% of Jingdong shares (swap) and then increased the holdings of Jingdong shares from 5.9% to 10.3%.	used Wal-Mart's global procurement system to remedy the short board of Jingdong supply chain.	
	2016/8：Tencent increasd holdings of Jingdong from 17.6% in 2014/5 to 21.25%.	increased the advertising coverage in the Tencent news client to get more traffic entries.	2years
	2016/4：China's largest logistics platform "Dada" and Jingdong's fresh food O2O platform "Daojia.jd.com" merged to "Imdada", serving over 500 thousands of businessmen in more than 300 cities and cooperating with more than 30,000 supermarkets and drugs in 18 cities. Jingdong has 47% stakes in Imdada as its single largest shareholder. 2016/10: Wal-Mart injected 336 million yuan to Imdada.	Self-building logistics system → upgrading cooperation → fully open (logistics branding), shifting logistics system from the cost center to profit center.	10years

Jingdong's overseas business started late. In 2015 it began international layout. In 2016, Jingdong will upgrade import and export business sector to the marketing department and set up a global team, responsible for attracting investment and purchasing directly overseas. It has launched French Pavilion, South Korean Pavilion, Japanese Pavilion and other national pavilions and pavilions with regional characteristics to attract Kao, Pigeon, Nissin, Shiseido, Kose, Canon, Panasonic and other international brands to settle. Jingdong chooses Wal-Mart and Tencent as partners. In the demand side, it places Jingdong ad into the Tencent news end, making Jingdong has access to its huge user group. In the supply side, Wal-Mart's global direct purchasing capacity and supply chain system enrich the original product categories. In Europe, Jingdong and the German electric giant Otto[26] set up a joint venture (2015). With Otto resources, Jingdong introduces European brands rapidly to meet the needs of overseas shopping for Chinese consumers. Otto changes from B2C to B2B, as grafting bridge between China's electric business and the European brand.

Compared to the entity companies, overseas acquisition of electric business enterprises cost less. For example, Ma's largest overseas acquisition cost $ 1 billion (2016, Lazada acquisition case). But establishing infrastructure is costly. From 2016 to 2017, Amazon plans to invest $ 2 billion to build a logistics distribution center and upgrade the technical information system.

SERVICES OPENING PATH COMPARISON BETWEEN CASE ENTERPRISES

China and the United States are very different in logistics distribution model. The 2/3 of the United States' population concentrates in around 8 km range of Walmart, BestBuy and other large supermarkets, which integrate logistics, payment and brand management and have their own credit and settlement system and a strong supply chain. Every day trucks shuttle in the major stores and timely distribute goods. Supermarkets entrust their own brand to factories for processing, and are commissioned to sell others' brand. The operation scale of China's chain supermarket is much smaller. Although the consumption scale is huge, the geographical dispersion needs to focus on cargo allocation and centralized declaration, in order to reduce channel costs. Chinese supermarket's gross margin is about 10% to 15%, net profit only 3% to 5%[27]. Supermarket's self-built logistics will undoubtedly increase the picking and delivery costs, and further squeeze profit margins. In China there is no successful stories about supermarkets which transform to electric business and construct dual operation mode of online and offline based on the supermarkets. Most of China's O2O enterprises are still in the stage of burning money on distribution, aiming at cultivating user habits and forming a large scale, and then transforming to be an entrance after the formation of consumer stickness, linking with value-added, profit-based life services.

Wal-Mart has its own satellite positioning system, automatic ordering system, stable supply chain, and a strong bargaining power because of the size of procurement. To expand the economy of scale, Wal-Mart has opened the logistics system, allowing suppliers to pay for their inventory management systems and distribution services (5% of the delivery fee), but the suppliers must use the Wal-Mart's bar code and do sorting and packaging under retail requirements. This is conducive to sharing cost and speeding up the supplier's inventory turnover. Opening logistics system makes logistics activities as a "profit source" for Wal-Mart, with distribution costs less than 3% of sales, far below the competitors' 4.5% to 5%[28] .

Amazon is oriented by self-run B2C business and sets platform, logistics and shopping malls in one, causing high operating costs. In 2006, Amazon opens its more than 64% of the platform

[26] Otto Group: Otto Group, Hanjo Schneider as chairman, was founded in 1949, has ever been the leading authority in the international mail order industry, and now involves in TV shopping, Internet retail and mobile business.It has 123 enterprises and sets up five procurement offices in Dongguan, Shanghai, Qingdao and other cities with business in more than 20 Countries and regions,being the world's largest retail channel operator, which provides financial and third-party logistics services. Its Hermes Europe is a supply chain management service providers (responsible for bilateral cross-border logistics), accounting for 25% of the European B2C and C2C express market with logistics profit margin of 5%.

[27] Source: what will Wal-Mart electric business eventually want to be? North Bay Suppliers, 2015-07-22.

[28] Data from: view Wal-Mart's business strategy from the financial management point.

GMV and FBA [29]business to the platform enterprises. It makes use of its advantages of warehousing and logistics, attracting a large number of businesses to enter, and ultimately beating ebay who leads the C2C model. After opening the platform and logistics, Amazon's net service revenue consists of four components: platform business commissions, agency fees (AWC), logistics revenue (FBA) and Prime membership fees. Among them, FBA is the most important source of profits.

Jingdong spent 10 years in investing the domestic construction of logistics system and now has 234 warehouses, 6756 distribution stations, billions of users and a online mall with whole categories. In 2013, Jingdong established Qinglong platform, whose daily processing capacity is up to 2 million, and which can support 10,000 users to operate online at the same time. In February 2015, Jingdong started "French Pavilion", sent a delegation to do direct overseas purchasing. Self-run logistics system and direct overseas purchasing are conducive to eliminating the uncertainty of distribution and effectively controlling the supply quality, but it has high operating costs and low gross margin.In order to amortize cost and get long tail effect, in November 2016, Jingdong opened the three service systems of supply chain, express and logistics cloud to the community and launched "211", "arrive in limited day", "distribute in night " "Speed up" and other integrated services in the core cities. For the economies of scale[30], Jingdong speeds up the layout of the warehouse network, transiting from the operator to the platform service providers, logistics shifting from the cost center to the profit center.

As a platform business, logistics is Alibaba's largest short board. In order to solve the logistics constraints, Ali has launched a large logistics plan (June 2010), Skynet plan (June 2011), and established "China568" with logistics enterprises (logistics information service platform). In September 2012, Taobao and Tmall piloted "Alibaba service station" to provide campus express system solutions; set up "community service station" in more than 580 convenience stores of Beijing, Shanghai, Hangzhou and other cities. In 2013, Alibaba announced the establishment of the logistics division, started "China Smart Logistic Network" (CSN) project[31]and set up rookie network (network plan) to strengthen the logistics infrastructure construction. Alibaba invested http://dict.youdao.com/w/eng/%e7%99%be%e4%b8%96%e7%89%a9%e6%b5%81%e6%9c%8d%e5%8a%a1/-keyfrom=dict.phrase.wordgroupBEST Logistics(2007),Stars Express (2010),and Haier Electric (2013) by equity, and indirectly held News Express (2010), and jointly developed logistics and distribution of appliances and large items of goods , installation and other service standards with Haier Electric.Based on the "China568" and CSN, Ali gradually builds the logistics system of "open platform + logistics integration", "self-building + cooperation", "online and offline integration" with the support of Internet of things and cloud computing. Ali makes use of accumulated mass trading data to create a socialized fourth party logistics integrator, which provides integrated solutions specifically for third-party logistics. Jingdong and Amazon have their own logistics, massive users and all kinds of goods. Benefiting

[29] In 2006, Amazon opens FBA (Fullfillment By Amazon) and provides a package of logistics services including warehousing, picking, packaging, distribution, collection and cargo return, which cover 44% of the population within the surrounding 20 km and achieve the day up, then up to the next day up to. According to the GRP (Consumer Intelligence Research Partner) 's study, by July 2016, more than 65% of sellers used Amazon's FBA service, accounting for 42.1% of Amazon's orders.

[30] That is, the more warehouse, the closer the goods from the consumer, the faster delivery, the lower cost.

[31] on May 28, 2013, Alibaba and Intime Group, Fosun Group, Forchn Holdings, China Post, EMS, SF Express, TTK Express,"3Ts and 1DA "(STO, YTO,ZTO,YUNDA),ZJS,HTKY and other related financial institutions together launched the CSN project, which is actually the supply chain integrator, or called the forth party logistics(4PL), responsible for the integration of technology, resources and capabilities to provide supply chain solutions.

from the early accumulation of users, Jingdong imported 4 million bottles of red wine from French winery under their first cooperation in 2014. Wal-Mart owns its developed supply chain logistics, but the traditional logistics distributes along the path of manufacturers → warehouses → supermarkets → consumers. Now it needs to comply with the requirements of the development of electric business to re-build the integration system of manufacturers → warehouse → consumers' warehousing and distribution. When the traditional business model and modern business model coexist, Wal-Mart faces a huge challenge as for how to get through the two logistics chain. Alibaba's relying on external alliance to build a logistics network is a typical light-asset operation model. Formulating industry standards of logistics equipment,operational processes and other aspects is the key to ensure efficient operation of the alliance, but which also needs to solve who will monitor the service and how to coordinate the interests of the parties and other problems.

Table 8 Comparison of Case Enterprise Services' Internationalization

	Service internationalization	Review
Warlmart	2015: At the Arkansas headquarters, Bentonville tests the service of "Walmart Pick-up Grocery"[32], which is designed for low-temperature food." 2016：promoted the Prime membership services in China.	attracted members and promoted member services. " Pick-up Grocery " is suitable for open towns, not for crowded and concentrated Chinese cities.
Amazon	Initial stage：outsourced domestic logistics to USPS and UPS, international logistics to Fedex.	platform mainly charges membership fees, rental fees, agency commission and so on with efforts to build high-tech distribution capacity from the logistics of outsourcing → self- run delivery → UAV distribution.
	2005：introduced Prime member service to Gold Medal users. 2007: launched a package of FBA services of "rental shop + selling network flow + sub-warehouse leasing + packaging and delivering for customers + collecting money" to the platform businessmen 2011：built its own express team in the UK, trying to solve the "last mile" distribution problem. 2013：established UAV project. 2015：promoted Amazon Flex's 2 hours arrival service in Seattle.	
Jingdong	2013：open FBA services to platform businessmen and partners. 2015：established the third national pavilion - Japan Pavilion, following the French Pavilion, South Korea Pavilion, made use of overseas direct purchasing to attract international brands to settle and provided direct mail, centralized distribution in bonded area and other integrated logistics solutions for Jingdong's global customers. 2016：established smart logistics open platform.	Shifted from the self-run logistics → open FBA service, and changed from the platform provider to a "platform + logistics" service providers through the "direct purchasing+ bonded logistics", focusing on smart and open logistics.

[32] "Walmart Pick-up Grocery": Warehouse and store are separated. 2 hours later after the consumer make orders online , the customer can drive to Pick-up Grocery (similar to the gas station), input the name, order number and click on t "pick up". 5 minutes later the warehouse staff will deliver the goods to the car.

COMPARISON OF STRATEGIC TRANSFORMATION OF CASE ENTERPRISES

The electric business industry has fastest strategic evolution. Due to the differences of culture, consumer habits, user stickness and others between countries, when there is a need for overseas expansion, case companies rarely use self-run B2C model, but prefer to make use of the local complementary resources, or build a complete B2B2C consumer service chain to help local brands enter into other markets, or even they can radiate regional market by means of geographical or policy advantages from the host country. Platform enterprises will face the two major challenges from lacking of technology and lacking of talent reserve when they enter overseas. Ali first appointed Michael Zeisser, former head of Liberty Media's Electric Business Department, as president of the Investment Department; then appointed Jane Penner, former spokesman of Google, as Vice President and Head of Investor Relation Department in order to use his experience and contacts to develop the North American market. In 2015, Ali successively appointed Amee Chande[33], Rodrigo Cipriani Foresio as the Group's general managers in the UK and Italy; appointed Terryvon Bibra[34], Sebastien Badault[35] as the office’s general managers in Germany (Munich), France (Paris), who directly reported to the Group CEO Mike Evans.

From the beginning, Amazon founder Jeff Bezos positioned the company as a technology company. Amazon has an unique advantage in cloud computing, media, hardware equipment and artificial intelligence and can use high tech to connect global resource platform in the role evolution process from technology provider → logistics provider → retail electric business provider. In 2015, electric business providers’ revenue accounted for 70% of the Group's total revenue. Alibaba was positioned at the beginning as a website to serve the global B2B, following the development path from platform → payment and consumer finance → logistics → technology, and gradually expanding to cloud computing, big data, culture and entertainment, O2O and other fields. Taobao sells ads and data services to sellers; Tmall and Alibaba impose membership fees, platform fees and advertising fees on the businessmen. Depending on the consumer finance and financial management functions of payment wallet (Yu E Bao), Ali gets a lot of cash flow and quickly puts it into advertising, logistics and other profitable activities. As a result, although Ali is famous for fakes and the "low price competition", relying on its innovation in trade finance field, its profitability is still stronger than Amazon. In 2013, Amazon's operating income and net profit were respectively Alibaba's 9. 36 times and 58. 24 times, but the sales profit margin is only 0. 37%, far below the Ali’s 45%.

In the O2O era, the offline layout of "store + shopping center + distribution warehouse" directly relates to commodity inventory and logistics coverage. Wal-Mart owns huge offline resources, increasingly paying attention to build an independent platform, improve the logistics system and develop data digging. Wal-Mart’s massive consumer resources are enough to support its precise marketing under the big data. For example, the proliferation of diaper consumption means that baby carriage will also meet its sales climax. Wal-Mart can boost baby car suppliers to increase production and efficiency and obtain low purchase price through strategic

[33] Amee Chande: Former senior executive of Wal-Mart , aged 41, later worked as Director of Health and Health Care Business in Tesco PLC.

[34] Terryvon Bibra: former chief omni-channel retail officer of Karlstedt, Germany's largest chain department stores; was responsible for Amazon's European business; served as the leader of all regional markets in Yahoo.

[35] Sebastien Badault: one of the founders of Amazon France and Google France,being responsible for regional business development.

cooperation. Wal-Mart used five years to successfully carry out supermarket O2O platform "Sugoo", the global flagship store, Sam's online shop and App in China; invested the Jingdong's "Imdada" logistics and planed to build the first shopping center by 600 million yuan in China. "Genuine, safety, daily parity, courteous service" is Wal-Mart's brand concept. To strengthen the quality control, Wal-Mart strictly enforces supply chain management, provides consulting services for suppliers to help them improve processes and reduce overall costs and uses long-term assets with suppliers to share costs together and improve asset efficiency. Wal-Mart's inventory turnover period is 17 days, accounts payable turnover period is 62 days[36], which means Wal-Mart can take up the supplier's funds for 45 days for free. If the daily demand for funds is 10 billion, it can get ample funds of 450 billion which can be invested flexibly in all types of capital markets.

In China, Jingdong focuses on the physical market and meanwhile pays attention to group buying, traveling and other virtual markets, expanding its business from the network mall to the finance, intelligent hardware and online travel, for example, investing BitAuto in the automotive field and Tuniu in tourism, gaining dividends from the growth of online travel market. Jingdong cultivates NSNG through multi-channels, following the business development path from chip → platform → cloud computing → super app → equity-based crowdfunding to provide system solutions for entrepreneurs, completing the change from retail platform provider → supply chain service provider → resource integrator. But JingDong is still an electric business enterprise which deeply roots in the local market, adheres to the development path of self-run logistics and overseas direct purchasing and focuses on creating brand reputation.

Investing and acquiring host country's leading platforms, logistics companies and high-tech start-ups to obtain the scarce technology and capacity are common tactics during the internationalization of electric business enterprises. In 2013, Alibaba set up overseas investment team, focusing on two types of investment: one is mobile applications with potential power (mobile phones and services). Ali has successively invested Lyft[37] (taxi application), Tango (chat application), Quixey[38] (search engine), Peel (TV content sharing), Kabam (mobile game development) and other Silicon Valley start-ups, deploying communication applications, content sharing and online and offline lives. The other is logistics and platform enterprises, aiming at attracting local brands to conduct online business and building global distribution capabilities. Ali has successively invested in vertical business platform 1stDibs (high-end luxury website) and Fanatics (sporting goods website); held shares in Singapore Post, and built strategic cooperative partnership with postal sectors of Australia, China and Brazil and the logistics enterprises of Russia, Japan, South Korea, the United Kingdom, the United States, Australia and other countries. In Japan, Alibaba cooperated with

[36] Cash turnover period = inventory turnover period (17 days) + accounts receivable turnover period (0 days) - accounts payable turnover period (62 days) = - 45 days. This means that the supplier offers 45 days' business credit for free.

[37] Lyft: a US privately held, traffic sharing network services company, headquartered in San Francisco. The company launched P2P ride sharing App, with its business in 65 cities across the United States.

[38] Quixey: Headquartered in Mountain View, California, developed the "Functional Search (App Search Engine) technology that allows users to search across websites for the APP information of comment sites, blogs and social media sites.

Softbank in operating platform, in which Softbank was responsible for the funds, Ali provided brand and member resources. Since 2016, Ali has started a strategic transformation, changing into cloud providers through the layout of the global cloud computing infrastructure, and has successively established data centers in Silicon Valley of the United States, Singapore, Hong Kong, Dubai, France, Germany, Japan (planning) and Australia, with its "virtual machine + Data center "covering more than 2. 3 million users in over 100 countries. During"double eleven" period in September 2016, Ali for the first time operated cloud computing center designed and built by itself to support 175 thousand times / second's transaction volume.

As can be seen, cloud computing is the ultimate strategy for cross-border electric business enterprises. Someone who owns the cloud infrastructure around the world will have the cloud management service capabilities of electric business. Only by entrusting the overseas cloud host to local or global cloud service providers can cross - border electric business enterprises understand thoroughly into global business, and open overseas online markets instantly.

Table 9 Comparison of the Characteristics of Regional Markets in China

	Platform		Logistics		Payment channel		Logistics cost		Investment and finance costs	
	Self-run	The third party	Self-run	The third party	Self-run	The third party	Low	High	Low	High
Amazon	+		+		+	+	+			+
Alibaba	+		+	+	+		+		+	
Jingdong	+		+			+		+		+
Wal-mart		+		+		+		+		+

From the business model of four regional case enterprises in China, Alibaba's "platform + payment + finance" model has an advantage. Platform enterprises operate "payment wallet", utilize consumer finance (financial management) activities to absorb and invigorate the retail funds, dominating the core factor "trade finance" and resulting in effective reduction of investment and financing costs and acquisition of sufficient cash flow. During the"double eleven" period in 2016, for the first time Tmall sold international famous products to Hong Kong and Taiwan with providing local settlement, free shipping, local returns and other services. In the supply chain management, Alibaba is mainly based on loose cooperative organizations, taking "China market" as an incentive to absorb overseas brands into Ali platform. As for the various brand sources and the difficulties of product control, counterfeit goods or fake problems are serious. How to ensure the quality of supply and improve customs clearance and distribution efficiency in this mode is the key. To solve overseas distribution problems, on one hand, Ali built or rented overseas warehouse (mostly located in the free trade area), making use of bonded logistics' fast customs clearance to reduce the cost of circulation; On the other hand, it cooperated with the local government, postal companies and logistics enterprises to solve the last one kg distribution problem by using their relationship resources and distribution capabilities. But the size and credibility of the partners is essential to maintain the network's stability and efficient operation, because the brand reputation will be affected once the betrayal or political risk arises. JingDong and Amazon are "self-run supply chain + self-run platform business " providers, which are responsible for providing all-round services from sales of self-run goods → inventory management →logistics and distribution by mainly using self-built channels and overseas direct purchasing approach, that is, it purchases goods directly from suppliers, imports in batches under general trade, and then distributes the goods through the JingDong logistics system. For the layout of all categories, JingDong builds overseas purchasing team or joint venture company and establishes a stable group purchasing relationship with overseas brands. This mode is strong in quality control and helps to improve the customer experience, but its operating costs and the requirements on financial management and logistics control capacity are high with needs of enough cash flow. Due to its huge network sales volume and the Group's powerful procurement bargaining ability, it is conducive to maintaining the price competitive advantage. Under proper management, with the advantage of the procurement scale and logistics' opening-up, through a reasonable account management, effective absorption and occupation of suppliers' funds, the enterprise can get plenty of cash flow to fasten overseas investment and expansion.

China's policy dividends produced by development of cross-border electric business and the opening of retail enables China's electric retail giants to take a huge lead in the cross-border development. Alibaba first stood on the Chinese market, attracted overseas retailers into Ali platform through exchanging the market for resources and opened the "one-stop" service of payment → distribution → marketing analysis and others. However, in the early stages of development, the platform was weak in dealing with users' supervision and legal punishment and was lacking of effective regulatory and responding mechanisms for abnormal transaction accounts and customers' complaints. As a result, fake and shoddy products were popular, which affected the international reputation of the Ali's platform. In terms of platform construction, Ali operates the platform together with local strong real estate or business giants under the "its own brand + third-party funds" mode. In the choice of investment location, Ali gradually expanded from Europe (Russia) → North America (USA) → South America (Brazil) → Southeast Asia → the Middle East. In Europe, Ali used self-built"Aliexpress"to attract large Russian retailers into the platform;worked with mobile phone operators to develop APP payment services, so that Russia quickly became China's largest overseas electric business market. In the United States, following the path from venture capital investment→ going public → testing boutique retail platform, Ali has successively invested dozens of start-ups in Silicon Valley, taking use of the perfect capital market and innovative environment in the United States to obtain the necessary overseas resources and funds. But it's difficult to capture the US consumers because of bearing the "big fraud" charges. In Brazil, Ali translated the Aliexpress's pages into Portuguese. By July 2015, the Brazilian website's page view had been over 12 million times, three times of Brazilian Ebay. In Southeast Asia, Ali mainly laid out in Singapore and India by acquiring the local platform and payment wallet company, worked with local channel partners or co-built to get local logistics operators and network customers, built the operational capacity that can radiate the Southeast Asia and laid the foundation of displaying Ali's operational advantages on the platform. The time when Ali entered India is late (2014), so it developed local platform which can adapt to the local needs mainly through the "self-building + acquisition" approach. Ali invested Indian payment company Paytm (2015) to obtain local payment channels and participated in the postal company to solve overseas distribution problems. It can be seen that "Made in China" is still recognized by global consumers. But overall, Ali's overseas layout is still in the early stage. Ali platform is now the main channel for overseas goods to enter the Chinese inland market. In China, Ali with its industry monopoly status advocates diversification. Ali took a stake in YinTai to develop O2O business; held the shares of China Vision to get film and television copyright; invested Wasu to enter the film and television industry and intelligent living room;entered Hengda football to get sports marketing channels;invested Sina microblog and YOKU;purchased AutoNavi, UC,etc. Ali has gradually penetrated into upstream and downstream of such industries as the finance, entertainment, sports, navigation and other fields.

CONCLUSIONS

Case study shows that cross-border B2B2C business is more complicated than domestic B2C business because of involving customs, tax, credit, payment, logistics, warehousing and other links, so it needs strong ability to integrate online and offline resources and build relationships. It is difficult for small companies to support this complex technical requirements because of its small size, low capacity of internationalized operation and shortage of fund. For this reason, cross-border electric business leaders are mostly network retail giants, which trigger host countries' concerns about national security issues. Most countries have strict access restrictions and security review systems for foreign Internet companies. Bypassing institutional barriers is one of the motivation for electric business enterprises to got internationalized. China's capital market is not yet fully open, lacking of QFII category, so that it has an open-minded attitude to the new form of Internet and allows Alibaba which has foreign capital holding structure to flourish in the country. It is very difficult to rely on single business to get through all links as cross-border electric business has long business chain. And large companies are limited by profit targets, leading to be relatively cautious in the innovation and investment. Therefore, it is the best way to cooperate with start-ups with the growth potential and the top electric business company in the host countries.

Electric business platforms mainly rely on price competition. It is undoubtedly a serious challenge for platform enterprises to ensure both the low price and quality of goods and distribution efficiency, which forces the platform enterprises to internationalize and establish the network of production, exhibition, consumption (finance) and distribution network based on global resource allocation. At present, China's cross-border retail electric business companies mainly do import business. Ali's Tmall International attracts more overseas businessmen. Wal-Mart enters Jingdong Mall and "No. 1 shop", aiming at the Chinese market. While Wal-Mart and Amazon's reverse support for the Chinese sellers' selling to the globe is small. Until 2016, there has been 550-600 Chinese sellers in Wal-Mart and Amazon, and it have regulation for the sellers: they must have the ability to deal with orders in the United States. On the one hand, because domestic companies are lack of overseas delivery capacity and brand influence, and do not have the basic conditions for overseas' online. China's Internet companies rely more on advertising revenue with the problems of occupancy, fighting for talents and channels and other unfair competition. On the other hand, The threshold for the companies set by platform enterprises in China is low. There is strong temptation of "China's major market and local logistics". The Chinese market has developed into a certain stage and has its unique ecological logic and oligopolistic competition. So leveraging is undoubtedly the best way to avoid the acclimatized problem brought by self-built logistics and platform. Overseas enterprises used Ali platform to enter the Chinese market, which greatly enriched the consumer's purchase choices and reduced the price of imported goods. But at the same time it squeezed the local enterprises, forcing the internationalization of domestic enterprises which establish production base overseas, and then bring products back to China to reverse the inferior position. Overseas investment and global operations will eventually lead to the internationalization of quality control, channel and brand strategy .

References

Huang Hanyu, Amazonized Wal-Mart, First Financial Weekly, 2016, No. 12

Zhang Xiaheng, Research on Operation Pattern and Type of Cross-Border E-commerce, China Business and Market,2017,No. 1

Zhao Jing, Ma Jun, the Interactive Development Issues on Cross-border Electric Business and Logistics, Research of Commercial Economics, 2016,No. 5

Yu Yuan, Elementary Analysis of the Impact of Tax Reform on " Cross-Border Online Shopping", China Business Update, 2016, No. 8.

Ouyang Minghui, Research on the Current Situation and Countermeasures about China’s Cross-board E-commerce Logistics, Logistics Engineering and Management,2016,No.6

Chang Zhenji, the Life Cycle and Capital Operation of China's Internet Companies-Taking Alibaba as An Example, Manager’ Journal , 2016, No. 2

Nancy M. Levenburg, Simha R. Magal(Summer 2004-2005),Applying Importance-Performance Analysis to Evaluate E-Business Strategies among Small Firms,e-Service Journal, 3(3):29-48

Jan Johanson,Jan-Erik Vahlne(2006),Commitment and Opportunity Development in the Internationalization Process: A Note on the Uppsala Internationalization Process Model,MIR: Management International Review, International Business in Central and Eastern Europe,46(2):165-178

Suresh Kotha, Violina P. Rindova (4th Qtr., 2001), Frank T. Rothaermel,Assets and Actions: Firm-Specific Factors in the Internationalization of U.S. Internet Firms,Journal of International Business Studies, 32(4):769-791

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.3988.
Koolma, R., Hulst, R., & Montfort, A. (2017). Are larger organizations more efficient and strategically stronger? A cross-sectional and longitudinal research into Dutch housing corporations. *Archives of Business Research, 5(12),* 126-147.

Are Larger Organizations More Efficient and Strategically Stronger? A Cross-Sectional and Longitudinal Research Into Dutch Housing Corporations

Rik Koolma, PhD
Researcher, Faculty of Social Sciences, Vrije Universiteit Amsterdam
De Boelelaan 1081, 1081 HV, the Netherlands

Rudi Hulst, PhD
Assistant professor, Faculty of Social Sciences, Vrije Universiteit Amsterdam
De Boelelaan 1081, 1081 HV, the Netherlands

André van Montfort, PhD
Associate professor, Faculty of Social Sciences, Vrije Universiteit Amsterdam
De Boelelaan 1081, 1081 HV, the Netherlands

ABSTRACT

There is only limited research on the relation between the scale of operation of organizations and their efficiency. Moreover, the research methods used are coarse. The relation between scale of operation and strategic position has not been subject of systematic research at all. In this article, a sophisticated, theory-based method is developed to assess the relation between the scale of operation of organizations and their efficiency and strategic position. The method is applied to the sector of housing corporations in the Netherlands. Although the optimal scale of operation appears to be larger for efficiency than for strategic position, housing corporations have grown far beyond both optimal scales.

Keywords: scale, economy of scope, strategic position, resource dependency, non-profit organizations

INTRODUCTION

About two decades ago, as a part of the quest for a more efficient delivery of public services, Dutch non-profit organizations in sectors such as education, health care, and welfare services started to merge extensively. These non-profit organizations deliver public goods and services and are wholly or partially funded by the state. Dutch government officials and managers considered the upscaling of activities as a means to improve their *efficiency* and *strategic position*. It was expected to have a positive impact on the ratio between the production volume and the resources used for production, and to strengthen the position of the organisation *vis-à-vis* government bodies, private firms, and other non-profit organisations (Koolma & Van Montfort, 2016).

As far as the *efficiency* of an organisation is concerned, the optimistic views of policy-makers and managers on the benefits of up-scaling largely reflect classic theories in the field of business administration (cf. Trautwein, 1990). The main argument states that large organizations have access to indivisible equipment not available for small organizations; that large-scale production makes task specialization possible; and that a large organization enables diversification. Thus, upscaling would result in economies of scale and scope (Mansfield, 1976; Dollery & Fleming, 2006). Classic theories do, however, also include the notion of diseconomies of scale and scope. Large organizations that have surpassed a certain scale of operation may show higher marginal production costs because of the complexity of coordination and management (Allan, 2003; Dollery & Fleming, 2006). Up to now, research has failed to provide a reliable insight into the optimal scales of production and diversification. Current research into economies of scale and scope is characterized by the arbitrary use of output indicators or the neglect of intermediate and moderating variables (Boyne, 1992; Byrnes & Dollery, 2002; King et al., 2004).

As far as the *strategic position* is concerned, the optimistic views of policy-makers and managers on the positive relation between the scale of operation of an organization and its strategic position reflect theoretical approaches that focus on the industrial environment of a firm. Big firms are supposed to have more bargaining power towards suppliers and buyers and to have more resources at their disposal to fight competitors or to prevent new firms from entering the industry. They would also be less dependent on other organizations for safeguarding resources that are important for their survival (Porter, Competitive Advantage, 1985). Whether a better access to resources is actually used for long-term survival is another matter.

Given the limitations and shortcomings of current research, our aim was to develop a sophisticated theory-based method for studying scale effects and to assess the usability of this method in a particular sector. The method should take three different issues into account: economies of scale, economies of scope and the relation between scale and strategic position. Moreover, the method should avoid the methodological limitations of current research, using analytical models that include appropriate moderating, intermediate, and output variables. To this end, three theoretical models were developed, which are presented in the next section.

To assess the usability of the method, we conducted research in the sector of housing corporations in the Netherlands. Dutch housing corporations are privately established non-profit organizations entrusted with the public task to provide good quality housing accessible for lower income groups. Over the past decades, housing corporations have been involved in a steady process of merging. As a result, their number has decreased from 855 in 1985 (CFV, 2012) to 376 ultimo 2012. In this period, the average number of housing units per corporation rose from 2.290 to 6.144. The biggest corporation owns more than 77.920 units.

The general question of our research question was how the scale of operation of a housing corporation is related to its efficiency and strategic position.

THEORETICAL FRAMEWORK AND SPECIFIC RESEARCH QUESTIONS

A larger scale of operation may lead to higher *efficiency* through economies of scale and economies of scope. *Economies of scale* mean that an increase in the quantity of produced goods or services results in lower average production costs per good or service. *Economies of scope* mean that the production of two or more different goods or services by one organization entails lower costs than the production of each of these goods or services by separate organizations (Dollery & Fleming, 2006; Bel, 2012).

Economies of scale

Returns to scale are the result of two opposing forces. On the one hand, a large scale of operation may have several advantages. It implies that fixed production costs, for example the costs that stem from the use of machinery or a plant, can be spread across a large number of goods or services. Exploiting capital goods to their maximum results in low fixed production costs per unit of output. Another advantage of a large scale of operation is that it facilitates the specialization of labour (and possible other inputs) and thus increases productivity. A last advantage concerns the discounts that can be achieved on bulk-purchasing of inputs, resulting in low variable costs per unit of output (Given, 1996; Dollery & Fleming, 2006).

On the other hand, there are also possible disadvantages. Higher production volumes imply an increase in managerial efforts, for instance in the field of inventory control and human resources management. At high production levels, the increase in managerial efforts can exceed the benefits of the increase in production volume and thus contribute to higher variable production costs per unit of output (Boyne, 1992; Allan, 2003; Dollery & Fleming, 2006).

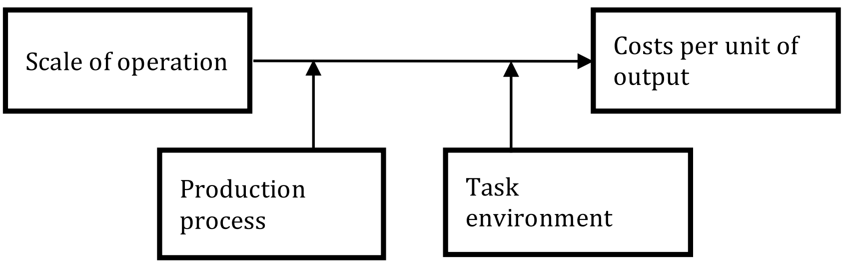
It is, however, unclear whether there is one or a number of levels of production that display maximum efficiency and, if so, at which level of production diseconomies occur. How the opposing forces affect the returns of scale depends on characteristics of the production process and on environmental circumstances (Boyne, 1992; Allan, 2003).

With respect to characteristics of the production process, the distinction between labour-intensive and capital-intensive goods or services is relevant. In the case of labour-intensive goods or services, a bigger volume of output generally requires a directly related larger number of employees. Efficiency gains from spreading the costs of capital goods will be relatively small. In contrast, when production volumes increase, the costs of managerial efforts can rise sharply. This could mean that an organization that produces labour-intensive goods, reaches its maximum efficiency at relatively small volumes of production. For capital-intensive production processes, on the other hand, one would expect maximum efficiency to occur at relatively large production volumes (Dollery & Fleming, 2006).

In the same vein, the environment can affect the returns on scale. Consider, for instance, the density of customers in the working area of an organization. If there are many customers in the area which is serviced by the organization, transport can be organized efficiently; and if an increase in sales can be realized serving more customers in the same area, transport costs per unit of output could even be reduced. In contrast, if customer density is low and an increase in sales can only be realized by geographical extension of the service area, transport costs will be relatively high, and marginal transport costs will tend to rise (Bel, 2012). All other conditions being equal, in high customer density areas, maximum efficiency can be realized at smaller production volumes than in low customer density areas.

The foregoing theoretical insights provide us with a conceptual model to represent the relation between the scale of operation of an organization and the costs per unit of output of an organization.

Figure 1 Relation between scale of operation and costs per unit of output, moderated by production process and task environment



In our analysis of the performance of Dutch housing corporations, we assume that characteristics of the production process are more or less the same for all corporations, as housing corporations are active in the same sector and engaged in the same type of service delivery. So, in the analyses to perform, the production process will be treated as a constant. The analyses will answer the following specific research questions: What are relevant units of output and what varying characteristics of the task environment have to be taken into account? How does the scale of operation relate to the average costs per unit of output, controlling for relevant characteristics of the task environment?

Economies of scope

There is a large body of literature that suggests a positive relation between the size of an organization and diversification. Large organizations tend to offer a bigger range of products or services than small ones (Gort, 1962; Amey, 1964; Utton, 1977; Lichtenberg, 1992; Aw & Batra, 1998). One of the economic rationales for diversification put forward is that it creates economies of scope: the joint production of two or more different goods or services by one organization can result in cost savings compared to a situation in which each good or service is produced by a separate organization (Teece, 1980; Panzer & Willig, 1981; Dollery & Fleming, 2006).

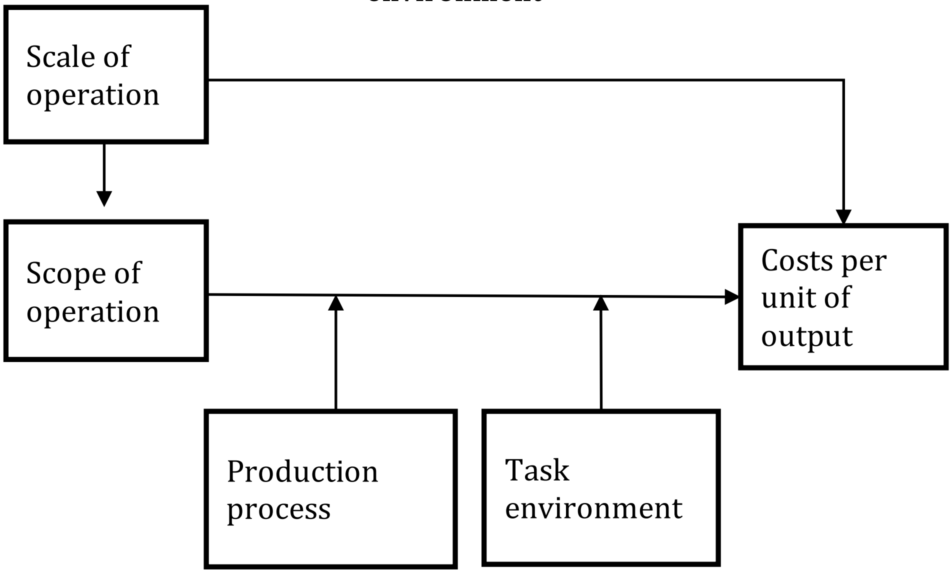
The main source of economies of scope suggested in literature is the shared use of inputs in the production of different outputs. If the shared production factor is imperfectly divisible, redundant capacity in one production process can be used in another (Willig 1979). Know-how represents a special type of input which, once acquired for one production process, can be applied for free in another production process (Penrose 1959; Teece 1980). Scope economies can also result from by-products of a production process and from situations where the output of one process can serve as an input for another production process (Dollery & Fleming, 2006).

If the technical conditions for synergy are fulfilled, economies of scope will occur when the governance costs of diversification are smaller than the costs of market transactions involving capital goods, raw materials, information, and know-how (Teece, 1980). This also explains why in multiproduct organizations, economies of scope sometimes do not materialize. It is up to the management of an organization to exploit the possibilities for synergy, to make sure that redundant capacity is actually used and that multi-applicable know-how is actually exploited to the max.

In large complex organizations, this can be a hard job, especially when product divisions enjoy a certain degree of autonomy. Management then faces increasing monitoring costs and has to deal with division heads that seek preferential treatment from the corporate centre (Rawley & Simcoe, 2010). Therefore, management and decision-making costs can rise to a level where they exceed the costs of market transactions, while at the same time the organization is not flexible enough to close down production lines or outsource the production of know-how (Dass, 2000).

For the analyses of the relation between the scope of an organization and the production costs per unit of output, it is necessary to take the characteristics of the production process and relevant elements of the task environment into account, for the same reasons as for the analyses of scale efficiencies. Moreover, it is clear that the average costs of a multiproduct organizations are the result of both scale effects and scope effects.

Figure 2 Relation between scale of operation and costs per unit of output, mediated by scope of operation; the relation between scope and costs moderated by production process and task environment



Assuming that characteristics of the production process do not vary per corporation, in our analyses of the performance of Dutch housing corporations in terms of efficiency, we will address the following specific research questions about possible scope effects: How does the scale of operation relate to the scope of operation? What are relevant units of output and relevant characteristics of the task environment? How does the scope of operation relate to the average costs per unit of output, if we control for the scale of operation and for relevant characteristics of the task environment?

Strategic position

In order to survive, an organization must adapt to significant changes in its environment. To a considerable extent, the adaptation to environmental changes takes place through the renewal of the organization's portfolio of products and services. Adaptation through portfolio renewal requires a strong strategic position (Sparrow & Ringland, 2010; Ben-Menahem et al., 2013).

According to resource dependency theory, the strategic position of an organization is determined by the degree in which the organization has access to resources that are essential for its business success and survival. An organization has a stronger strategic position to the extent that it is less dependent on other organizations for acquiring relevant resources (Hilmann et al., 2009; Davis & Cobb, 2010). Of course, the relevant resources of an organization vary depending on the production process, but roughly consist of three categories, namely labor, capital, and land, whereby land can be considered as a specific kind of capital (Foley, 2003).

It can be assumed that organizations that operate on a large scale are less resource dependent on other organizations than small-scale organizations. First, large-scale organizations are more able to develop and produce relevant resources themselves. One can think of the development of computerized administrative systems or specialized work tools and the production of useful intermediates. Because of the substantial knowledge and skills that are present internally, there is less need to obtain such resources from other organizations (Lankford & Parsa, 1999).

Second, large-scale organizations have better possibilities to influence the decision-making of legislative authorities and advisory boards. Due to their larger prestige, bigger power, and higher societal importance, the interests of large-scale organizations are taken more into account in the considerations of public decision-making bodies, which leads to more favourable policies, rules, and arrangements for such organizations (Berger, Hertog & Park, 2016).

Third, large-scale organizations are more effective in negotiations with resource providers. They can offer counterparts more compensation in exchange for resources and have a larger number of employees who are specialized in successful bargaining (Mintzberg, 1983; Chae & Heidhues, 2004).

Fourth, large-scale organizations are assumed to be more successful in using resources for the renewal of supply portfolios. Large-scale organizations generally have a relatively high number of specialists in the field of research and development who contribute to product and service innovation (Mintzberg, 1983).

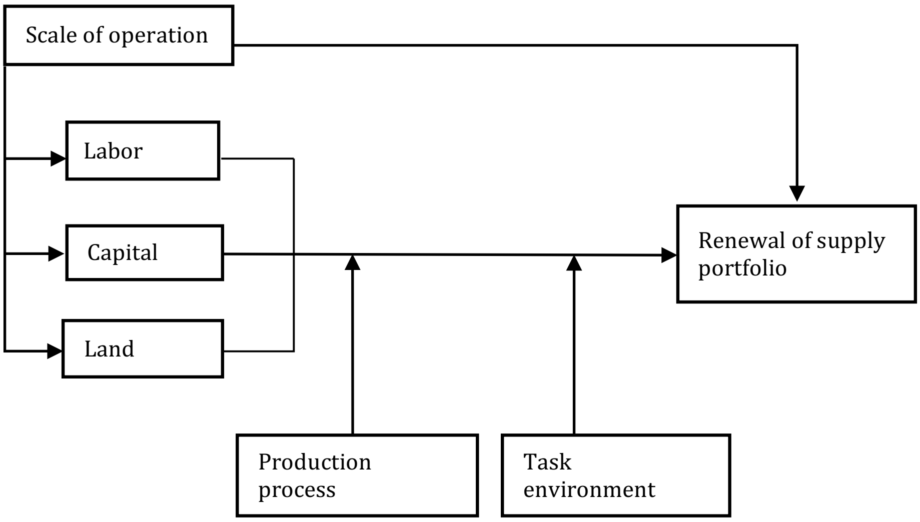
So, large-scale organizations are presumably better equipped to safeguard relevant resources and utilize these resources for the renewal of supply portfolio's than small-scale ones. There is, however, probably a turning point at a certain scale of operation.

First, large organizations tend to diversify, and the larger an organization grows, the more likely it is that it will gradually fall apart in a number of smaller, autonomous divisions that must procure their own resources (Mintzberg, 1983). Second, if an organization is operating on a too large scale, there is a risk of extensive bureaucratization or red tape (Bozeman & Scott, 1996; Feeney & DeHart-Davis, 2009). Both circumstances will restrict the organization's capacity to safeguard relevant resources and utilize these for product and service innovation. Finally, there is also a risk that ambitious managers of big organizations start prestigious, expensive projects that mainly serve as a means to gain personal power, prestige, and benefits, neglecting the need for portfolio renewal (Williamson, 1964; Mueller, 1969; Rhoades, 1983).

Another theoretical assumption is that the degree in which the organization's supply portfolio is periodically renewed, not only depends on the access to relevant resources. There is presumably also a *direct* relation between the scale of operation and the strategic position of the organization (Damanpour, 1992; Camisón-Zornoza et al. 2004).

A last theoretical assumption is that characteristics of the task environment moderates the relation between the organization's resource dependency and the periodic renewal of the organization's supply portfolio (Walker et al., 2015).

Figure 3 Relation between scale of operation and renewal of the supply portfolio, mediated by the availability of relevant resources and moderated by production process and task environment



In line with the above model and assuming that characteristics of the production process do not vary across the population of housing corporations, in our analyses of the strategic position of Dutch housing corporations, we will address the following specific research questions: What are relevant units of output to assess the renewal of the supply portfolio of housing corporations? To what extent is there a relation between the scale of operation of a corporation and the renewal of the corporation's supply portfolio mediated by the corporation's access to relevant resources, if we control for scale of operation and characteristics of the task environment?

DATA AND METHODOLOGICAL ISSUES

The specific research questions raised in the previous section have been answered by means of quantitative analyses of data from a comprehensive dataset on the Dutch social housing sector. The data were prepared to enable statistical testing of economies of scale, economies of scope, and the relation between scale and strategic position. First, we discuss the way the data were prepared for statistical analysis.

Data sources and preparation

The analyses were conducted on a comprehensive set of annual accounting data of the whole population of Dutch housing corporations spanning a period from 2002 to 2012. The data were collected and delivered by a state agency, namely the Central Housing Fund (CFV). Environmental data on demographics and physical working circumstances were taken from the site of Statistic Netherlands (CBS). Due to mergers, the population shrunk from 552 entities in 2002 to 376 at the end of 2012.

Many attributes of the CFV database were converted to ratios in order to arithmetically eliminate differences between the inputs from small and large corporations. For instance, the input values of costs were divided by the number of rental housing units in stock of each corporation. Doing so, the cost levels of small and large organizations became comparable.

The use of highly specified models with a lot of variables brings about the risk of multicollinearity, which could result in the distortion of correlation coefficients and significance values (Field, 2013). For instance, the variables from the CBS database entail the risk of multicollinearity, especially between the concentration of postal address, the population share of non-western immigrants, and the share of welfare recipients. The risk was reduced to an acceptable level by checks before and after analyses and, if necessary, the exclusion of variables.

Linear regression analysis makes demands on the distribution of scores on the values of variables. Although these demands are lower for independent variables, it was a problem that the variable Scale of Operations, which was measured as the number of rental housing units in stock, appeared to be extremely skewed to the right.

The distribution of the values within the population with many small corporations and a few big and even fewer very big ones, would affect the reliability of the findings. Therefore, this crucial variable was converted into a logarithmic scale.

Independent and dependent variables were tested on extremes and outliers: these were removed. The justification for not selecting the whole population but skipping extremes and outliers was that our aim was to find regular patterns in the relations between variables.

After the preparation, dependent variables were tested successfully on normality. Due to the removal of observations the dataset was reduced. After this reduction, the dataset was still large enough for a chance on significant findings.

The residuals of all linear regressions were assessed on normality and linearity by a visual inspection of scatterplots, P-P plots and histograms. The test showed there was no need to withdraw significant findings.

Cross-sections and time series

Economies of scale were analyzed using combinations of cross-sectional and longitudinal data. These combinations are susceptible to autocorrelation or, in other words, serial correlation. Regression analyses were checked for autocorrelation by the Durbin-Watson algorithm also in compliance with common rules of thumb (Field, 2013:311). Without exclusion, autocorrelations did not exceed thresholds of acceptability.

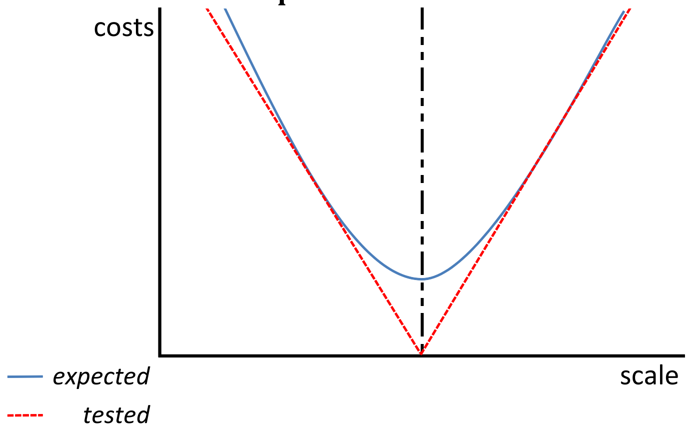
For the analyses of economies of scope and strategic position, the dataset was adapted and converted into a new one. The cases were aggregated across time. The records from 2002 to 2012 were summed and converted into ratio's. This was done because of the a-synchronism between costs and results of investment and divestment projects. These projects usually require more preparation time than the operations of housing exploitation. The aggregation across time entailed the problem of an unstable population. The population of housing corporations started with 552 organizations in 2002 and ended with 376 in 2012, due to mergers in all interceding years. It was decided to join the predecessors to the 376 organizations that remained ultimo 2012, and to add the scores of predecessors to the ones of the successors.

RESULTS

Economies of scale: operationalization and research findings

The main assumption concerning economies of scale is that costs depend on the scale of operation. As argued before, research on economies of scale suggests a u-curve is to be expected, resulting from two opposing effects, namely decreasing costs because of an extended base for fixed costs and specialization, and increasing costs due to increasing managerial efforts.

Figure 4 Economies of scale: expected curve and trend lines to be tested



The resulting graph will not necessarily represent a symmetric curve. As the two opposing trends are relevant, measurements were set up in order to find two straight line segments, deflating to and inflating from a yet to be determined scale level. At this level, the costs are at a minimum and efficiency, therefore, at an optimum.

Operationalization
The number of housing units in stock was taken as the measure for the variable Scale of Operation. Costs were divided by the number of housing units in stock. There are three types of costs: Operational Costs, Costs of Property Maintenance, and Financial Costs.

The turning points tested were located at 1000, 2500, 3500, 5000, 7500, 10000, and 20000 housing units. Previous research suggests that the number of 2500 housing units is a probable optimum for efficiency (Veenstra, Koolma & Allers, 2017). Cloudt (2015) finds a maximum of 5000 for optimal service to clients. In the Dutch state regulation, 10000 units is a scale level above which merger proposals are assessed more rigorously, because at higher scale levels, a loss of efficiency and effectiveness is expected. Around these three scale levels, four more levels were pinpointed.

Control variables
As stated before, some publications on scale effects suffer from under-specification. Apart from scale or scope, costs may be related to characteristics of the task environment that influence the complexity of operational processes (Figure 1). In the analyses, such characteristics should be treated as control variables. The selection of control variables requires specific insight into production processes of the industry under research.

Previous explorative research by Koolma (2008) with the 2002 sample of the data suggests that there is a positive relation between operational costs on the one hand and the number of contract turnovers and the number of houses assigned to low income tenants and aged people (both in relation to the number of contract turnovers) on the other. The research by Koolma (2008) also suggests that costs are positively related to the rate of urbanization (operationalized as the concentration of postal addresses), as a high urbanization rate implies a high population share of non-western immigrants and welfare recipients. These groups, juveniles, and aged inhabitants are expected to put higher demands on social aspects of the operations.

It is also necessary to control for characteristics of the housing stock, because maintenance costs are positively related to the age of construction, poor construction quality, floor surface, and swampy soil. Single family houses involve higher maintenance costs than apartments. To take these characteristics into account, the share of the housing stock built before World War II (aged construction), the share built between 1945 and 1960 (poor quality), the average floor surface, the presence of swampy soil, and the share of single family houses were used as control variables.

A number of these characteristics also have an impact on the financial costs. Due to redemption schemes, aged housing stock is expected to be negatively related to financial costs. Single-family houses and a high level of floor surface are indicators for more expensive production in the past and therefore, higher financial costs in the present.

Lastly, we controlled for investments and divestments related to the housing stock, such as the construction of new houses, the sale of existing stock, and the reconstruction or demolition of existing stock. These activities are assumed to correlate positively to operational costs (more activities), negatively to maintenance costs (smaller or better stock) and positively or negatively to financial costs, depending on whether it concerns investments or divestments.

Research findings

The results of the analyses concerning economies of scale are presented in Table 1.

[Table 1; see at the end of this article]

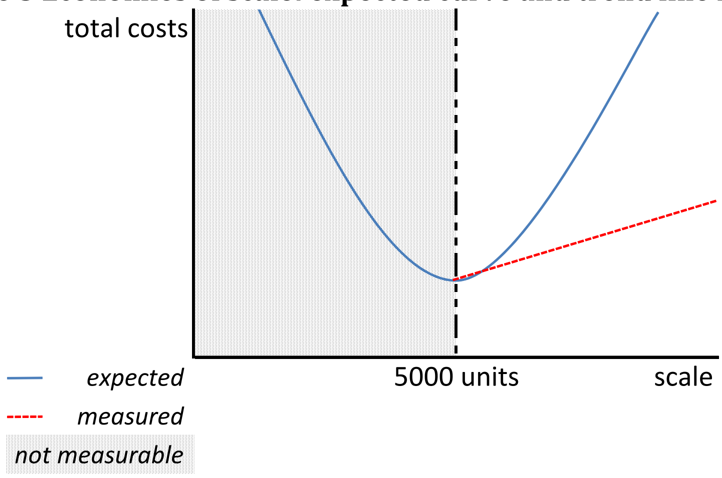
Economies of scale up to a certain turning point would be represented by a combination of a decreasing trend below the split level and an increasing trend above the split level. The analyses showed that economies of scale only occurred with respect to *Financial Costs* up to a level of 5000 units. The combination of a decreasing trend at the left panel and an increasing trend at the right panel was only found in the results of the Financial Costs at 5000, 7500, and 20000 units.

Remarkably, *Operational Costs* and *Maintenance Costs* have positive signs both below and above the split levels. This implies that are no scale advantages measurable. There are some indications that the increasing trend of operational and maintenance costs turns into a flat course at 10000 and 20000, suggesting a decreasing scale disadvantage. However, the coefficients of the left panels do not decrease too, while shifting from 7500 to 10000 and from 10000 to 20000 units. So, the observations are not consistent, and therefore it is likely that the flattening course in the right panels at 10000 and 20000 has to be attributed to a low number of observations and a consequent loss of significance.

In sum, financial costs show economies of scale up to 5000 units. Total costs have no significant relation to scale up to 5000 units, and show diseconomies of scale above that level.

We conclude this section on economies of scale with a comparison between the expected curve, and the course of the trend lines of total costs at 5000 units. For the record, there was no expectation about the scale level at which a trend change would occur. The contrast between the expected course and the measured relation between scale of operation and costs is illustrated in Figure 5.

Figure 5 Economies of scale: expected curve and trend line found

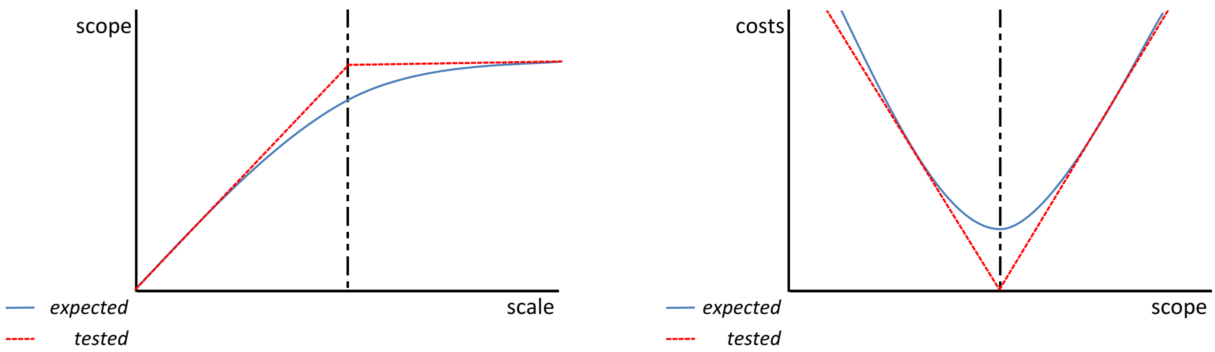


The dotted area at the left side of figure 5 represents non-significant findings. As stated before, only increasing costs are found departing from the scale level of 5000 housing units in stock. A scale dependent decreasing costs trend is absent, contrary to propositions and findings in literature. A likely explanation is the presence of so-called pooled resources. For instance, systems for the marketing and supply of houses are shared among corporations and charged for a flat fee per housing unit in stock. Information and communication services are usually delivered for flat fees too. Employees perform administrative tasks without expensive equipment. So, small housing corporations are probably less faced by a disadvantageous ratio between fixed costs and the number of contracts, clients and so on, than organizations in other industries.

Economies of scope: operationalization and research findings

To assess whether economies of scope are present in the sector of Dutch housing corporations two-stage analyses were carried out. First, we related the scope of corporations to scale. Subsequent analyses concerned the relation between scope and costs.

Figure 6 Economies of scope in two stages: expected curves and trend lines to be tested



A first assumption was that there is a positive relation between scale and scope up to a certain scale level. Above that level an increase in scale does not affect the scope of an organization, which is represented by the flat line segment at the right side of the first graph. A second assumption was that scope and costs are associated in the form of a u-curve.

Operationalization

As in our analysis of economies of scale, *Scale* was measured by the natural logarithm of the number of housing units in stock. *Scope* was measured by assessing the scores on the investment and divestment activities. These activities are additional to the common exploitation activity (housing management).

There are five-types of production activities, namely the construction of rental houses, the construction of houses for sale, the sale of houses from the rental exploitation stock, the reconstruction of houses, and the demolition of houses. The measurement of scope was dichotomized, where 0 represents no activity and 1 for an annual production of more than 1 housing unit. For each type, the dichotomous scores were summed across the 11 years. The sums were corrected for fluctuations across years. The algorithm for this correction is the mean divided by the standard deviation. As a consequence, the scope variable is independent of the level of production. Otherwise scope would arithmetically correlate to the Costs variable. The *Costs* variable is the operational costs divided by the number of housing units produced and housing units reconstructed. The cost base differs from the one of economy of scale, where the costs were divided by the number of housing units in rental exploitation. Scale split levels to be tested were pinned at 1000, 2500, 3500, 500, 7500 and 10000. Due to the aggregation across the years (see data preparation), the number of observations were roughly divided by 11. Above 20000 housing units the number of observations would be too low for significant findings, so this turning point was omitted.

Control variables in the second stage of analysis

The selection of control variables for economies of scope was reduced to the ones that are associated with the techno-physical aspects of building. Higher building density involves more costs of production, so postal concentration is assumed to positively relate to costs, just like swampy soil. Stock characteristics such as single-family houses share and average floor surface are indicators for less effort in meeting present housing standards, so these variables are expected to have a negative relation to costs. In contrast, aged property and poor building quality imply more effort and higher costs. After testing for multicollinearity, the single-family variable was dropped because of interference with the postal concentration variable.

Finally, economies of scope were controlled for the scale of operations. This was done in order to establish to what extent scale autonomously influences operational costs per housing unit of production, bypassing the mediating scope variable. Considering the persistent positive relation between scale and operational costs in the previous section, an autonomous effect is likely to occur.

Research findings

Our first analyses concerned the relation between scale and scope (panel A of Table 2).

[Table 2; see the end of this article]

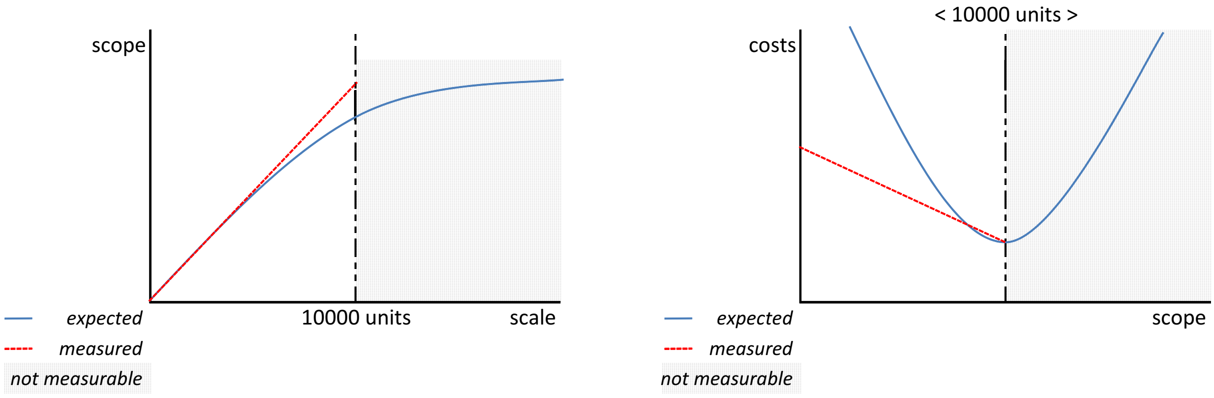
The combination of a significant positive coefficient left of the split-level point and a non-significant result at the right side was found at 5000, 7500, and 10000 units. At the 10000 level, the coefficient is decreasing compared to the other points, but it is still strong and significant. This finding justifies the conclusion that scope is positively related to scale at least up to a level of 10000 units of rental houses in stock.

The subsequent analyses showed a negative relation between scope and operational costs per housing unit produced up to the scale level of 10000 units in stock (panel B of Table 2). So, an increase of scope contributes to efficiency in the scale range from 0 to 10000 units.

Moreover, we found an increasing positive relation between the scale of operation and costs (panel B of Table 2). Remarkably, at the 10000-unit level, the impact of scale approximates the impact of scope. The implication is that economies of scope are almost entirely neutralized by diseconomies of scale. Although the lack of significance does not allow for conclusions, it suggests that at levels over 10000 units, scale effects will neutralize or even outweigh scope effects. In other words, if diversified corporations become larger than 10000 housing units, marginal operational costs will increase.

In Figure 7, the expected curve and measured trend lines converge in the scale to scope graph. In the scope to costs graph, it is undetermined whether an increase in scale above 10000 units will cause an increase in costs. At the right side of the scope to costs graph, the expected curve and measured trend line do not converge due to the lack of significant findings.

Figure 7 Economies of scope in two stages: expected curves and trend lines found



So, in the scale range from 0 to 10000 units, our research findings support the assumption of economies of scope. Above that scale level, it was not possible to make assessments about economies of scope. A likely explanation for the limits to economies of scope are found in the production process. Supply of housing is bounded by a geographical span of control. Up-scaling usually entails the use of more front-offices. Housing corporations are obliged by law to negotiate and covenant with local authorities and tenant organizations. Furthermore, housing markets are regionally specific. So, up-scaling will require splitting up staff and management. Economies of scope originate from combining activities, while economies of scale from a certain level require dividing activities in separate geographically bounded units. This counteracting effect of scale on economies of scope is caused by the characteristics of the production process of housing corporations.

Strategic position: operationalization and research findings

The relation between scale and strategic position was analyzed in two stages as well. First, we looked at the relation between the scale of operation and the access housing corporations have to resources. The second step concerned the analyses of the relation between the access to resources and portfolio renewal. It showed whether the resources a corporation has at its disposal are actually used for portfolio renewal.

Operationalization

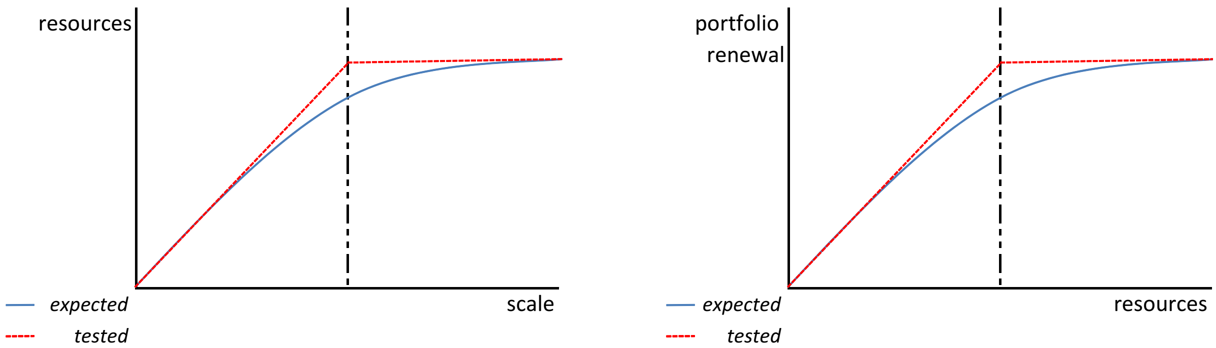
As in the previous analyses, scale was operationalized as the natural logarithm of the number of housing units in stock.

In reminiscence of Ricardo (1821), we distinguished between three classic production factors labor, capital, and land. Labor was sub-divided into three categories: quantity, quality and diversity. In order to obtain a measure for access to qualified personnel, the quantity of personnel was measured as the ratio of full time equivalents to the number of housing units in stock. The scope variable was added as a proxy for the rate of diversification of the personnel. The level of long-term debts per unit in stock represented the variable for access to capital. The access to land was measured in terms of the acreage of bare building land rated to the number of housing units in stock. Housing corporations have also acquired land that cannot be built on for a certain period due to public law restrictions. This was conceived as a non-utilizable resource, and excluded from the input of the regression models.

To measure the dependent variable, the degree of portfolio renewal, the number of rental housing units built divided by the number of rental houses in stock was taken as a proxy.

Based on our discussion of the literature, we would expect positive relations between scale and the access to resources, and between the access to resources and portfolio renewal, with coefficients that become smaller and tend to zero above a certain level. Our test implied regression analyses at different split levels.

Figure 8 Strategic position in two stages: expected curves and trend lines to be tested



Scale split levels were located at 1000, 2500, 3500, 5000, 7500 and 10000. In the left graph, the access to resources depends on scale up to a yet undetermined scale level. Above this level scale dependency of resources disappears.

Control variables in the second stage of analyses

In the tests concerning the relation between the access to resources and portfolio renewal, a number of control variables were used. Urbanization (postal concentration) and swampy soil were assumed to complicate the construction of new houses. The higher the technical and housing quality of the current portfolio, the less renewal of the portfolio was expected. These three factors thus were assumed to negatively relate to portfolio renewal. The sale of rental houses is a way to generate capital. Demolition of houses is a means to recreate land that is suitable for building. Therefore, both variables represent intra-firm short cuts to resources, and are likely to have a positive effect on the rate of renewal.

Finally, the relation between resources and portfolio renewal was controlled for the scale of operations. The question was whether scale has an autonomous influence on the renewal of the portfolio of rental housing, bypassing the intermediate variables representing the resources. In an analysis of the 2002 dataset, Koolma (2008) found a dominant negative effect of scale on the production of rental houses. Therefore, autonomous influence is likely to occur.

Research findings

The first question was whether the access to resources depends on the scale of operation. The trend line pattern searched for is a positive coefficient in the range to the scale split and a coefficient approximating zero above the split level. Findings are presented in panel A of Table 3.

[Table 3; see the end of this article]

Only two of the personnel variables at some split-level points showed this pattern. The first one is the relative amount of personnel. The turning point was found at the level of 7500 housing units. However, at lower split-level points observations diverged. For instance, above 2500 units the amount of personnel was significantly related to scale, suggesting that the marginal increase in access to resources for large corporations is higher than for small corporations.

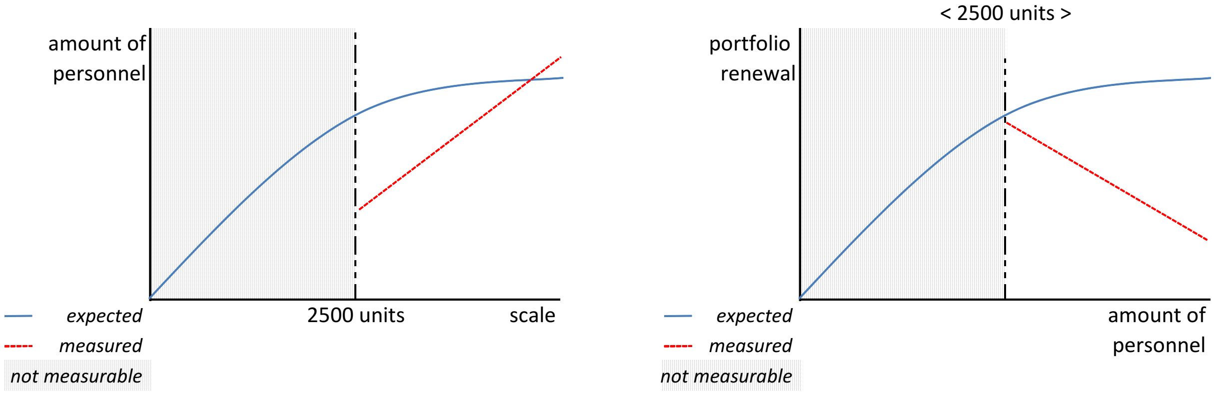
With respect to the diversity of personnel, turning points were found at the split-levels of 5000, 7500, and 10000 units, where the 10000-unit level presented the best fit. Also with this variable, the sequence of findings across the scale levels was not consistent. For instance, at the 1000, 2500, and 3500 a positive relation was found above the scale levels.

The analyses showed that the quality of personnel, capital costs, and land are resources that do not have the relation to scale of operation as sought for. So, we proceeded to the next step with the amount of personnel and the diversity of personnel (panel B of Table 3). At both sides of the 7500 units level, the amount of personnel had no significant relation with the renewal of the rental portfolio. The diversity of personnel showed a trend change from positively significant to non-significant. However, the coefficient for the subset above 10000 units was negative, and furthermore, the right-sided model exceeded acceptable levels of multicollinearity. Therefore, a result can't be stated.

In the second stage, the selected variables failed to present trend courses at all split levels excluding 10000, which point had been dropped in advance. Only at the split level of 2500 units, both variables related significantly to the renewal of the rental portfolio. However, the sign was negative for the amount of personnel. For the diversity of personnel, the relationship was positive, but of less influence.

In our analyses, scope was used as a proxy for the diversity of personnel. Scale as control variable even outweighed the positive effect of scope on the rate of portfolio renewal. Considering this, we limited the analysis to the relation between Scale of Operation, Amount of Personnel and Portfolio Renewal. The findings are presented as drawings in the next figure.

Figure 9 Strategic position in two stages: expected curves and trend lines found



At 2500 units, the trend lines in the scale to amount of personnel graph look like the mirror image of the expected curve. Up to 2500 units there is no significant relation between scale and relative amount of personnel. Below 2500 units the access to personnel is independent from scale of operation. Expected was scale dependency up to a certain, undetermined scale level. Contrarily, scale dependency of the quantity of personnel was observed in the range above 2500 housing units. The larger the corporation the more access it has to personnel. This is a first indicator for the strength of an organization's strategic position.

In the right graph the question is whether access to resources leads to a higher level of portfolio renewal. The expectation was that the increase in portfolio renewal would flatten out above a certain, undetermined amount of personnel. Instead of a flat trend, a decreasing trend was found, reading that the more personnel are employed the lower will be the level of portfolio renewal. In terms of strategic position, scale gives access to more personnel; however, this strategic advantage has a contrary effect on the rate of portfolio renewal.

Usually, a strong strategic position is associated with large-scale business operation. In our analyses of the Dutch housing corporations, the findings were contrary to the expectations. For small corporations up-scaling did not lead to better access to resources. Aforementioned, the availability of pooled resources in the Dutch social housing sector has created circumstances in which small organizations do not suffer a disadvantage due to their scale. The flat trend at all splitting points for the resource Capital shows evidence for the effect of pooled resources. Dutch housing corporations have shares in a mutual guarantee fund that provides equal access to the capital market.

Furthermore, figure 9 suggests that larger corporations show over-collection with respect to the amount of personnel. A likely explanation for the intriguing observation that more personnel leads to less portfolio renewal is that resources in access are utilized for activities that do not contribute to the cause and purpose of social housing. This is supported by the observation that the management of commercial real estate is positively related to the amount of personnel in the scale range from 2500 up ($R = 0.246$ $p < 0.000$). We hypothesize that these activities consume managerial attention at the expense of portfolio renewal in social housing.

Dutch housing corporations have grown too big

One of the goals of our research was to obtain an integrated picture of the effects of the upscaling of Dutch housing corporations, in terms of economies of scale, economies of scope and strategic position. In perspective of our findings concerning optimal scales, how does the composition of the population of Dutch housing corporations compare? First, the analyses show that if the scale of operation surpasses 5000 housing units, diseconomies of scale occur. Notwithstanding, ultimo 2012 35.4 % of the housing corporations were operating at a scale level above 5000 units in stock. A closer look at the research data reveals that 72,5 % of the housing corporations that merged in the period between 2002 and 2012 established a scale level above 5000 units (CFV, 2012).

Second, the analyses show that there is a positive relation between diversification and efficiency. However, the findings suggest that economies of scope are outweighed by diseconomies of scale, once the 10000-unit level is reached. Notwithstanding, ultimo 2012 16.5 % of the housing corporations were operating at a scale level above 10000 units in stock. A closer look reveals that 41.9 % of the housing corporations that have merged in the period between 2002 and 2012 established a scale level above 10000 units (CFV, 2012). Since 2015, merger proposals that establish scale levels above 10000 housing units are subject to more scrutinized assessments by the state agency. It is not clear whether this new regulatory practice will depart from the permissiveness of the period before 2015.

Third, our analyses show that there is no relation between the scale of operation and the access to resources, with only one exception: from a scale of 2500 units up, corporations have better access to personnel. However, this strategic advantage does not pay out, as it turns out that there is a negative relation between the amount of personnel and portfolio renewal. Nevertheless, ultimo 2012 53.4 % of the housing corporations were operating at a scale level above 2500 units and 89,7 % of the housing corporations that have merged in the period between 2002 and 2012 established a scale level above 2500 units.

While optimal scale levels differ, depending on whether one looks at efficiency or strategic position, the overall picture is that a substantial part of the Dutch housing corporations operates on disadvantageous scale levels, a part that has increased by merger decisions. One can hypothesize about the reasons for managers to engage in mergers that do not contribute to the efficiency or long-term survival of their organization. The literature offers possible explanations (cf. Williamson, 1964; Mueller, 1969; Rhoades, 1983). However, it would require detailed event studies to make positive statements about which of these explanations holds. Our research provides insufficient basis for that.

DISCUSSION

The aim of our endeavour was to contribute to the theoretical and practical debate on the effects of increasing the scale of organizations. Two issues were at stake.

First, so far, research and analyses have focussed on the relation between the scale of organizations and their efficiency, largely neglecting the relation between scale, scope, and strategic position. From a practical perspective this is unsatisfactory, because decisions about organizational scale, mergers or breaking up large organizations, should not only take into account short term costs, but also the advantage of combining activities and the impact on long-term survival.

Second, research and analyses on scale effects tend to they take a limited number of variables into account and sometimes resort to simple measures for output. In this article, we have tried to address both issues: to develop a sophisticated method to analyse the effects of scale in terms of both efficiency and strategic position of an organization. We applied this method to a specific case to assess its usability.

Developing a sophisticated method, the basic assumption was that to attribute scale effects to the role of fixed capital goods, specialization, and management and coordination – being factors that the theory holds responsible for economies and diseconomies of scale - it is necessary to take into account the characteristics of the production process and the task environment of an organization. This requires a thorough knowledge of the sector in which an organization operates. Applying our method to the sector of Dutch housing corporations, we selected a series of control variables, largely based on previous research concerning the cost structure of a corporation's operations. Whether the analyses carried out provide a valid picture of the relation between scale, efficiency, and strategic position depends on the adequacy of this selection.

Our analyses showed that we selected relevant control variables. For instance, controlling for characteristics of the task environment, the contribution of the scale variable to the explanation of the variance of operational costs decreased from 4.8% to 2.1% above the 5000 units turning point. Simple bivariate models or isolated event studies would exaggerate the effect of scale on efficiency in this case. Our method appeared therefore useful to determine scale effects in terms of efficiency and strategic position.

The research findings obtained by applying the proposed method are relevant from a practical perspective. They show that the optimal scale of an organization in the Dutch housing sector differs depending on which criterion is used. When economies of scale are concerned, turning points are located at 5000 housing units in stock. From the viewpoint of economies of scope, the optimum level is at 10000 housing units. Remarkably, the optimum for strategic position is found at 2500 units in stock.

So, the choice of an optimum for scale of operation will depend on the question which criterion is prevalent. There is no reason to assume that optimal scales in other industries simply coincide. It shows that the choice of scale is not a straight forward problem and requires a sophisticated approach.

Our research also produced findings that are theoretically relevant. The economy of scale literature assumes a u-curve with a range of economies of scale turning to diseconomies of scale (Boyne, 1992; Allan, 2003; Dollery & Fleming, 2006). Economies of scale are absent in the Dutch social housing sector. This finding can be explained by the effect of pooled resources. Pooled resources are available when organizations establish co-operation. In the literature, the phenomenon of co-operation between business firms and the use of pooled resources is acknowledged and subject of research (Brandenburger & Nalebuff, 1996; Padula & Dagnino, 2007; Thomason et al. 2013). Our findings suggest that in non-profit sectors specific forms of pooled resources may be present, such as capital funds the organizations have access to. Also, in non-profit sectors pooled resources may play a more prominent role because of a lower degree of competition, government regulation and the presence of strong branch organisations. All in all, the role of pooled resources in issues of scale and efficiency of non-profit organisations would be a relevant line of further investigation.

Economies of scope appear to be counterbalanced by diseconomies of scale. Apart from the general explanation of rising costs of management and coordination, the findings concerning the Dutch housing sector suggest that other explanations may be valid. One is that diseconomies of scale result from the need to set up separate production or service centres to deal with a bounded geographical span of control. If that is the case, diseconomies of scale may neutralize economies of scope at relatively small organizational scales. This is a phenomenon which is likely to occur in more industries with a land-bound service. It underlines the need to have a thorough knowledge of the sector under research.

Finally, as strategic position is concerned, the trends found are wholly contrary to theoretical expectations, which can at least partially be explained by the presence of pooled resources discussed above. The other contrary finding is that the larger the amount of personnel the lower the rate of portfolio renewal. We attribute this finding to the over-collection of resources (cf. Penrose 1959). Excess resources are used for side-line activities that distract managerial attention from the renewal of the core portfolio. We assume that over-collection of resources will occur in other non-profit sectors too, when strategic objectives are shifted to commercial activities. This would justify further research into the role of government, as many non-profit organisations are active in sectors where government regulation and oversight are more prominent than in most business sectors.

BIBLIOGRAPHY

Allan, P. (2003). Why Smaller Councils Make Sense. *Australian Journal of Public Administration,* Vol. 62, Issue 3, 74-81.

Amey, L.R. (1964) Diversified manufacturing businesses. *Journal of the Royal Statistical Society*, 27, series A, part 2.

Aw, B-Y. & G. Batra (1998) Firm size and the pattern of diversification. *International Journal of Industrial Organization*, 16, 313-331.

Bel, G. (2012). *"Local Government Size and Efficiency in Capital Intensive Services: What Evidence is There of Economies of Scale, Density and Scope?* International Center for Public Policy Working Paper Series, 65.

Ben-Menahem, S.M, Kwee, Z., Volberda, H.W., & Van den Bosch, F.A.J. (2013). Strategic Renewal Over Time: The Enabling Role of Potential Absorptive Capacity in Aligning Internal and External Rates of Change. *Long Range Planning*, Vol. 46, Issue 3, 216–235.

Berger, B.K, Hertog, J.K. & Park, D-J (2002). The Political Role and Influence of Business Organizations: A Communication Perspective. *Annals of the International Communication Association*, Volume 26, Issue 1, 160-200.

Bozeman, B. & Scott, P. (1996) Bureaucratic Red Tape and Formalization: Untangling Conceptual Knots. *The American Review of Public Administration,* Vol 26, Issue 1, 1 – 17.

Boyne, G. A. (1992). Local Government Structure and Performance: Lessons from America? *Public Administration* 70 (3), 333-357.

Brandenburger, A. M. & Nalebuff. B. J. (1996) *Co-opetition*. Harvard Business School Press: Boston, MA.

Byrnes, J. & Dollery, B. (2002) Do Economies of Scale Exist in Australian Local Government? A Review of the Research Evidence. *Urban Policy and Research*, 20:4, 391-414.

Camisón-Zornoza, C., Lapiedra-Alcamí , R., Segarra-Ciprés,

M. & Boronat - Navarro, M. (2004). A Meta-analysis of Innovation and Organizational Size. *Organization Studies*, Vol 25, Issue 3, 2004, 331–361.

CFV. (2012). *Jaarverslag 2011* [Annual Report 2011]. Naarden: Centraal Fonds Volkshuisvesting.

Chae, S., Heidhues, P. (2004). Buyers' Alliances for Bargaining Power. *Journal of Economics & Management Strategy*, Volume 13, Issue 4, 731–754.

Cloudt, S. (2015). *Organizational configurations and performance of Dutch social housing associations.* Tilburg: Tilburg University.

Dass, P. (2000) Relationship of Firm Size, Initial Diversification and Internationalization with Strategic Change. *Journal of Business Research*, 48, 135-146.

Damanpour, F. (1992). Organizational Size and Innovation. *Organization Studies*, Vol 13. Issue 3, 375–402.

Davis, G.F. & Cobb, J.A. (2010) Resource dependence theory: Past and future, in C. Bird Schoonhoven & F. Dobbin (ed.) *Stanford's Organization Theory Renaissance, 1970–2000*. Bingley: Emerald, 21 – 42.

Dollery, B. & E. Fleming (2006) A Conceptual Note on Scale Economies, Size Economies and Scope Economies in Australian Local Government. *Urban Policy and Research*, 24, 2, 271-282.

Feeney, M.K. & DeHart-Davis, L. (2009) Bureaucracy and Public Employee Behavior: A Case of Local Government. *Review of Public Personnel Administration*, Vol 29, 311-326.

Field, A. (2013). Discovering Statistics using IBM SPSS Statistics. Thousand Oaks, CA: Sage.

Foley, D. K. (2003). *Unholy Trinity: Labor, Capital and Land in the New Economy*. London and New York: Routledge.

Given, R. (1996) Economies of scale and scope as an explanation of merger and output diversification activities in the health maintenance organization industry. *Journal of Health Economics*, 15, 685-713.

Gort, M. (1962). *Diversification and Integration in American Industry.* Princeton: Princeton University Press.

Hillman, A.J., Withers, M.C. & Collins, B.J. (2009) Resource Dependence Theory: A Review. *Journal of Management*, Vol 35, Issue 6, 1404 – 1427.

Koolma, H. M. (2008). *Verhalen en prestaties. Een onderzoek naar het gedrag van woningcorporaties [Stories and Achievement. An inquiry into the behavior of housing corporations].* (PhD-thesis, Vrije Universiteit Amsterdam).

Koolma, R. & Van Montfort, A. (2016). Aan mooie woorden en ambities geen gebrek, De stuurloze koers van woningcorporaties. In Buijs, G. & Hoogland, J. (Eds), *Ontzuilde bezieling, Transformatie van burgers en maatschappelijke organisaties [Depillarized inspiration, transformation of citizens and civil society organizations].* The Hague: Boom Bestuurskunde, pp. 57 - 69.

King, D., D. R. Dalton, C. M. Daily & J. G. Covin (2004) Meta-analyses of Post-acquisition Performance: Indications of Unidentified Moderators. *Strategic Management Journal*, Vol. 25, No. 2, pp 187–200.

Lankford, W. M., & Parsa, F. (1999). Outsourcing: a primer. *Management Decision*, Vol. 37, Issue 4, 310-316.

Lichtenberg, F. R. (1992) Industrial de-diversification and its consequences for productivity. *Journal of Economic Behavior and Organization*, 18, 427-438.

Mansfield, E. (1976). Microeconomics. Theory and Applications. New York: W. W. Norton.

Mintzberg, H. (1983) *Structure in Fives: Designing Effective Organization.* Englewood Cliffs NJ: Prentice-Hall.

Mueller, D. C. (1969). A theory of conglomerate mergers. *Quarterly Journal of Economics*, Vol. 83, 643-659.

Padula, G. & Dagnino, G. B. (2007) Untangling the Rise of Coopetition. *International Studies of Management and Organization*, 37, 2, 32-52.

Panzer, J. C. & R. D. Willig (1981) Economies of Scope. *American Economic Review*,71, 268-272.

Penrose, E. (1959) *The Theory of the Growth of the Firm.* New York: John Wiley.

Porter, M. E. (1985) *Competitive Advantage*. New York: Free Press.

Rawley, E. & T. S. Simcoe (2010) Diversification, Diseconomies of Scope, and Vertical Contracting: Evidence from the Taxicab Industry. *Management Science*, 56, 9, 1534-1550.

Rhoades, S. A. (1983) *Power, empire building, and mergers*. Lexington MA: Lexington Books.

Ricardo, D. (1821). *On the Principles of Political Economy and Taxation* (3th Edition). Kitchener, Ontario: Batoche Books.

Sparrow, O., & Ringland, G. (2010). A system for continuous organizational renewal, *Strategy & Leadership*, Vol. 38 Issue 4, 34-41.

Teece, D. (1980) Economies of scope and the scope of the enterprise. *Journal of Economic Behavior & Organization* Vol. 1, issue 3, 223-247.

Thomason, S.J., Simendinger, E. & Kiernan, D. (2013) Several determinants of successful coopetition in small business. *Journal of Small Business & Entrepreneurship,* Vol. 26, Issue 1, 15-28.

Trautwein, F. (1990). Merger motives and merger prescriptions. *Strategic Management Journal* Vol. 11, Issue 4, 283-295.

Utton, M.A. (1977) Large firm diversification in British manufacturing industry. *Economic Journal*, 87, 96-113.

Veenstra, J., Koolma, H.M. & M.A. Allers (2017). Scale, mergers and efficiency: the case of Dutch housing corporations. *Journal of Housing and the Built Environment*, Vol. 32, Nr. 2, 313–337.

Walker, R.M., Berry, F.S., & Avellaneda, C.N. (2015). Limits on innovativeness in local government: examining capacity, complexity, and dynamism in organizational task environments. Public Administration, Volume 93, Issue 3, 663–683.

Williamson, O. E. (1964). *The Economics of Discretionary Behavior*. Englewood Cliffs NJ: Prentice-Hall.

Willig, R. (1979) Multiproduct technology and market structure. *American Economic Review*, 69, 2, 346-351

Table 1 Economies of scale: research findings

Number of housing units in stock	1000		2500		3500		5000		7500		10000		20000	
Depent varaobles	below	above	below	above	below	above	below	above	below	above	below	above	below	above
Operational costs	0.244 ***	0.169 ***	0.245 ***	0.175 ***	0.236 ***	0.175 ***	0.237 ***	0.196 ***	0.232 ***	0.150 ***	0.236 ***	0.045	0.259 ***	0.027
Costs of maintenance	0.092 *	0.149 ***	0.152 ***	0.178 ***	0.125 ***	0.145 ***	0.138 ***	0.093 ***	0.160 ***	0.090 **	0.165 ***	0.040	0.177 ***	0.007
Financial costs	0.127 **	-0.148 ***	0.020	-0.005	-0.042	0.028	-0.071 **	0.110 ***	-0.130 ***	0.068 *	-0.135 ***	0.080	-0.127 ***	0.174 ***
Total costs	0.108 *	0.017	0.079 **	0.081 **	0.026	0.084 **	0.031	0.103 **	0.027	0.077	0.029	-0.033	0.058 **	0.176 *
n (total costs)	460	2107	1138	1429	1357	1210	1951	1028	2367	622	2548	431	2816	163

*independent Scale of operations (log), standardized coefficient flagged for significance *** p<0.001 ** p<0.01 * p<0.05*

Table 2: Economies of scope in two stages: research findings

Number of housing units in stock	1000		2500		3500		5000		7500		10000	
2A First stage	below	above	below	above	Below	above	below	above	below	above	below	above
Depedent Scope												
Independent Scale (log)	0.479 ***	0.398 ***	0.577 ***	0.201 *	0.643 ***	0.198 *	0.616 ***	0.154	0.607 ***	0.134	0.579 ***	0.103
2B Second stage												
Dependent Operational costsper housing unit produced												
Independent Scope	-0.260	-0.254 ***	-0.303 ***	-0.224 **	-0.287 **	-0.225 *	-0.226 **	-0.216	-0.241 **	-0.338	-0.260 **	-0.035
Control variable Scale of operations (log) #	-0.083	0.275 **	0.080	0.183	0.165	0.281 **	0.172	0.229	0.155	0.038	0.203 *	0.002
n (observations)	53	232	126	159	153	132	201	84	234	51	252	33

*Standardized coefficient flagged for significance *** p<0.001 ** p<0.01 * p<0.05*
 # Other control variables are not presented in this table

Table 3 Strategic position in two stages: research findings

Number of housing units in stock	1000		2500		3500		5000		7500		10000	
3A First stage	below	above	below	above	below	above	below	above	below	above	below	above
Independent Scale (log) 5 Dependents variables in bi-variate tests												
	-	-	'-	-	-	-	-	´-	-	‘'-	-	
Quality of	0.09	0.1	0.1	0.1	0.1	0.0	0.1	0.04	0.1 *	0.01	0.1	0.2
personnel	1	64 *	23	00	15	60	69 *	9	80 *	7	57 *	34
	´-	*		*			*		*		*	-
Amount of	0.16	0.4 *	0.1	0.2 *	0.2 *	0.2 *	0.3 *	0.16	0.4 *	0.04	0.4 *	0.1
personnel	8	11 *	89	81 *	75 *	72 *	58 *	6	07 *	9	45 *	27
		*	*		*		*		*		*	-
Diversity of	0.30	0.3 *	0.3 *	0.2 *	0.4 *	0.1	0.4 *	0.17	0.4 *	0.13	0.4 *	0.0
personnel	5	69 *	64 *	15 *	62 *	94 *	72 *	1	57 *	4	24 *	72
					-		-					
	0.30	0.0	0.0	0.1	0.0	0.0	0.0	0.03	0.0	0.12	0.0	0.2
Capital	9	36	25	17	47	74	36	4	03	4	16	26
			-	-	-			-		-		-
	0.26	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.00	0.0	0.1
Land	8	06	31	57	17	78	53	0	31	2	10	25
3B Second stage												
Dependent Renewal of rental housing portfolio 5 Independent variables												
	-	-	-	-	-		-	-	-	-	-	
Quality of	0.16	0.0	0.1	0.0	0.1	0.0	0.1	0.10	0.0	0.13	0.0	0.2
personnel	3	79	49	27	84	05	03	1	90	3	89	97
		-		-	-	-	-	-	-	-	-	-
Amount of	0.20	0.1	0.0	0,2 *	0.0	0.1	0.1	0.16	0.1	0.24	0.1	0.3
personnel	4	62 *	25	39 *	78	72	31	5	19	7	42 *	66
												-
Diversity of	0.49	0.1	0.2	0.1	0.2	0.1	0.1	0.16	0.1	0.25	0.1 *	0.1
personnel	5	49	38 *	74 *	05 *	70	95 *	0	83 *	1	83 *	96
		*	*	*	*	*	*		*		*	
	0.26	0.4 *	0.5 *	0.3 *	0.5 *	0.3 *	0.4 *	0.24	0.4 *	0.22	0.4 *	0.0
Capital	2	17 *	54 *	12 *	16 *	24 *	80 *	7 *	57 *	4	36 *	26
	-	-	-		-			-	-		-	
	0.15	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.10	0.0	0.2
Land	8	31	82	23	33	13	64	1	77	2	43	01
Control variable												
Scale of	-	-	-	-	-	-	-	-	-	-	-	-
operations (log)	0.16	0,1	0.0	0.1	0.0	0.1	0.0	0.32 *	0.0	0.39	0.0	0.0
#	7	71 *	36	87	28	88	68	3 *	54	9 *	66	77
n (observations)	26	235	95	166	119	142	167	94	201	60	224	37

*Standardized coefficient flagged for significance *** p<0.001 ** p<0.01 * p<0.05*

 # Other control variables are not presented in this table

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.3840.
Anas, M. (2017). Environmental Kuznets curve for the Moroccan economy. *Archives of Business Research, 5(12),* 148-155.

Environmental Kuznets curve for the Moroccan economy

Mossadak Anas
Mohammed V University, faculty of law
economics and social sciences, Salé

ABSTRACT
The Environmental Kuznets Curve (ECK) analyses the relationship between economic growth and environmental deterioration. The traditional view that that economic development and environmental quality are contradictory objectives reflects a pure scale effect and does not take into account technological developments. the ECK hypothesis suppose that once economies reach a certain level of development (turning point), environmental degradation tends to decline due to the use of more strict application of environmental rules and increasing public awareness of environmental issues The aim of this paper is to estimate an environmental Kuznets curve for the Moroccan economy. The objective is to investigate its existence and calculate its turning point. The empirical findings show that the Moroccan economy would observe a reversal of its CO2 emissions by 2040. At this point of time, the real GDP per capita would reach 7800 dollars.

Keywords: Environmental Kuznets Curve, pollution, CO2, turning point, environment, growth.

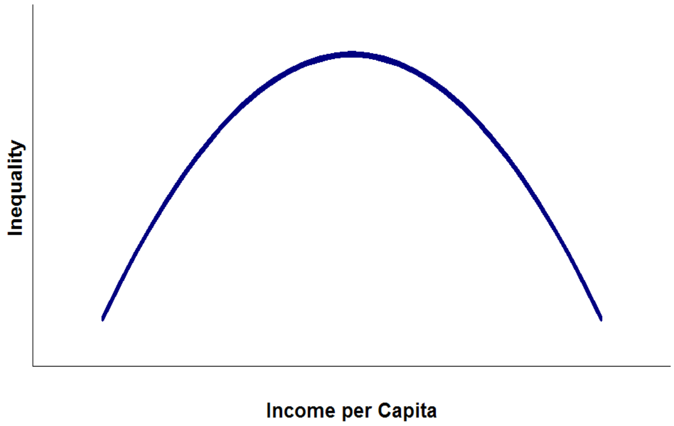
INTRODUCTION

The 1980s were characterized by the emergence of the sustainable development concept, which stressed the need to review development strategies in order to ensure the sustainability of economic growth for both present and future generations. As a result, development is no longer necessarily harmful to the environment, and poverty reduction becomes compatible with environmental protection.

Based on this idea, Grossman and Krueger (1991) introduced the concept of Environmental Kuznets Curve (EKC) in their study of the impact of the American Free Trade Agreements (NAFTA). They have shown that the increase in growth makes it possible to improve the quality of the environment in Mexico rather than to reduce it.

The Environmental Kuznets Curve analyzes the impact of economic growth on environmental degradation based on the same principle as the original Kuznets curve which postulated the existence of an inverted U-shaped relationship between the level of inequality and economic growth. Economic growth initially creates inequalities, but as economic growth accelerates, the level of inequality tended to decline over time.

Figure 1: the original Kuznets Curve

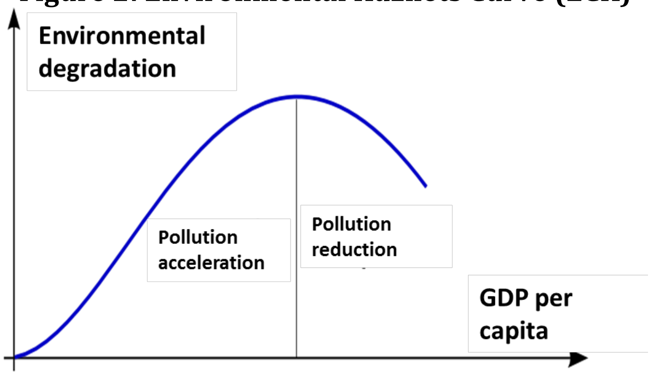


This concept has been taken up by development economists to highlight the link between environmental degradation and economic growth.

The traditional view that economic development and environmental quality are contradictory objectives reflects a pure scale effect and does not take into account technological developments. In other terms, if there were no changes in the structure of production, economic growth would inevitably lead to a proportional increase in pollution (Panayotou, 1993).

Proponents of the ECK hypothesis argue that once economies reach a certain level of development, environmental degradation tends to decline due to the use of more strict application of environmental rules and increasing public awareness of environmental issues.

Figure 2: Environmental Kuznets Curve (ECK)



The ECK was popularized by the 1992 World Development Report of the World Bank, based on the work of Shafik (1994). According this study, the view that more economic activity inevitably degrades environment is based on static assumptions about technology and environmental investments. In the same way, Beckerman (1992) argues that while economic growth generally leads to environmental degradation in the early stages of the process, at the end it is the best and probably the only way to improve the quality of the environment in most countries.

Arrow et al. (1995) criticized this approach because it assumes that there is no impact of environmental damage on production as long as growth is considered as an exogenous variable. The idea is that environmental degradation does not reduce economic activity sufficiently to stop the growth process and that any irreversibility is not too severe to reduce the level of future income.

Shafik (1994) estimated an EKC based on ten indicators of pollution through three different functional forms. In terms of results, the lack of drinking water and the lack of urban sanitation have been reduced uniformly with the increase in incomes. Also, the concentration of air pollutants decreased with the increase in income with a turning point between 3000$ and 4000$ per capita. However, indicators of deforestation, and river water quality showed no signs of reversal and worsened with increasing income.

Selden and Song (1994) estimated a CKE for four pollutant gases: SO2, NOx, SPM, and CO. The study concerned mainly developed countries. The estimated turning points were all very high compared to previous studies: SO2, 10391$; NOx, 13383$; SPM, 12,275$ and CO, 7,114$.

The authors concluded that in the early stages of economic development, the industrial fabric tends to concentrate in a small number of cities with a very large population density. However, it is quite the reverse that occurs during the advanced stages of the development process leading to an improvement in environment quality. Stern et al. 1996 criticized these findings by arguing that it is quite possible that ambient concentrations will tend to decline as income increases, even though total national emissions are increasing.

The objective of this paper is to estimate an environmental Kuznets curve for the Moroccan economy. First, we present the methodology adopted for estimating the EKC, and then analyze the obtained results for the Moroccan case.

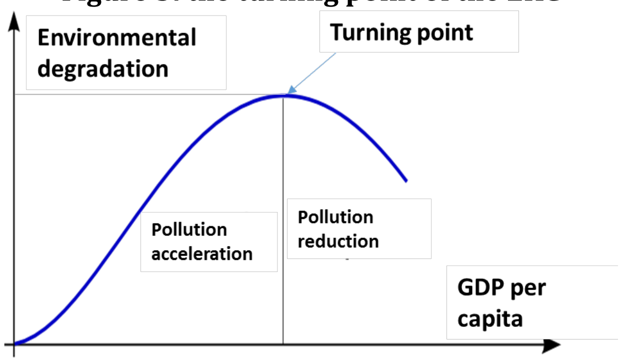
METHODOLOGY

Estimations of the EKC, in particular Shafik (1994), use a quadratic functions where endogenous variable are pollution indicators and the exogenous variable is the per capita income level, often considered in logarithm. Thus, the standard formulation of the EKC is given by:

$$lnE_t = \beta_0 + \beta_1 lnY_t + \beta_2 (lnY_t)^2 + \varepsilon_t$$

With E_t an indicator of environmental quality or emission of pollution per capita, Y_t the per capita income and ε_t is an error term.

Figure 3: the turning point of the EKC



The turning point, i.e the level of income for which the degradation of the environment is at a maximum level. The general form of a second-degree polynomial is given by:

$$y = \beta_0 + \beta_1 x + \beta_2 x^2$$

To reach a maximum, the first derivative of y must be equal to 0, we have:

$$\frac{dy}{dx} = \beta_1 + 2\beta_2 x^* = 0 \text{ , Thus: } x^* = \frac{-\beta_1}{2\beta_2}$$

x^* is positive (maximum) as long as β_2 (the second derivative with respect to x) is less than 0. If the estimate is made in logarithm, then the expression of the turning point is given by:

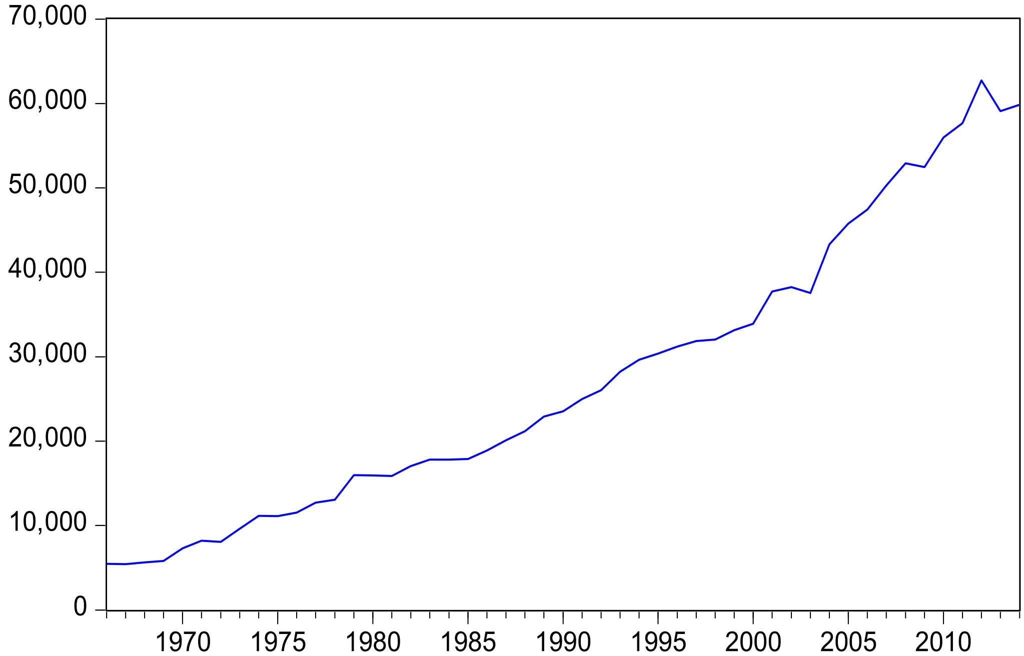
$$x^* = \exp\left(\frac{-\beta_1}{2\beta_2}\right)$$

It is obvious that this equation is quite simplistic as other omitted variables are important to explain the level of emissions. For example, Harbaugh et al. (2002) reviewed and updated the data from Grossman and Krueger (1991) and found that the turning points for the different pollutants were sensitive to both sample changes and econometric specifications.

ESTIMATIONS AND RESULTS

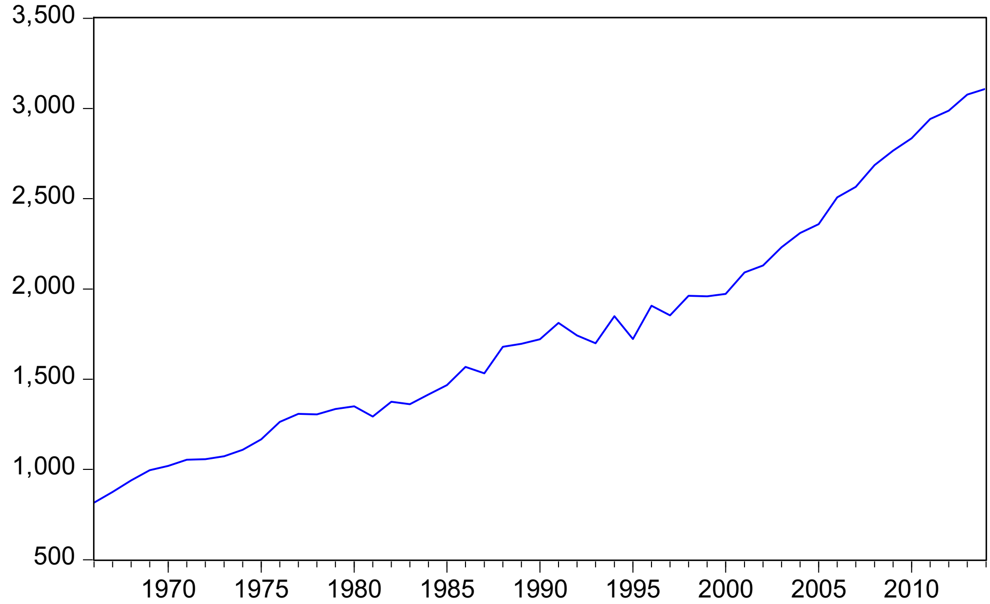
The data used in this study are from the World Bank database. The used variables are per capita CO2 emission (in kiloton) and real GDP per capita (in constant 2010 US dollars). The data cover the period from 1966 to 2014 and are expressed as logarithm. It should be noted that we have not tested other types of environmental indicators because of the unavailability of data over a long period of time.

Figure 4: Evolution of CO2/cap emissions (in kt) in Morocco between 1966 and 2014



Source: World Bank

Figure 5: evolution of real GDP/capita (2010 constant US dollar) in Morocco between 1966 and 2011



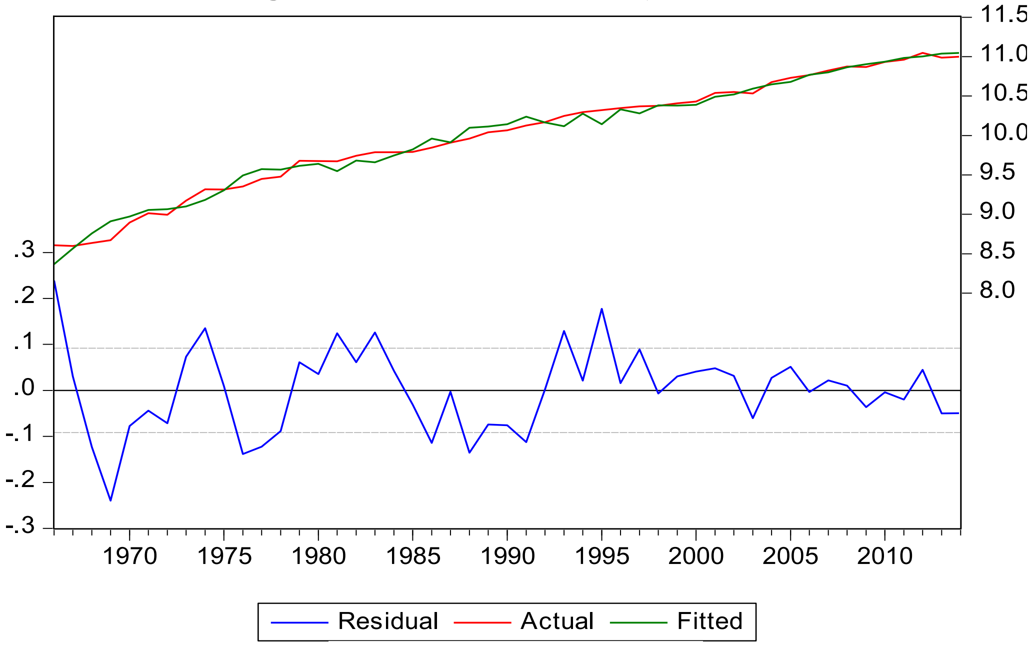
Source: World Bank

The model can be expressed as follow:

$$lnE_t = -39.03 + 11.29lnY_t - 0.63(lnY_t)^2 + \varepsilon_t$$

To ensure the robustness of our estimation we conducted a variety of tests such as t-statistic for coefficients significance, normality of residual (Jarque-Bera test), stability of the coefficients (Cusum test an) and the autocorrelation test of residuals (Durbin-Watson test). See the appendix for more details about estimations

Figure 6: CO2 emission and adjusted CO2



Source: author's calculation

Concerning the turning point we have:

$$x^* = \exp\left(\frac{-\beta_1}{2\beta_2}\right) \text{ Donc } x^* = \exp\left(\frac{11.12}{2x0.63}\right) = \exp(8.96) \approx 7800$$

Thus the turning point of the CO2 emission in Morocco should be reached when the real GDP per capita would be around 7800 US dollars (in real 2010 dollar).

Assuming that the real growth of Moroccan GDP is 4.5[1] on average, and knowing that the real GDP per cap of 2014 is 2546 dollars[2], one can write:

$$2546(1{,}045)^{\,n} = 7800\ so\ n \approx 25{,}5$$

Thus the turning point should be reached in 2040. This result is in line with the turning points found in the empirical literature and which are generally between 6000 and 13000 $, depending on the pollution indicators used and the adopted econometric approaches.

CONCLUSION

The objective of this work was to estimate an environmental Kuznets curve for the Moroccan economy and to find the turning point from which environmental degradation should begin to decrease. The empirical results have proved the existence of a quadratic environmental Kuznets curve with a turning point of 7800$ (constant US 2010 dollars) per capita. This level of income should be reached by 2040.

Although the result is in line with the empirical literature, it is necessary to test the relevance of this approach for different types of pollution indicators as well as using other econometric methodologies to ensure the robustness of the obtained results.

References

Arrow, K., all, 1995. Economic growth, carrying capacity, and the environment. Science, 268: 520-521.

Beckerman, W., 1992. Economic growth and the environment: whose growth? Whose environment? World Development, 20, 481-496.

Forrest, A. S., Lockhart, J. E., 1999. Analyzing reductions in U.S. air pollution emissions: 1970 to 1990. Land Economics, 75:1-21.

Grossman, G. M. & Kreuger, A. B., 1991. Environmental impacts of a North American free trade agreement. The US-Mexico free trade agreement, ed. P. Garber, Cambridge, MA:MIT Press.

Grossman, G. M., 1995. Pollution and growth: what do we know? In: I. Goldin and L. A. Winters (Editors) The Economics of Sustainable Development, Cambridge University Press, Cambridge, pp. 19-47.

Grossman, G. M. and Krueger, A. B., 1991. Environmental Impacts of a North American Free Trade Agreement. National Bureau of Economic Research Working Paper 3914, NBER, Cambridge MA.

Grossman G. M. and A. Kreuger, 1995. Economic growth and the Environment. Quarterly Journal of Economics. 110 (2), 353-377.

Harbaugh, W. T., Levinson, A., Wilson, D. M. 2002. Reexamining the Empirical Evidence for an Environmental Kuznets Curve , The Review of Economics and Statistics, 84: 541-551.

Kaufmann, R. K., Davidsdottir, B., Garnham, S., and Pauly, P., 1997. The determinants of atmospheric SO2 concentrations: reconsidering the environmental Kuznets curve, Ecological Economics, 25: 209-220.

Kuznets, S., 1955. Economic growth and income inequality. American Economic Review, 49: 1-28.

[1] Average assumption considered by the IMF for the next 7 years, see IMF WEO.
[2] Constant dollar 2010.

Panayotou, T., 1993. Empirical Tests and Policy Analysis of Environmental Degradation at Different Stages of Economic Development. Working Paper WP238, Technology and Employment Programme, International Labour Office, Geneva.

Panayotou, T., 1997. Demystifying the environmental Kuznets curve: turning a black box into a policy tool. Environment and Development Economics, 2: 465-484.

Shafik, N. & Bandyopadhay, S., 1992, Economic growth and environmental quality: time series and cross country evidence. Background paper, World Development Report. Washington, DC: World Bank..

Shafik N., 1994 Economic Development and Enviromental Quality: An Econometric Analysis. Oxford Economic Papers, 46, pp. 757-773,.

Selden, T. M. and Song, D., 1994. Environmental quality and development: Is there a Kuznets curve for air pollution? Journal of Environmental Economics and Environmental Management, 27: 147-162.

Selden, T. M. and Song, D., 1995. Neoclassical growth, the J curve for abatement and the inverted U curve for pollution. Journal of Environmental Economics and Environmental Management, 29: 162-168. Selden, T. M.,

Stern, D. I., Common, M. S., and Barbier, E. B., 1996. Economic growth and environmental degradation: the environmental Kuznets curve and sustainable development. World Development, 24, 1151-1160.

Stern, D. I., 1998. Progress on the environmental Kuznets curve? Environment and Development Economics, 3: 173-196.

Stern, D. I., 2002. Explaining changes in global sulfur emissions: an econometric decomposition approach. Ecological Economics, 42: 201-220.

Stern, D. I. and Common, M. S., 2001. Is there an environmental Kuznets curve for sulfur? Journal of Environmental Economics and Environmental Management, 41: 162-178.

APPENDIX

Estimation Details

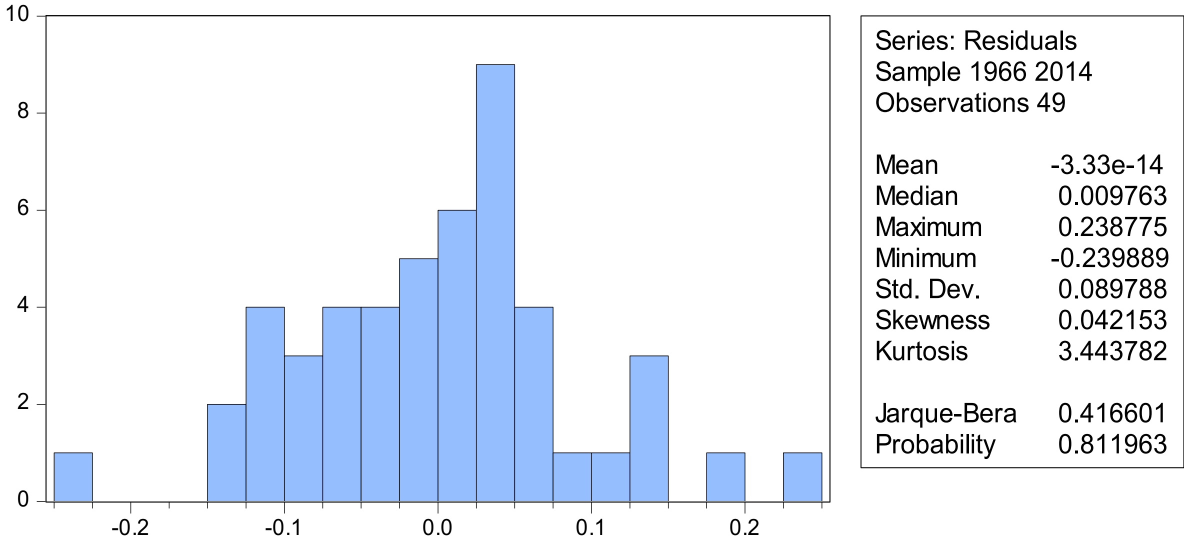
Dependent Variable: LCO2
Method: Least Squares
Date: 10/30/17 Time: 14:24
Sample: 1966 2014
Included observations: 49

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LGDP	11.29433	1.450893	7.784397	0.0000
LGDP2	-0.630071	0.097783	-6.443593	0.0000
C	-39.03115	5.373053	-7.264241	0.0000

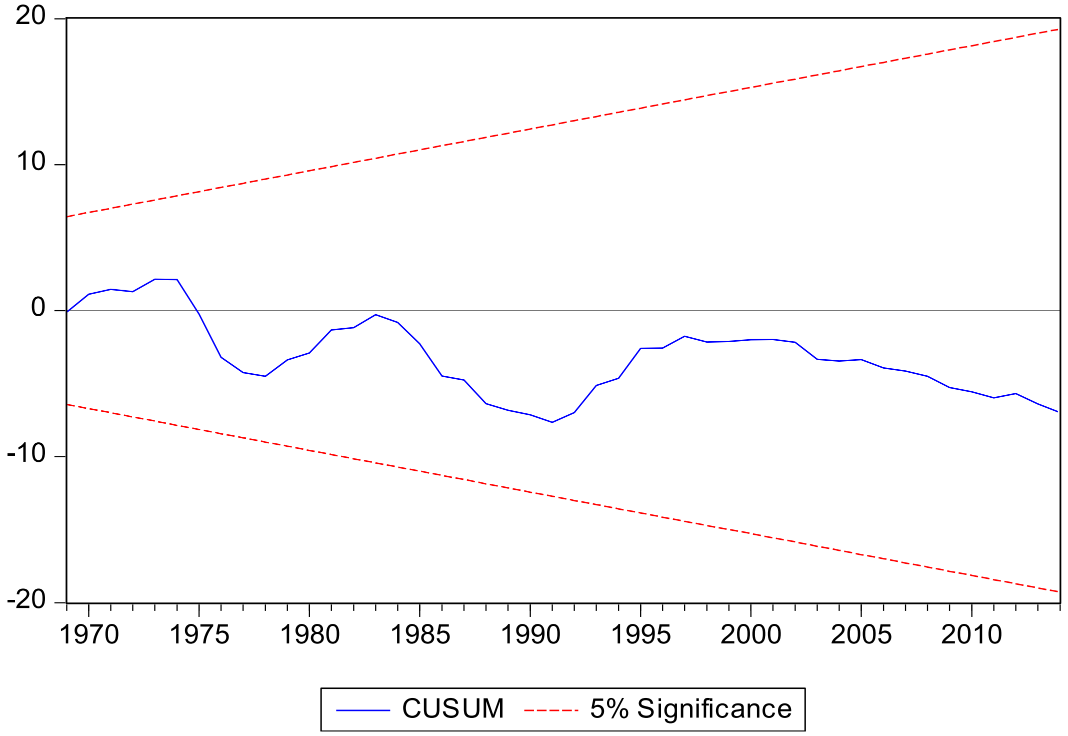
R-squared	0.984197	Mean dependent var	9.996821
Adjusted R-squared	0.983510	S.D. dependent var	0.714243
S.E. of regression	0.091719	Akaike info criterion	-1.880901
Sum squared resid	0.386971	Schwarz criterion	-1.765075
Log likelihood	49.08207	Hannan-Quinn criter.	-1.836957
F-statistic	1432.401	Durbin-Watson stat	1.865078
Prob(F-statistic)	0.000000		

o

Residual normality test



Model stability test (Cusum test)



Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.3796.
Aduamoah, M., Yinghua, S., Anomah, S., & Ahmed, F. (2017). Riding the Waves of Technology: A Proposed Model for the Selection of Appropriate Computerized Accounting Software for Implementation in SMEs in Developing Countries. *Archives of Business Research, 5(12),* 156-179.

Riding the Waves of Technology: A Proposed Model for the Selection of Appropriate Computerized Accounting Software for Implementation in SMEs in Developing Countries

Maurice Aduamoah
Schools of Management, Wuhan University of Technology,
Wuhan P.R. China, 430070

Department of Accountancy & Accounting Information Systems,
Kumasi Polytechnic. Post Office Box 856, Kumasi,-Ghana.

Song Yinghua
Schools of Management, Wuhan University of Technology,
Wuhan P.R. China, 430070

Sampson Anomah
Department of Accountancy & Accounting Information Systems,
Kumasi Polytechnic. Post Office Box 856, Kumasi,-Ghana.

Fawad Ahmed
Schools of Management, Wuhan University of Technology,
Wuhan P.R. China, 430070

ABSTRACT

Currently, SMEs are looking for ways to select Computerised Accounting Software packages to better improve their business process capabilities, economies of scale and competitive edge over rivalry companies in the market. CAS is seen as the optimal preference as it is now a dominant, powerful and integrated software package embedded with all the modules needed to process and generate accounting information on a timely, high precision and error free manner for management decisions. However, choosing the appropriate CAS has become a critical problem for many SME entities in developing countries as the past and continuous selection of sub-optimal CAS application had brought mischance's to SMEs leading to massive financial losses and arguably bankruptcies. Some critical and vital considerations such as vendor credentials, CAS selection and implementation financing option by the CAS vendor, Maintenance overheads, Functionality, Flexibility and Implementation are most often marginalised during the selection process which have negatively affected SMEs ability to select the best breeds of CAS among the proliferated software in the software market in Ghana. This study fills this gap by proposing an appropriate integrated buying framework leading to a mathematical model that may guide SMEs in their quest to selecting an optimal CAS package for implementation where the software market is fuzzy and unclear regarding the best CAS package available. Business processing needs of SMEs are varied so it is expected that the suggested model would support SMEs in developing countries select the "most appropriate" CAS that may meet their respective financial transaction processing needs.

Keywords: Computerised Accounting Software, Delphi Technique Process, Small and Medium sized Enterprises, Most Appropriate.

INTRODUCTION

Taking advantage of the new waves of technology benefits immensely from the world of business dynamics have caused many SMEs in developing countries also look for new ways to collect, process, store and disseminate accounting information to all relevant users of for quick decision making as it pertains advanced countries. As results, SMEs have resorted to the use of business processing application called Computerised Accounting Software (CAS) to help them achieve their respective financial transaction processing which has become the norm of doing business fast changing global environment. CAS is a dominant accounting information system software application, embedded with all the normal physically operational activities of SME entities interrelated together to facilitate the processing and generation of financial information such as comprehensive income statement, the statement of financial position, accounts receivable schedules to facilitate debt collection, inventory management, sales analysis, all forms of tax returns and payroll for employee salaries etc. [1] asserts that CAS facilitates information flows and sharing within the business entity among each operational module which ultimately leads to the summary generation of the information above. This according to[2], successful selection and implementation of CAS enables the SME benefit from easy access and retrieval of the same data and information for quick decision making. However, the software market is proliferated with many CAS application packages with different brand names and information, making the selection very challenging for implementation. These phenomena have become stumbling barriers for SMEs according in their quest to implement CAS application in developing countries such as Ghana [3-4].

Recent software implementations across government's strategic businesses such as the computerisation of all business processing's at the Ghana Ports and Harbours (GHPOHA), The Ghana Revenue Authority (GRA)[5]; The Social Security and Insurance Trust (SSNIT)[6] and the entire overhaul of the banking sector through computerization [6-7]. [8] suggest that SMEs should take advantage of software adoption revolution by government to also implement CAS package systems into their financial data processing's to complete an element of the payment cycle. The adoption and implementation of CAS for financial data processing will enable SMEs have easy interaction with these statutory government agencies and the banking sector to propel the country achieve a paperless society status; SMEs receipts and payment cannot be successful if they fail to automate their business processing to hook their computerised networks to that of government business and the banking sector. The trade cycle must be completed by the interaction of the customers banking networks and the vendor's bank networks. However, this is not the case in Ghana so far as the trade cycle is concerned. A case example is where Telco's in collaboration with banks in Ghana have introduced money transfer systems. The system rolls out demands that SMEs must be provided with handy payment devices at their respective business locations to enable potential customers buy and then render fees for goods and services provided to them on that computerised platform. SMEs in their efforts to complete the business processing cycles by implementing CAS packages are overwhelmed with massive lots of accounting software packages in the software market with the risk of selecting the inappropriate one very high to an SME manager or owner who is novice in the market. There is no single published determinant which must guide SMEs in their desire to selecting for installation a CAS package. The results have seen many SMEs managers and their accounting staff getting disappointed in witnessing a CAS package underperforming to requirements in Ghana.

According Liu, (2009)[9], the time has come for SMEs to use the information systems and technology to reinforce their management decision making process and also improve their competitiveness in both local and international business environment. This accomplished by those SMEs using CAS already to upgrade and replace their legacy computerised systems which are not relevant, time consuming, and non-cost effective (Kimberling, 2006)[10]. To achieve the above needs appropriate selecting and implementation techniques that bring all SME business processing requirements needs expected to be provided by a selected CAS service provider with full integration of all the functional operations in the software package. To enable the SMEs in Ghana mitigate the risks of selecting the wrong CAS package for implementation this research study adopts the Delphi techniques which requires knowledgeable and expert contributors to individually respond to questions regarding the dimensions of selecting an optimal package and submitting the results to a central coordinator. The coordinator then processes the contributions, looking for central and extreme tendencies and their rationales. The results are then sent back to the specialist participating respondents to resubmit their views based on the refined questionnaires by the moderator. This process continues until the coordinator sees that a consensus has been formed. The technique aims at removing biases that are possible when diverse groups of experts meet together. In the Delphi technique, the experts do not know who the others experts are during the process [11]. This process will contribute to an applicable buying model which is more consensuses in nature from diverse specialist stakeholders hence reducing the risks of selecting inappropriate CAS packages for implementation.

SMEs sector have been preferred for this study for various motivations: since the inception of CAS literature into SMEs business processing's, there have not been enough literature because it is seen as young and up and coming [12-13], hence we are of the view that focusing only on the fusion of CAS into SME businesses, would add to existing literature by providing academic and practical viewpoints to balance out with how SMEs select and implement their CAS package. Many SMEs have blindly made selection of sub-optimized CAS products.[14], posit that there is not much research work on how respective SMEs coordinate the migration of their manual or existing accounting functions (legacy systems) to a newly implemented computerized accounting system. Examining the existing literature uncovered neither the existence of a framework, interrelated and integrated theoretically regarding the major dimensions and sub-features that needs to be taking into accounts in selecting suitable CAS for SMEs in Ghana. Many SMEs in Ghana nowadays have perceived as a results of the frustrations they go through in acquiring CAS packages that nobody can assure that using certain criteria in choosing CAS application will meet its business processing and regulatory requirements until the CAS is totally set up and effectively running. This research study therefore fill this gap by coming out with an integrated buying framework and model which may lead to the "appropriate" selection of CAS by respective SMEs for implementation at a mitigated reduced risks to an acceptable risks tolerance.

Related Research Work on Computerized Accounting Software Implementation in SMEs
Studies on IT implementation in SMEs have gained much prominence particularly during the last decade [15-16] conducted a study into Computerized Accounting Systems Usage by Small and Medium Scale Enterprises in Kumasi Metropolis, Ghana. The research centered on examining the extent of usage, paybacks and the difficulties inherent in CAS systems by SMEs operating in the Kumasi Metropolis. The results revealed that a only a few SMEs have implemented accounting software package. [17] in his master theses also embarked on a study to evaluate the relationship between alleged effectiveness, simplicity of use CAS among SMEs in Libya. The study showed an encouraging connection between alleged effectiveness and intention to adopt CAS among SMEs. [14] in their effort to examine the Status of Computerized Accounting Software in Small American Businesses in the USA sought to investigate into how entities chose their present CAS system, the depth of training offer to their employees before the CAS is rolled out, and the degree to which the accounting function

of SMs is now automated. It also looked at user's perception and actual functioning of CAS system to SMEs. The results revealed a massive increase in knowledge about accounting software usage of small companies. [19] in his case study approach, investigated into the teaching of computerized Accounting course by using real-life case study in accounting or finance which allowed students to complete their final projects in the area of Accounting, Medical Billing, payroll, accounts receivable and payables etc. at the end of the study each students mastered new skills and were able to find employment in both big and smaller companies. [20] and his colleagues conducted a study into "Computer-Based Accounting Systems in SMEs with a practical substantiation from a Randomized Trial in Nigeria" using finance and accounts personnel of companies or executives whose sole responsibility is the processing financial transactions in entities such as manufacturing, agriculture, construction and mining, hotel and hospitality, IT services, medical services, wholesale and retail trade, and general services industries. The research findings revealed a marginal increase in usage of CAS by Nigerian SMEs. The suggested outcome implored professional accountants to continually mix their accounting skills with that of CAS to enable their relevance and impact to be felt in the business community and also their profession Again these studies have not come out with any framework that brings together the view points from specialist stakeholders like consultants, practicing personnel like accountants, internal auditors and CAS vendor suppliers and academia to develop a one-stop –shop model to aid respective SMEs in their desire to implement an accounting software.

LITERATURE REVIEW

Small and Medium Enterprises (SMEs)

Businesses are regarded as Small and Medium Seized (SME), if it fulfils certain requirement ceilings for staff, a turnover value found in a statement of comprehensive income and financial position ceiling. For example Small and Medium sized Enterprises (SMEs) are of paramount significant to scores of countries. In the US for instance, SME, entities with fewer than 500 employees, are the backbone of the economy which offer employment to over 50 percent of the private sector employees in various career disciplines and also generate over 65 percent of net new private sector jobs according to[21].. Across the EU28, the contributions of SMEs business make up 99.8% of all enterprises, 57.4% of value added, and 66.8 % of employment [22]. This requirement has made the definition of SME somewhat vague and incomprehensible as it does not have a uniform criterion across countries [23]. As a result of a non-convergence criteria and definition, SMEs definition in Ghana is largely based on the number of employees in the fold of the business. In Ghana, [24], defines firms with more than 10 workers as SMEs. It could be seen from the definition and scope that SMEs could have many workforces when it's operational activities expands. The expansion of business activities in SMEs necessitates the fusion of CAS technologies to process its large financial data set with ease and on time for management decisions. The reason being that it would be a requirement that the SME business files a statutory financial statement, VAT returns, employee Pay as You Earn (PAYE), employee pension insurance etc with appropriate authorities under the umbrella of the Ghana Revenue Authority (GRA).

Table 2: Employee sizes used in defining micro, small, medium enterprises bya sample of IT researchers.

AUTHORS	COUNTRY	MICRO	SMALL	MEDIUM	SME
Richard. (2016) [25]	Australia	1-5	1-20		20-199
Tenby Powell, (2015) [26]	New Zealand		20-100		
Catherine, (2018)[27]	Hong Kong		1-49		

Computerized accounting systems

The theory and concept of CAS broadly come under Accounting Information System (AIS) which is defined as computer software application which is used for recording and processing accounting transactions such as: accounts receivable module; accounts payable module; trial balance module; payroll module; and all-purpose functional financial report module [28]. According to [29], AIS in general is defined as the interrelation and integration of an entity's components parts that are joined collectively to gather raw data and information relating to that business discipline such as sales ledger, purchase ledger, value added returns, payroll returns etc, and convert these data sets into a summary of financial information in the form of statement of reports for distribution to relevant users within and outside the entity to make decisions. AIS could be applied in Health, Education, Banking and Metrological administration etc in general to collect data and process them into meaningful information for relevant users' consumption. In such circumstances, we have Health accounting information system, education information systems, banking information systems and metrological accounting information systems respectively. In relation to financial reporting in these entities AIS could replicate itself to collect data relating specifically to financial transactions process it to produce an output in the form of information and then report to relevant users for decision making. To comprehend the term 'AIS appropriately', three expressions represented in AIS would need to be detailed individually. In the first instance, available literature has asserted that accounting could be classified into three components parts, namely information system, "words of commerce" and basis of financial information reporting's [30]. Also, information must be seen as important data processing which is augments a base for decisions making such as taking action to retrieve ageing debtors when the schedule has been presented to management in the form of report. Finally, any system should be seen as integrated entity joining all the relevant sub-components, where the conceptual framework is focused on a set of objective achievement as asserted by [31, 32, and 33]. The CAS package may be developed in-house (bespoke) by the entity or be purchased from a third party software developer (off-the-shelf). CAS application packages hugely vary based on cost and complexity. In contemporary and dynamic business environment, packaged CAS application is not only restricted to recording and processing of financial data, but also provides expert functional modules that support easy managerial decision making with the ultimate aim of breeding in competitive advantage.

The Origin of Computerized Accounting Software

The beginning of CAS development could be dated back to 1959 where IBM created "9PAC", a earliest account production "language". This application enabled users to stock up and retrieve ordered and controlled data sets from relational databases from their computer networks [34]. Entities commenced to invest heavily in the creation of proprietary CAS applications intended for specific requirements, as contract works were made in batches. As computer automation grew in capability and effectiveness, a concept arose to create a broad financial information system which is embedded with flexible functionalities, and that became a reality 1973, with the birth of SAP RF which has the capability to handle a various aspect of an entity's day-to-days routine operations for quicker economic decision making with less or no intermediaries. Peachtree CAS system was then developed to simplify data storage with the aim of allowing users to obtain more worth [35]. Peachtree in 1981 demonstrated its first upgraded and integrated office package with spreadsheet and word processing capabilities. Intuit also came out with Quicken accounting package in 1983, with a new friendly user outlook and interface. Teleware in 1993 developed a outstanding CAS application which attracted the awareness of Best Software., The Australian publisher of Teleware also joined the CAS development wagon by launching product Mine Your Own Business in 1999. The trend of CAS development has reinvented since into this present day where Sage Accounting Software of Canada and Tally of India emerged.

Current use of Computerized Accounting Software

The use of CAS is increasing day by day. However, there are a few literatures available in this field of study concerning the application of accounting software among SME business as most persons within academia and industry believes that it is related to technicians and so must be discussed at a technical level within and outside their purview. Computerized accounting is defined [36] as a total suit of components that together comprises all inputs, storage, transactions, processing, collecting and reporting of financial information to stakeholders. Modern computerized accounting systems are based on the concept of database. A database is implemented using a database management system, which is defined as a set of computer programmes (or software) that manage and organise data effectively and provide access to the stored data by the application programmes. There is offline-based CAS software that needs installing into a computer or laptop and the computer need not to be connected to the Internet. It needs one time installation; however, the software needs updating on a regular basis to perform efficiently. It is recommended to back-up the data on a regular basis to secure any potential loss. The most recent development in the CAS is going online and cloud-based. Such online software can be accessed from anywhere and any devise provided there is an Internet connection. There is no requirement for data backup as it is taken care by the software provider.

Accounting Software Proliferation and Selection

In small businesses, before computerization of accounts, typically only two people managed the accounts: the owner/manager and the business' external accountant. The work involved and the costs associated in 'doing the books' are clear and there are no uncertainties or risks to the owner / manager. With computerization of accounts involving DOS based software, the number of people involved in the management of accounts grows to three or more people: the owner/manager, the accountant, the IT consultant and a few employees. The software is purpose built. There are no automatic updates to the software, unless it is requested by the owner. The initial costs are usually high, but there are no hidden costs. With the currently available packaged software, benefits such as affordability and high functionality come with potential complexity, risks, uncertainties and dependency. For example, the owner / manager is now dependent on several specialized experts (sometimes on ongoing basis): the accountant, the software consultant, the IT consultant and IS/IT auditors/ training of software employees. The cost of coordination for the small business owner / manager increases and the risk of something going wrong in maintaining and using the accounting software also increase [37].

SMEs and Computerized Accounting Systems Implementation

For an SME business, the acquisition of CAS package is a huge capital expenditure. As such, failure to utilize it or unproductive use of that system is deemed as a costly waste of the SME's budget, time and resources. An unsuccessful implementation of CAS system does also lead to high levels of frustration and disappointments among SME owners, managers, and employees. As a result, an SME manager wanting to implement a CAS package need to be informed of the potential risks exposures and benefits involved in the selection of an accounting system. An SME do not have the budget to have a management information systems department or an IT consultant to lead in the purchase of or design of a tailor-made system specifically to their needs. As a result, SME managers have resorted to purchasing off-the-shelf software packages which comes with inherent risks as the selection of suitable CAS application for implementation has turned out to be the most critical choices SMEs have to make within the quick-shifting business environment to gain competitive advantages. To mitigate the risks in selection and installation, CAS package desired and purchase by SMEs must best serve the entities requirement needs and must have the capacity to be customized to also meet statutory and regulatory requirements to avoid the entity's time and resources and budgets which may ultimately affect the entity's profit and loss accounts and balance sheet figures. To this end, it's suggested that organizations undertake an effective and efficient due diligence regarding every facet of the CAS desired prior to acquisition and implementation as it will be too late to reverse during roll the out stage of usage.

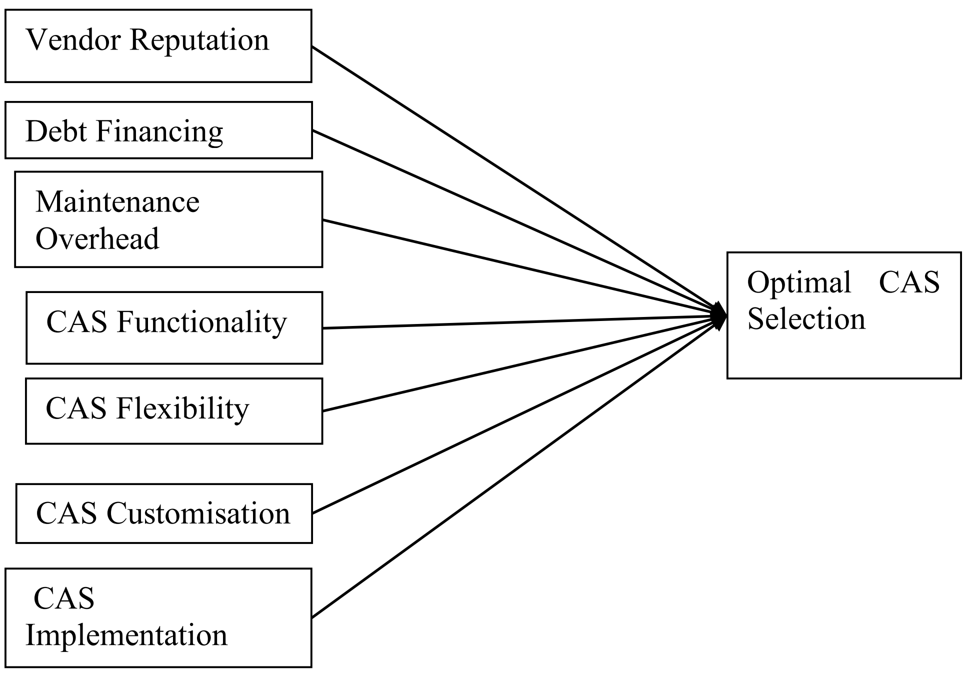
[38], argue that selecting the optimal CAS for installation has become risky venture as the software market has becomes proliferated with more and more fuzzy CAS packages with varied information. They are of the view that in most circumstances, more merchandize information creates choice-making very difficult for reporting entities desiring to buy some. These situations put SMEs into thinking that a costly CAS may perform to business requirements which are sometimes the opposite and difficult to evaluate[39]. also discovered that choosing the right CAS for an SME needs a profound examination of numerous diverse criteria's. It is noted that, during the selection of CAS, numerous stakeholders stress on the selected application meeting entities present and future critical requirements needs.

Table 1: Increase in System Complexity When Switching from Manual Accounting to IT Based Accounting

Item	Internal (Owner)	External (Accountant)	IT Trained	Accountant/Internal Auditor	IS/IT Auditor	IS Vendor
Manual	✓	✓				
Use of DOS based software	✓	✓	✓	✓		
Used of AIS/CAS package	✓	○	✓	○	○	✓

Model for the Selection of an Appropriate CAS packages

Figure 1: Criteria for the Selection of Optimal CAS Service Provider



Vendor credentials

Nearly every the literature on the CAS selection process make mention of vendor credential no matter large or small the entity is. These imply that there is no distinction between large, medium and smaller entities when it comes to the selection of CAS packages for implementation. However there are three distinctive attributes in Vendor credentials when it comes to a decision to select CAS for implementation from a supplier. These are Vendor's reputation, market share and the demonstration of previously successful CAS implementation for another reporting. The vendor credentials can be used by SMEs to perform due diligences about the desiring CAS providers, because reputation and current market share are possible indicators of CAS suppliers performance. The exhibition of previous implementation can be applied to check on the efficiency of suppliers CAS system. Moreover, vendor credentials depicts the fame of the CAS Provider in the market and how the committed the vendor is in quality of CAS, implementation and periodic maintenance [40].

Financing option

CAS application cost, Consulting and Maintenance/upgrade revenue expenditure and how to fund the CAS investment are the three major sub-criteria's in this dimension. To select an appropriate CAS provider, expenditure relating to implementation is always ranked high in the decision making process for SMEs desiring to automate their accounting function, together with after-sales service in case there occur unpredicted challenges after implementation, and the quality of employee's training regarding the use of the CAS package and cost of training should there be any upgrade of the software subsequently.. A research study conducted by [41] shows that the annual maintenance costs of ERP hooves around 25% of the initial ERP implementation costs, and upgrade costs as much as 25-33% of the initial ERP implementation. In relation to SMEs, it will look too expensive and so they might not be able to pay these huge revenue expenditures. As a result, this criterion is very important for any organization desiring to purchase CAS for implementation. In conclusion, financing option represents the whole capital and revenue expenditure and the options available to pay for it by an SME entity.

Maintenance overheads

Subsequent CAS repairs and maintenance service needs should be taken into accounts in the early stages of selecting the CAS supplier [42]. Maintenance aspect of CAS selection deals with After-sale service and the level training that will be given to SME staff as part of the implementation process including Real-time CAS reviews and online inquiry which must be seen to be operational on the part of the desiring CAS supplier. As part of the training and maintenance users should clearly understand the software's features and its capability how to use it to effect transaction using the double entry bookkeeping principles. If maintenance terms are not properly negotiated, may lead to mischance on the part of the SME entity if vendor display unwillingness to upgrade the CAS in subsequent years to comply with new regulatory requirements. SMEs business operations may be frozen by authorities if the CAS system displays non-compliance [43]. Obviously, this criterion shows the services renders by the CAS vendor supplier after the CAS system has been implemented.

Functionality

Actually no particular CAS application package can meet all the business entity's functionalities or business requirement needs [44]. Different reporting entities demand for diverse CAS system functions due to their unique business requirements which usually include inventory management, payroll, debtors ageing schedule, generation of statement of comprehensive income, statement of financial position, ratio analysis, budgets and variance analysis etc. [45, 46, 47, 48] is of the view that reporting entities are only running 50% of the functionalities embedded in their CAS packages they have implemented. This means that most companies are paying for functionalities they don't need but have been implemented and they are paying for it as maintenance fees periodically. According to Butler Group the functionality is not only about how many functions a CAS has but how efficient the functions of CAS system can provide to achieve the business processing needs of an entity.

Flexibility

This selection criterion simply means the easiness with which the CAS system users can work with desired software application in real time. The CAS system should not be too complex in design and development but have a user-friendly and well-managed interface. The CAS must be embedded capability to process and generate the needed report of the SME entity over its lifetime prior to its subsequent upgrade and maintenance, in order to meet the SMEs culture and business strategy, although some business strategies are reviewed as the needs comes out in the ordinary course doing business. Ease of use is, possibly, more significant for SMEs, as they normally do not have sufficient in-house IT personnel to support them use complex application [49]. As such, the flexibility nature of CAS represents the level of ease of use and how well the system can work along with the business over its life expectancy.

Customization Capabilities

The most essential determinants of CAS that should be factored in choosing appropriate CAS application is its capability to be customized to satisfy an entity's particular business processing requirements. Most of the current CAS packages enable the end user of these packages to modify them with ease. According to [50] customization abilities of CAS application are typical concerns to SMEs desiring the selection and implementation of any software. However, some off-the-shelf applications are supplied with little or no prospect for customization to support a reporting entity's needs, but other CAS vendors do offer support with the end users to modify the software applications to meet their entity's business processing requirement needs. It is argued that the greater the chance for customization the higher the capital and revenue payment burden to the SME in terms of the CAS software. [39] put in a strong argument that the most optimal question an SME manager, accountants or whoever is in charge of business processing needs to decide before desiring a CAS application is whether it could be tailor-made, and if it could, whether the bespoken will meet the user needs. The expected main customization levels are: company set up customisation, VAT and other taxes customisation, financial statement customization from say twelve months to six months, forms-level customization, screen-level customization, blank user definable fields, default settings, database-level customization, third party integration customization, help-level customization and systems administration customisation.

Implementation

A CAS application which is installed implemented across an entity must be seen to be effecting changes across the length and breadth of the company business processes [51]. As part of the implementation process, the CAS must demonstrate enough customization and ease of integration onto the SMEs existing computerised system which are rather crucial when installation CAS application system in any reporting entity. Organizations business processing needs demands different CAS in capacity, the CAS must have the ability to be customised to suite the business processing needs of the individual SME organisation. Thus, the CAS modules should be easily integrated and support faultless flow of data among the other modules to increase the operational efficiency of the CAS application transparently [52]. Furthermore, the CAS should be available to exchange data with SME's the current application system if any. SMEs do not enough budget resources pump in extra money into a CAS that has long implementation times and any difficulties associated that may arise out of it as such CAS must have shorter implementation and delivery times [53-54]. Implementation describes how the new CAS system can be bespoken and integrated with SMEs current system as well as the time spent during the course of the implementation, including customization capabilities in harmony with SMEs strategic objectives.

The Delphi Technique

Dalkey et al (1950) at the Rand Corporation firstly came out with the concept of the Delphi technique which was named after an ancient Greek sanctuary where an oracle was assumed to be located. This process requires that knowledgeable and expert in a specialist field of enquiry be contacted independently for their contributions individually by responding to questions in their specific field and submitting the outcome to an assigned central coordinator who is also a specialist in that field on examination. The coordinator then processes input collected from specialist. The coordinator mainly looks for extreme tendencies and their rationales from these contributors. The results are then returned to the respondents. The respondents are then again requested to resubmit their views, assisted by the inputs given by the coordinator as may be a review of the original as a result of the outcome derived from that questionnaire survey. The process continues in anticipation that the coordinator will note that a consensus has agreed after processing. The aim of this technique is to remove the bias that emerges when group of experts meet for a consensus building on certain issues. The Delphi technique demands that the solicited experts do not have to know each other during the investigation [55].

[56], posits that one clear time of application of the Delphi technique is when the subject under examination does not does not have a formal analytical method – subjective in nature, but can benefits the study on a collective basis from the experts. [55] provide a critique of the Delphi application in nursing, and concluded that "It is obvious from examining the benefits and criticisms of the Delphi technique that the argument**s** are no stronger or no more valid on one side than the other. It was rather recommended that the technique be evaluated against the proposed study to determine the benefits which can be accrued by applying this method as against the other for the study. [57], characterize the classical Delphi method by four key features:

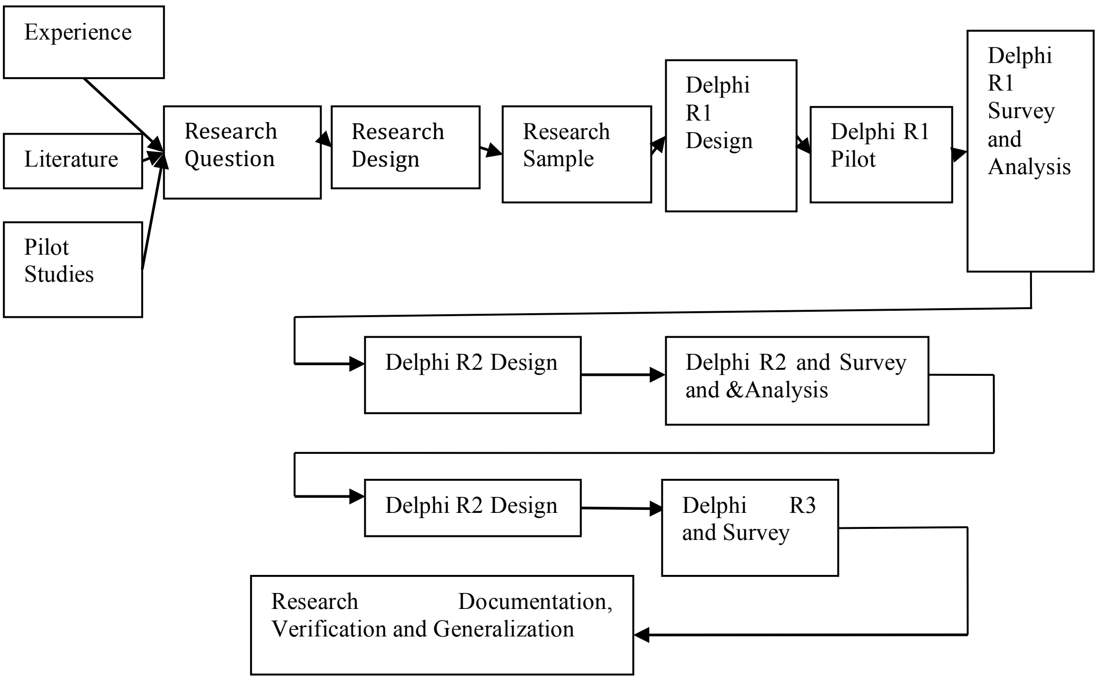
1. Secrecy of Delphi participants: this demand allows the expert participants to freely express their opinions without undue influence to kowtow from others in the group. Decisions must be evaluated on their worth instead of who proposed the thought.
2. Iteration: this method also allows the participants to re-examine their viewpoints in light of the advancement of the group's work from stage to stage.
3. Controlled feedback: It also requires that participants be informed of the views of other participant's, to provide the chance for other Delphi participants to make clear or re-evaluate their views if possible.
4. Aggregation of statistical group response: this process allows for a quantitative analysis and interpretation of data.

[57], further point forward a suggestion that it is only when the issue under study has the four attributes that it should be classified as Delphi technique. However, others [58- 60] argue that the technique can be modified to meet the needs of the given issue under study. They put forward that a distinction be made by using the term Classical Delphi to describe a type of approach that adheres to the attributes of the original Delphi as summarized by [57].

Typical Delphi Process

The Delphi process has been comprehensively reviewed elsewhere [59-61], and so this research proposal present only a brief overview of how the project will apply Delphi in reaching consensus regarding the sub-features of the independent variables in the framework for selecting an appropriate CAS application.

Figure 3 Three Round Delphi Process



RESEARCH METHODOLOGY

The research study was undertaken using some reporting entities in the Auto Spare Parts distribution industry of Ghana, Shopping Mall Operators, Haulage Distribution Companies, Construction Hardware equipments wholesaling and retailing companies, Abattoir services Poultry farming and Restaurant and Hotel businesses **(See Table 2)** especially those in Kumasi in the Ashanti Region and the Greater Accra Region of Ghana who are all members of th Ghana Association of Small Businesses (GASB, 2015)[62]. Most of these SMEs are clients to our accounting firms so it was easy to get their accountants and bookkeepers together for the research study. The aim was to understand how these randomly selected SMEs choose their CAS packages for implementation as most of them have implemented different brands of CAS packages with different challenges in usage. The Institute of Chartered Accountant of Ghana (ICAG, 2015)[63], The Institute of Internal Auditors of Ghana (IIAG, 2015),[64] Price Waterhouse Coopers (PWCG, 2015)[65] in Ghana, some selected CAS vendors and other local chartered accounting firms operating mainly in Ghana had their respective representations. Even though employee accountants and internal auditor and other stakeholders from the Ghana Association of Rural Banks (APEX, 2015)[66] and Ghana Association of Microfinance Institutions (GAMFI, 2015)[67] were not invited they willingly opted to be part of this critical survey to offer some inputs. We were made to be aware that they have and currently being confronted with challenges relating to their already installed ERP (T24) package failures as such deemed themselves as also a experience stakeholders in this research study to offer practical inputs. The overwhelmed patronage clearly showed the importance these entities attached to the selection and implementation of CAS packages in developing countries such as Ghana. Table 2 shows patronised business entities who willingly gave us the authority to add their names as part of the research to find a model solution to CAS selection and implementation.

Table 2 Contacted SME Organizations for the Research

Organizations	Operating type	Ownership
Collins Auto Spare Parts Company Limited	Auto Parts Imports	Private
Poku Trading Company Limited	A shopping Mall	Private
Hippo Ghana Limited	Haulage and Distribution	Private
Agya Owusu Company Limited	Distributor of Building Hardware	Private
Kagyee Meat Distribution Limited	Abattoir Services	Private
Darko Farms Company Limited	Poultry Farming	Private
Lizzy Catering and Hotels Limited	Restaurant and Budget Hotel	Private
Cambridge International School	Education	Private

The methodology adopted was to segregate member participants into their respective area of specialization both in academia and in practice. They were made to be in ten respective rooms for to respond to questions on major dimensions and sub-features of CAS packages that may influence their decisions to select accounting software for implementation. The questions were selected from within the model we have developed which was deemed subjective in nature for selection. After lengthy inputs from these skilful and experienced specialist participants we the coordinators realised there were some inconsistencies from some member participants and so way for the adoption of the Delphi techniques to refined the questions to member participants in their respective rooms for resubmission. This took us to the second round of certain sub-features of CAS that may influence their decision to select it for implementation. This time round we gave them specific accounting software which is competing in the software market. We made some specialist participants be aware of the stance of majority of other members in other for them to review their opinion subjectively to reach a general consensus on the major dimensions and sub-features of CAS for potential selection and implementation. The coordination was effective so consensus was reached on round two To ensure speedy consensus building to proof the variables in the model a Likert scale question was chosen to formulate the questionnaire to collect the primary data capturing all the independent variables and sub-features that were identified**.** The Delphi technique sets the following which our member participants all met:

i) knowledge and experience with the issues under investigation;
ii) capacity and willingness to participate;
iii) sufficient time to participate in the Delphi; and
iv) Effective communication skills.

Participants were seen as heterogeneous in nature. The total groupings were ten which we believed would yield sufficient results. There were different modes of Delphi interactions available to us the researchers. Initially, the Delphi survey was pen and paper-based and returned through an assigned messenger who supports the moderator. The number of rounds again was seen to be variable and dependent upon the purpose of our research which in this research study was two rounds as there were some contradictions in response in round one which caused us to review the questionnaires for their subjective inputs. The meeting also sought to understand if there is an existing selection methodology which has been employed before in choosing the best CAS package for implementation in their respective entities.

Dimensions of Selecting Appropriate Accounting Software: A Proposed Model

Upon reaching consensus of the theoretical examination in the research study, it was agreed amongst participants that selecting the most appropriate CAS for business organization would be a function in the following variables: Vendor Credentials (VC), Debt Financing (DF), Maintenance Overhead (MO), CAS Functionality (CF^1), CAS Flexibility (CF^2), CAS Customisation (CC), and CAS Implementation (CI) **(See figure 1).**However, the real shape of the function could not be determined without using real empirical data. So, the questionnaire designed were distributed to participants with a list of accounting software packages available in the market that are expected to satisfy their organization's business processing needs. This technical committee studied the main features and attributes of each CAS application taking into consideration the independent variables above. The technical committee members were instructed to exclude CAS which does not have some of the main and important features. Finally, the committee prepared a short list of the strongly recommended accounting software for selection and implementation.

The Proposed mathematical Model for Arriving at CAS Selection Decision

The selecting committee moderator to member participants the estimated maximum points that should be assigned to each of the selected sub-features in the proposed model according to its relative importance or materiality for an organization by filling in the required data of the respective column in the suggested evaluation statement of accounting software. To ensure consistency in their evaluation of the independent variables and the sub-features, The Delphi technique was employed to reach a reasonable and acceptable level of consensus in their assessment regarding the relative significance of each variable dimension and its components. With the application of the Delphi's technique the aggregate number of assigned points for each independent variable identified in selecting the best CAS by all evaluation committee members were calculated, then the average point assigned for each CAS was also calculated (total number of points assigned for a specific CAS by all the committee members divided by the total number of the evaluation committee members). The committee then selected the accounting software that obtained the highest average of points that were calculated in the previous step which achieve the best matching which was assumed to have fulfilled the organization's financial business processing requirements needs.

Next, the average number of points for each dimensional item and its inherent components were calculated by dividing the total number of points assigned for that dimensional item by all committee members divided by the total number of the committee members. The maximum points assigned for the selecting dimension in the proposed evaluation statement were used as a yardstick for evaluating the competitive accounting software. However, significant variations emerged among the committee members concerning their evaluation of the materiality of the dimensional items which, accordingly, affected the maximum points assigned to each sub-features within the variable item. The moderator then redesigned the questionnaire and re-submitted it to each member (round two) to fill. This process led to a reasonable consensus with regards to the points ultimate points assigned to each independent variable.

For the purpose of this research it is convenient to assume the existence of a multi-linear relationship between selecting appropriate accounting software (Y) and the independent variables in figure1 which is formulated in equation (1) below.

$$Y = \frac{1}{n}\sum_{i=1}^{n}\sum_{k=1}^{m} Di\ k \quad \text{(General equation of the proposed model)} \qquad (1)$$

Where:

Y = Average number of points assigned to desired accounting software in the market;
i = Index of the evaluation participant members from 1 to n;
n = Total number of evaluation participants members;
k = Index of variables that goes into the selection of optimal CAS from 1 to m;
m = Total number of selected Items in the variables; and
D = Total number of points assigned Items in CAS application selection.
we subtituted our dimensional views basic functionality of selecting an appropriate CAS package into above equation, which depicts the model equation for selecting an optimal CAS as follows:

$$OPCS = \frac{1}{n}\sum_{i=1}^{n}(VC + DF + MO + CF1 + CF2 + CC + CI) \quad (2)$$

Where:
OPCS = Average number of points assigned to desired accounting software in the market;
i = Index of the evaluation participant members from 1 to n;
n = Total number of evaluation participants members;
VC = Total number of points assigned to the Vendor Credentials of CAS packages;
DF = Total number of points assigned to Debt Financing aspect of CAS selection and Implementation;
MO = Total number of points assigned to subsequent maintenance aspect of CAS selected;
CF^1 = Total number of points assigned to CAS Functionality;
CF^2 = Total number of points assigned to CAS Flexibility;
CC = Total number of points assigned to CAS Customization;
CI = Total number of points assigned to CAS Implementation;

The assumption is that the main characteristics of the selected CAS should have gone through the above variable scrutiny (VC, DF, MO, CF^1, CF^2, CC, and CI).Further, the selected accounting software should be competitive and compatible with the existing information systems and integrated with other programs in place.

Vendor Credentials

To determine the optimum points for Vendor credentials the following three attributes were concluded: Vendor's reputation VR, market share (MS) and the demonstration of previous implementation (DPI). This is depicted in the following mathematical modelling:

$$VC = \sum_{i=1}^{n}(VR + MS + DPI) \quad (3)$$

Where:
VC = Average number of points assigned to Vendor credentials in the software in the market;
i = Index of the evaluation participant members from 1 to n;
n = Total number of evaluation participants members;
VR = Total number of points assigned to the Vendor Reputation in the software market;
MS = Total number of points assigned to Market Share aspect of the CAS supplier in the software market
DPI = Total number of points assigned to Demonstration of Previous Implementation of CAS by the vendor;

Debt Financing

With regards to the maximum points for Debt Financing the following three attributes were concluded: CAS application cost (CAC), Consulting and Maintenance/upgrade cost (CM), and how to pay for the CAS investment (CI) to the vendor supplier if the SME desires a hire purchase. To derive the maximum points allocated to the Debt Finance the following mathematical function was derived:

$$DF = \sum_{i=1}^{n} (CAC + CM + CI) \tag{4}$$

Where:
DF = Average number of points assigned to Debt Finance in the software in the market;
i = Index of the evaluation participant members from 1 to n;
n = Total number of evaluation participants members;
CAC = Total number of points assigned to the Software Cost in the software market;
CM = Total number of points assigned to Consulting, Maintenance and upgrade aspect of the CAS supplier in the software market
CI = Total number of points assigned to payment options provided by the CAS vendor;

Maintenance Overheads

The maintenance overheads concern itself with After-sale service (AFSS), hands-on training (HOT) as well as the instantaneous change and online inquiry (OLI). To determine the optimum points assigned to maintenance overheads the sub-features derived above were used to model the following equation:

$$MO = \sum_{i=1}^{n} (AFSS + HOT + OLI) \tag{5}$$

Where:
MO = Average number of points assigned to Maintenance Overheads provided by the CAS vendor in the software in the market;
i = Index of the evaluation participant members from 1 to n;
n = Total number of evaluation participants members;
AFSS= Total number of points assigned to the After Sales Services by the CAS vendor supplier;
HOT = Total number of points assigned to Hands-on Training provided by the CAS supplier in the software market;
OLI = Total number of points assigned to Online Enquiry services provided by the CAS vendor;

Functionality

Different businesses do request for diverse CAS system functions due to their distinctive business set up and processing requirements needs, which normally include: Statement of Comprehensive Income (SI), Statement of Financial Position (SFP), Tax Returns (TX), Payroll Preparation (PP), Bank Reconciliation Statement (BRS), Cash Bookkeeping (CBK), Accounts Receivable Ledger and Payable Ledger (ARPL) Expenses Accounts (EXP) and Inventory Management (IM). These sub-features of functionalities were used to derive the maximum points obtained from functionality variable which is depicted below:

$$\mathrm{CF} = \sum_{i=1}^{n} (SI + SFP + TX + PP + BRS + CBK + ARPL + EX + IM) \tag{6}$$

Where:
CF^1= Average number of points assigned to desired accounting software function in the market;
i= Index of the evaluation participant members from 1 to n;
n= Total number of evaluation participants members;
SI= Total number of points assigned to the ability of the CAS to process and generate statement of Comprehensive Income;
SEP= Total number of points assigned to the ability of the CAS to process and generate Statement of Financial Position;

TX= Total number of points assigned to the ability of the CAS to process and generate varied tax returns such as VAT, PAYE, SNNIT, NHIS etc;
PP= Total number of points assigned to the Payroll Functionality of the CAS;
BRS= Total number of points assigned to the ability of the CAS to process and generate periodic Bank Reconciliation Statement;
CBK= Total number of points assigned to the keeping of Cash Book of the SME entity by the software application;
ARPL= Total number of points assigned to the ability of the CAS to process and generate Accounts Receivable and Payables controls accounts and their respective ledgers to determine ageing debtors and creditors respectively;
EX= Total number of points assigned to the keeping of all expenditures (both capital and revenue) of the SME entity and also generate a summary total to reflect in the trial balance and subsequent financial statements by the CAS application;
IM= Total number of points assigned to the keeping of all individual inventories in SMEs stores and the ability to generate a closing inventory and cost of sales by the CAS application;

Flexibility

In terms flexibility (CF^2) it was concluded that the CAS should have the following sub-features: Easy to use (EU); not be too complex in design (NCD), well-managed user interface (WMUI), capability to support the needs of the business over its lifetime (CSNB). This is reflected in the following mathematical model equation:

$$\mathrm{CF} = \sum_{i=1}^{n}(EU + NCD + WMUI + CSNB) \qquad (7)$$

Where:
CF^2 = Average number of points assigned to Flexibility embedded in the desired CAS packager in the software in the market;
i = Index of the evaluation participant members from 1 to n;
n = Total number of evaluation participants members;
EU= Total number of points assigned to Ease of use of the CAS package;
NCD = Total number of points assigned to “not be too complex in design” of the desired CAS package;
CNSB = Total number of points assigned to capability to support the needs of the business over its lifetime of the CAS.

Implementation

Accounting software implemented across an organization should be able to affect almost all of the business processes of that reporting entity. The following sub-features were considered essential in allocating maximum points to Implementation: Customization and Ease of integration (CEI), be able to Exchange data with the current application (EDCA), the time it takes during the implementation process (TIME), the CAS customization strengths to uniquely meet SMEs strategic business goals. The sub-features identified above, we believe would enable maximum allocation of points to Implementation as a variable in determining best CAS selection as shown below:

$$\mathrm{IM} = \sum_{i=1}^{n}(CEI + EDCA + TIME + CSNB) \qquad (8)$$

Where:
IM = Average number of points assigned to Implimentation of the desired CAS packager in the software in the market;
i = Index of the evaluation participant members from 1 to n;
n = Total number of evaluation participants members;

CEI= Total number of points assigned to Customization and Ease of use of the CAS package;
EDCA = Total number of points assigned to the ability of the installed CAS" to exchange data with any existing accounting software package for easy migration onto the new system
TIME= Total number of points assigned to the time it takes to implement the CAS package and the depth of training the CAS vendor will give to the SMEs
CNSB = Total amount of points allocated to customization strengths of CAS to uniquely meet SMEs strategic business goals.

THE PROCEDURES FOR IMPLEMENTING THE PROPOSED MODEL

The real practicable process for the implementation the proposed model for choosing an appropriate CAS package for any business entity could use the following approach:

1. A commission made up of all the functional heads of the entity should be formed to study and specify Vendor Reputation, Debt Financing, Maintenance Overhead, CAS Functionality, CAS Flexibility, CAS Customisation, CAS Implementation The heads of the accounting, internal audit, and computing departments should be represented in the committee's composition.
2. A market research should be embarked upon in the software to gather data and information the currently available CAS packages which competing among themselves with the inclusion of end users to see those CAS packages which can process data and information to meet the organisation's strategic objectives.
3. The commission as a result of (2) above should come out with CAS software packages in the software market that are without duress expected to meet the business entities financial processing requirements (Appendix 1).
4. The selection and implementation commission should be made to exclude CAS which does not have the main significant attributes. At the end of the day, the commission would need to prepare a list of the highly recommended CAS applications in the markets.
5. The commission should take into consideration of currently available information technology infrastructure in the reporting entity to enable compatibility of the desired CAS with the available personal computers (PCs)
6. Gathering data and information about the vender reputation, capital expenditure on CAS purchase, periodic maintenance overheads and other important factors are to be considered very essential and fundamental for the selection and implementation of the proposed model.
7. The selecting and implementation commission should come out with the maximum points that should be designated to each of the selecting dimensional and sub-features of the CAS in the proposed model according to its comparative preference and for the business organization by filling in the required data of the respective column in the proposed evaluation of the CAS software package (Appendix 1).
8. The average number of points for each dimensional feature and its embedded sub-features should be computed by dividing the total number of points assigned for that dimensional feature by all the commission's members divided by the total number of the commission's members.
9. The highest points assigned for the selecting dimension in the suggested evaluation form should then be used as a yardstick for evaluating the competitive CAS package
10. Each commission's member must be made to learn and appraise the independently proposed CAS package and assign a number of points to each dimension or feature and its sub-feature using the proposed evaluation form in Appendix 1, taking into account the maximum points allocated to each dimensional sub-feature. A different statement

should be made for each individual proposed CAS by each member of the evaluation commission.

11. If significant tendencies appear among the commission members as regards their evaluation of the materiality of the dimensions, then the maximum points allocated to each dimension should be used. Delphi technique should therefore be implemented in those circumstances to reach a reasonable and acceptable level of consensus in their evaluations as regards the relative significance of each dimension and its sub-features.
12. Consultants, professionals and academia could participate – if it need be - in the selection process and to offer suggestions if such expertise knowledgeable inputs are readily available internally within the entity.
13. The aggregate number of allotted points to each CAS by all evaluation commission members should be computed, after that the average points allocated to each CAS should be computed (aggregate number of points assigned for a specific CAS by all the committee members divided by the total number of the evaluation committee members)
14. The commission should choose the CAS application that obtains the highest average of points which have been computed in the previous step. It is likely that the selected CAS will achieve the best matching which will meet the financial data processing of the organisation in the short to the long term. In the nutshell, it is of high expectation that, the best satisfactory CAS would be selected based on the criteria and dimensions used in the suggested model.

LIMITATIONS OF THE PROPOSED MODEL

The proposed model is beneficial in assisting an SME who desires in choosing an optimal CAS packages among the many packages in the software market. However, the following limiting factors should be taken into account in applying the model:

1. That the proposed model is largely designed to assist a newly established business entity like an SME that is determined purchase and implement a CAS application for the first time, as well as business organisations wanting to migrate their financial processing's from manual to computerized accounting platform in choosing the most optimally appropriate CAS. It does not support those entities that have already implemented CAS packages unless entity is discarding the old software to buy a new one from scratch.. The suggested model does not involve the selection of CAS supplier for maintenance and upgrade to an existing CAS package already installed.
2. That the highest number of points allocated to each dimension of selecting CAS and its sub-features in the suggested evaluating statement (Appendix 1) have been computed using Delphi technique. Delphi technique was used by accountants, internal auditors, bookkeepers and some SME managers who have vested interest in the processing of financial statement in their respective business organisation It also included representation from the Institute of Chartered Accountants of Ghana (ICAG), The Institute of Internal Auditors of Ghana (IIAG), The Ghana Association of Small Business (GASM) and the Kumasi Technical University from Ghana. Therefore, the highest number of points assigned to each dimension in the proposed evaluation statement (Appendix 1) represents an input from academics, professionals and practitioners as regards the substance of the dimensions in selecting appropriate CAS in the suggested model.
3. That the proposed numbers should be applied with all the care in the world if the model is to achieve its intended purposes of assisting an entity select the best CAS for implementation. As a result, the highest points allocated to each dimension in the proposed statements should not be deemed as static and generally be regarded as standards for all types of business entities, because it is based on small size and

heterogeneous sample. Moreover, the substance of each dimension could be different from one organization to the other according to size, type, present and future processing requirement needs, IS/IT environments and infrastructure, Strategic direction and other factors as it is discussed in this paper.

4. This research study does to evaluating which accounting software in the market is the best for SMEs to select for implementation. The authors are of the firm believed that there is no specific CAS package which is deemed as best in the software market. "Appropriate" CAS package for an SME organisation may not be "appropriate" for another reporting entity. With this in mind it could be concluded that, there is no particular CAS package that may fit and please every entity's particular business processing needs, but as the model could be modified to include other dimensions can possibly enable reporting entities to select an appropriate CAS which suites their unique circumstances and needs among the many in the software market.

CONCLUSION

The continuous reduction in information systems and technology (IS/IT) infrastructure coupled with the rapid emergence of off- the -shelf CAS packages have enabled business entities of to computerised all their accounting processing's. Consequently, choosing and continuously depending on the optimally the best CAS package for business processing's have become crucially critical issue among reporting entities such as SMEs in developing countries these days. This research study brought into the fore an integrated framework of the major dimensions that should be taken into account in the selecting among the competitive CAS applications in the software market.

The research further went on to translate the framework into a proposed mathematical model which took into consideration the major dimensions and sub-features of choosing CAS application package for SME which may be useful also for any other reporting desiring to select and implement a CAS package of his/her choice. It also offered the pragmatic processes and procedures for implementing the mathematical model in simple terms for easy understanding. This suggested model would be of paramount support to new SMEs desiring to invest in CAS application for the first time, and also for business firms willing to migrate from manual process of keeping accounts to CAS platform. The model has been made simple and flexible to enable organisation fits in other sub-features and to easily derive the maximum points to be allocated to each dimension and its sub-components to enable it assist different organisations select the best CAS package which meets the unique business processing need. These will alleviate a situation where some reporting entities adapt and implement other entities CAS already implemented but which at the end of the day fails to meet requirements needs. It is highly suggested that a real-time test be made with live data to test the applicability, validity, and reliability of the model from the point of view of every entity before it is rolled out in practice.

APPENDIX 1

Variables in Selecting an Appropriate Computerised Accounting Software Package for Implementation

Name of Evaluation Member: ……………………………………………………
Name of Accounting Software: ……………………………………………………

1 Vendor Credentials

Vendor Credentials	Allocated Points	Maximum Points Gained
1) Total number of points assigned to the Vendor Reputation in the software market	250	
2) Total number of points assigned to Market Share aspect of the CAS supplier in the software market	200	
3) Total number of points assigned to Demonstration of Previous Implementation of CAS by the vendor	250	

2 Debt Financing

Debt Financing	Allocated Points	Maximum Points Gained
1) Total number of points assigned to the Software Cost in the software market	140	
2) Total number of points assigned to Consulting, Maintenance and upgrade aspect of the CAS supplier in the software market	140	
3) Total number of points assigned to payment options provided by the CAS vendor;	100	

3 Maintenance Overheads

Vendor Credentials	Allocated Points	Maximum Points Gained
1) Total number of points assigned to the Vendor Reputation in the software market		
2) Total number of points assigned to Market Share aspect of the CAS supplier in the software market	200	
3) Total number of points assigned to Demonstration of Previous Implementation of CAS by the vendor	250	

Maintenance Overheads	Allocated Points	Maximum Points Gained
1) Total number of points assigned to the After Sales Services by the CAS vendor supplier	120	
2) Total number of points assigned to Hands-on Training provided by the CAS supplier in the software market	120	
3) Total number of points assigned to Online Enquiry services provided by the CAS vendor	100	

Functionality

Functionality	Allocated Points	Maximum Points Gained
1) Total number of points assigned to the ability of the CAS to process and generate statement of Comprehensive Income	150	
2) Total number of points assigned to the ability of the CAS to process and generate Statement of Financial Position	120	
3) Total number of points assigned to the ability of the CAS to process and generate varied tax returns such as VAT, PAYE, SNNIT, NHIS	150	
4) Total number of points assigned to the Payroll Functionality of the CAS	150	
5) Total number of points assigned to the ability of the CAS to process and generate periodic Bank Reconciliation Statement	100	
6) Total number of points assigned to the keeping of Cash Book of the SME entity by the software application	100	
7) Total number of points assigned to the ability of the CAS to process and generate Accounts Receivable and Payables controls accounts and their respective ledgers to determine ageing debtors and creditors respectively	150	
8) Total number of points assigned to the keeping of all expenditures (both capital and revenue) of the SME entity and also generate a summary total to reflect in the trial balance and subsequent financial statements by the CAS application	100	
9) Total number of points assigned to the keeping of all individual inventories in SMEs stores and the ability to generate a closing inventory and cost of sales by the CAS application	130	

Flexibility

Flexibility	Allocated Points	Maximum Points Gained
1) Total number of points assigned to Ease of use of the CAS package	150	
2) Total number of points assigned to “not be too complex in design” of the desired CAS package	120	
3) Total number of points assigned to capability to support the needs of the business over its lifetime of the CAS	150	

Implementation

Implementation	Allocated Points	Maximum Points Gained
1) Total number of points assigned to Customization and Ease of use of the CAS package	150	
2) Total number of points assigned to the ability of the installed CAS" to exchange data with any existing accounting software package for easy migration onto the new system	120	
3) Total number of points assigned to the time it takes to implement the CAS package and the depth of training the CAS vendor will give to the SMEs	150	
4) Total amount of points allocated to customization Capabilities of CAS to uniquely meet SMEs strategic business goals	100	

References

Hildreth, S., 2004. Big-time ERP in a small-business box. [Online] (Updated 22 July 2004). Available at:http://searchciomidmarket.techtarget.com/news/article/0,289142,sid183_gci995065,00.html. [Accessed: 22 March 2017]

Muscatello, R.J. Small, H.M. & Chen, J.I., 2003. "Implementing enterprise resource planning (ERP) systems in small and midsize manufacturing firms". Emerald Group Publishing Limited, Ebsco, Vol. 23, Issue. 8, pp. 850-872.

Umble, E. Haft, R. & Umble, M., 2003. Enterprise Resource Planning: Implementation Procedures and Critical Success Factors. European Journal of Operational Research, Vol. 146, No. 2, pp. 241 - 257.

Liu, T., 2009. Talking about the ERP of SMEs (谈论中小型企业ERP), [Online] (Updated 4 December 2009). Available at: http://www.accesscn.com/offspace/html/70/n-170.html. [Accessed: 22 April 2017]

Michael.B, Dainese.F (2015)"The Status of Computerized Accounting Software in Small American Businesses" Miami University (Ohio)

Venkateswarlu P. , "Implementing Accounting Software In Small Businesses In New Zealand: An Exploratory Investigation" Accountancy Business and the Public Interest, Vol. 9, 2010 (J)

Richmell B.A., Alfred M., Kwaku A., "Computerized Accounting Systems Usage by Small and Medium Scale Enterprises in Kumasi Metropolis, Ghana" Research Journal of Finance and Accounting www.iiste.org ISSN 2222-1697 (Paper) ISSN 2222-2847 Vol.7, No.16, 2016 (J)

Oladipupo.M., Tijani. A., Kayode.M., "Computer-Based Accounting Systems in Small and Medium Enterprises: Empirical Evidence from a Randomized Trial in Nigeria" Universal Journal of Management 1(1): 13-21, 2013 http://www.hrpub.org DOI: 10.13189/ujm.2013.010103 (J)

Ahmad A. A-Ma., "The Determinates Of Selecting Accounting Software: A Proposed Model" The Review of Business Information Systems – Summer 2005 Volume 9, Number 3(Email: abumusa@kfupm.edu.sa), King Fahd University of Petroleum & Minerals, Saudi Arabia

Patrice et al, (2003) "European Union,. Commission Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises". Official Journal of the European Union, pp.36–41 2003 (J)

Saleh. A.S (2011) "A Study On The Use Of Computerised Accountinting Systems In Small Business: A Case Of Small Business In Libya"

Hall, J., Accounting Information Systems, South-Western Centage Learning, U.S., 2011

Waburoko, E. S. *Introduction to Information Technology.* 2nd Edition ed. s.l.:I.A.C.E, Makerere University. 2001, (B)

Wood, F. & Sangster, A. Business Accounting. Illustrated ed. s.l.:Financial Times/Prentice Hall, 2005. (Bulleting)

Matzler, K., Waiguny, M. & Füller, J. "Spoiled For Choice: Consumer Confusion In Internet-Based Mass Customization," Innovative Marketing, 3:3, 2007, pp.719.(J)

Donald K. Hsu (2007) "Case Studies in Financial Accounting Software" E-Leader Prague, 2007 Division of Business Administration Dominican College Orangeburg, NY USA don.hsu@dc.edu

Ayyagari, M., Beck, T. & Demirguc-Kunt, A., 2007. Small and medium enterprises across the globe. Small Business

Economics, 29(4), pp.415–434

Ghana Statistical Service (GSS) 2010 Population and Housing Census: Summary Report of Final Results, s.l.: http//:www.statsghana.gov/docfiles/2010phc/December 23, 2012 [Online]

Richard. H (2016) " Is small business really the engine room of Australia's economy?" UNSW Australia provides funding as a member of The Conversation SMB World, (2017), "HK's small-sized firms offer higher average pay rise than biggercompanies"https://www.enterpriseinnovation.net/article/hks-small-sized-firms-offer-higher-average-pay-rise-bigger compani[es-205421692

Tenby.P 2016 Small and Medium Businesses in New Zealand Report of the Small Business Development Group P ISBN: 978-0-947497-78-1

Catherine. L (2008) Legislative Council Panel on Commerce and Industry Small and Medium Enterprise (SME) Funding Schemes" LC Paper No. CB(1)1849/06-07(03)

Mathew. W, Chris. R (2014) "Small businesses and the UK economy" Section Economic Policy and Statistics Standard Note: SN/EP/6078

Shara L.A, Daniel R.P, Deanna.T.O, Charlotte R.L, Irving A.W, Dean A.P (2010)."Small and MediumSized Enterprises: Overview of Participation in U.S. ExportsInvestigation No. 332-508 USITC Publication 4125 Washington, DC 20436 www.usitc.gov

Mahdi.S,Vahab.R, Abdolkarim.M (2010)"Usefulness of Accounting Information System in Emerging Economy: Empirical Evidence of Iran" International Journal of Economics and Finance Vol. 2, No. 2;

Wilkinson, J. W. (1993). Accounting Information Systems: Essential Concepts and Applications. Second Edition. New York: John Wiley & Sons Inc.

Bhatt, G. D. (2001). Knowledge management in organizations: examining the interaction between technologies, techniques, and people. Journal of Knowledge Management, 5(1), 68-75. http://dx.doi.org/10.1108/13673270110384419

Thomas, V., & Kleiner, B. H. (1995). New developments in computer software. Industrial Management & Data Systems, 95(6), 22-26. http://dx.doi.org/10.1108/02635579510091296

Langfield-Smith, K. (1997). Management Control Systems and Strategy: A critical Review. Accounting, Organizations and Society, 22(2), 207-232. http://dx.doi.org/10.1016/S0361-3682(95)00040-2

Ben. S (2015) "The Accounting Journal: the Univac changes everything" www.myob.com/nz/blog/the-accounting-journal-the-univac-changes-everything/ [Accessed 13/10/2017]

Honig.l (1999)"Literature Review of Accounting Software/ Packages in Australia"Read more at: https://bigassignments.com/samples/literature-essay-of-accounting-software-packages-in-australia [accessed 13/10/2017]

Medalia A, Revheim N, Herlands T. (2009) Selecting Appropriate Software. Cognitive Remediation for Psychological Disorders: 43–60

Alanbay, O., (2005). ERP Selection: Using Expert Choice Software. Honolulu, Hawaii, July 8-10.

Celeste, S.P.N. Gable, G. & Chan, T., 2003.An ERP Maintenance Model. hicss, vol. 8, pp.234b, 36th Annual Hawaii International Conference on System Sciences (HICSS'03) - Track 8, 2003

Gross, J., 2010. ERP Maintenance: Consider During ERP Planning Phase. [Online] (Updated 2 April 2010). Available at: http://it.toolbox.com/blogs/junction/erpmaintenance-consider-during-erp-planning-phase-36772, [Accessed: 29 April 2017]

Kimberling, E., 2006. Do Small Businesses Need ERP?, In Search of Business Value and ROI: Achieving IT Benefits Realization. [Online] (Updated 29 June 2006). Available at: http://it.toolbox.com/blogs/erp-roi/do-small-businesses-need-erp10215. [Accessed: 22 March 2017]

Ehie, I.C. & Madsen, M., 2005. Identifying critical issues in enterprise resource planning (ERP) implementation, Computers in Industry 56 (6) pp. 545–557

Avraham S., 2002. Enterprise. Resource Planning (ERP): The Dynamics of Operations Management, Kluwer Academic Publishers.

Klaus, H. Rosemann, M. & Gable, G.G., 2000.What is ERP?. Information Systems Frontiers 2:2 pp. 141-162

Turbide, D., 1999. What is ERP?, Foundry Management and Technology, Vol. 127 Issue: 8 pp. 94-98

Cliff, S., 2006. Businesses 'only using 50% of ERP functionality, Computer Weekly; 3/14/2006, pp. 4-4.

Chaudhary, R., 2007. Vendor Credentials Influence Customer Decisions. [Online] (Updated 21 September 2007). http://biztech2.in.com/india/interviews/erp/vendor-credentials-influencecustomer-decisions/6811/0. [Accessed: 14 April 2017]

Fisher, Dorothy M.; Steven A. Fisher; "For rent: Are you considering an ASP for your accounting functions?", The National Public Accountant; Washington; Vol. 46, Issue 6, Aug 2001, PP. 16-18

Collins J. Carlton, "Customizing Accounting Software", http://www.AccountingSoftware advisor.com/topics/customization.htm [accessed 05/07/2016]

Malhotra, R. & Temponi, C. (2010), Critical decisions for ERP integration: Small business issues, Elsevier, International Journal of Information Management, Vol. 30, Issue 1, pp. 28-37

Loh, T.C. & Koh, S.C.L., 2004. Critical elements for a successful enterprise resource planning implementation in small and medium sized enterprises. International Journal of Production Research, 42(17), pp. 3433–3455

Cragg, P.B. & Zinatelli, N., 1995. The evolution of information systems in small firms. Information and Management, 29(3). pp 1–8.

Nah, F.F-H., & Lau, J.L.S., 2001. Critical factors for successful implementation of enterprise systems. Business Process Management Journal, 7(3), pp. 285–296.

Brungs, A. & Jamieson, R. (2005). Identification of legal issues for computer forensics. Information Systems Management, 22(2), 57 - 66.

Sinead.K, Felicity.H, Hugh P.M (2001) A critical review of the Delphi technique as a research methodology for nursing"International Journal of Nursing Studies 38 (2001) 195±200) 0020-7489/01/$ - see front matter 7 2001 Elsevier Science Ltd. PII: S0020-7489(00)00044-4

Rowe, G. and Wright, G., 1999. The Delphi technique as a forecasting tool: issues and analysis. International Journal of Forecasting, 15(4), pp. 353–375.

Chang, S.-I., Yen, D. C., Ng, C. S.-P. and Chang, W.-T., 2012. An analysis of IT/IS outsourcing provider selection for small- and medium-sized enterprises in Taiwan. Information & Management, [e-journal] 49(5), pp. 199–209. http://dx.doi.org/10.1016/j.im.2012.03.00

Delbecq, A., van de Ven, A. and Gustafson, D., 1975. Group techniques for program planning. A guide to nominal group and Delphi processes. Glenview, Ill.: Scott Foresman and Co.

Linstone, H. A. and Turoff, M., 1975. The Delphi method. Techniques and applications. Reading, Mass.: Addison-Wesley Pub. Co., Advanced Book Program.

Ghana Association of Small Business (GASB), (2015) member participant in the selection of accounting software for implementation in Ghana,

Institute of Chartered Accountants of Ghana (ICAG) (2015) member participant in the selection of accounting software for implementation in Ghana,

Institute of Internal Auditors (IIAG), (2015) member participant in the selection of accounting software for implementation in Ghana,

Association of Rural Banks (APEX), (2015) member participant in the selection of accounting software for implementation in Ghana,

Ghana Association of Microfinance Institutions (GAMFI), (2015), member participant in the selection of accounting software for implementation in Ghana

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.3960.
Astuti, H. K., Widari, N. S., Pelitawati, D., & Gamal, A. (2017). The College Management Performance is Reviewed from the Perspective of Customers and Financial Perspective (A Case Study On University WR Supratman Surabaya). *Archives of Business Research, 5(12),* 180-190.

The College Management Performance is Reviewed from the Perspective of Customers and Financial Perspective (A Case Study On University WR Supratman Surabaya)

Dra. Ec. Hartati Kanty Astuti TD, MM
University of WR. Supratman Surabaya, INDONESIA

Ir. R. Nyoman Sri Widari, MM
University of WR. Supratman Surabaya, INDONESIA

Diah Pelitawati, SE, M.Si, Ak
University of WR. Supratman Surabaya, INDONESIA

Ir. Ahmad Gamal, SE, MM
University of WR. Supratman Surabaya, INDONESIA

ABSTRACT

One important factor that is used to assess the success of private college is performance. Private colleges continue their efforts to prepare and fine-tune their business strategies in order to survive in the world of education and even become a winner in the competition. Measurement of performance becomes a very important thing. Balanced Scorecard has goal and measurement that is not only a combination of financial and non-financial measurement, but is the result of a top-down process based on the mission and strategy of a private college. The purpose of this study is to determine the effect of Balanced Scorecard model toward performance of future private colleges. The independent variable in this study is the Balanced Scorecard that consists of customer perspective (X_1) and financial perspective (X_2) while the dependent variable is the performance of the private college (Y). The sample in this study is 100 people covering over half of the students who are active students at the University of WR Supratman Surabaya. Method of data processing is using multiple linear regression with SPSS. The result of Discussion can be concluded that (1)The perspective of customers positive effect on the College Management performance, because value t calculate the customer's Perspective amounted to 2.345 greater than t table (0.659), (2) Financial Perspective significant effect on the College Management performance, because value t calculate the financial perspective of 3.561 greater than t table (0.659) and (3) The Financial Perspective is the dominant influence on the variable the College Management performance because it has a coefficient of determination of partial of 0.116).

Keyword: perspective of customers, financial perspective, and college management performance

INTRODUCTION

College management is always put forward existence of convenience and affordable tuition as well as maintaining the quality of our graduates become the choice of people who want to lecture. The expectation is the expectation from the perspective of customers or students, with a variety of characters and the promotion of the mengiurkan make the community interested and eventually became a student at the University.

But often the College using promotions that sometimes exceed the ekspetasi causing the public can fall so that after a student was disappointed and eventually in the long term the College his credibility is down so clearly very detrimental to the management of the College. College success indicators can be measured by the number of students. The greater number of students the College indicated that performance management College and otherwise getting the amount of students that lecture a bit indicates the lower performance management.

Then it is reasonable when the College management and strive to always pull the number of the students as much as possible to lecture in various ways. Hope the community can certainly be a bona fide University College, the cost is affordable and graduates easily find work. At least the last hope is a dream that must be realized.

Lectures in private university generally almost the same as in university the country started courses, lecturer and facilities as well as the building of College. A growing campus has the accreditation of A then it is generally about the same country. This means that the community is confronted with a variety of options for college so that the public should know which promise true campus and the campus which only sell promises.

Based on the above background, the outline of the problem in this research is "what is the perspective of customers and financial perspective effect on performance management colleges in Surabaya. Whereas the aim of this research is to know and discuss how the perspective of customers and financial perspective can serve as a model of performance measurement.

LITERATURE REVIEW

Balanced Scorecard

Yuwono, Sukarno and Ichsan (2006: 8), "Balanced Scorecard is a system of management, measurement, and control that are quickly, accurately, and comprehensively give insight to managers about business performance". The Balanced Scorecard rapidly developed in recognition of its potential and emerged as a new strategic management system (Butler et al, 1997 in Abdalkrim, 2014). Binden, Mziu, and Suhaimi (2014) The Balanced Scorecard is used as a measurement tool in order to measure an organization's performance in both public and private sectors to achieve the key business strategies and objectives. Rigby (2011) in Elola, Tejedor, Pastor Tejedor (2016) The balanced Scorecard is an advanced model of strategic orientation of organizations and it is also use 54 per cent of the 1,230 global firms.

One of the main goals of balanced scorecard is to create a participation and communication of the vision and strategic objectives of a company. If the concept is not applied as it should be, then the people in the organization will probably have a wrong perception that the balanced scorecard is a controller for themselves, not for company that is attempting to make progress to achieve the goals that have been set.

Many executives look balanced scorecard as an initiative to improve the performance measurement system not as something that is made to make fundamental changes in the way the company manages its business. So many managers are interested only in the conceptual appeal of the balanced scorecard, whereas conceptual appeal is not an enough reason to start this program. When construction is begun, every senior executive must identify and agree on the main objectives of the project implementation. Objectives set out in the implementation of balanced scorecard will help to:

a. Provide guidance in determining objectives and measurement of scorecard.
b. Get commitments from project participants.

c. Clarify the framework for the implementation and management process that must be carried out after the initial scorecard formulation.

The College Management performance

David (2010:5) in Purwoko, Gamal and Kunhadi (2016), strategic management could be defined as art and knowledge in formulating, implementing, and evaluating functional-traffic decisions that enabled an organization to reach its purpose. Gaspersz (2005: 69), "Performance measurement is a way of measuring the direction and speed of change, which can be likened to such gauges of a car speed". It can be concluded that the college performance is the result achieved by college in a given period under review from the important perspectives which are financial, customer, internal business, learning and growth as a result of the implementation strategy of the college in order to realize its vision.

Performance measurement is divided into four elements: (1) companies to set goals, objectives and strategies. (2) Establish indicators and performance measures. (3) perform a measurement of the level of success objectives and goals earned the company and (4) evaluate performance continuously. Performance measurement is a measurement system that ensures an organization takes place on the right track. Performance measurement understanding generally summed up as a formal effort to evaluate the outcomes of the activities that have been implemented.

Yuwono *et al*., (2006:31-43), aspects that are measured in the balanced scorecard include:

1. Customer Perspective
   Students as consumers, learners and as an investor for the future have a role to determine the sustainability of a lecture. As consumers, students are entitled for quality service and education. As investors, students are entitled for future benefits on teaching and education they got. The success to realize students' hope is an indicator of lecture success that is the existence of a system that works dynamically to produce graduates with effective placement, ensure the quality of instructional and academic activities support and establish good relations between the university and the student trustee.
2. The internal process perspective
   Just as in business entity, universities also need to identify the most important process manifested in educational services appropriate to customer expectations. Central to the process is based on university efforts to provide assurance on the quality of Teaching and Learning and the quality of the supporting devices of Teaching and Learning. In the implementation, the service that has been designed is then conducted with effective cost.
3. Learning and Growth Perspective
   To operate the internal processes in order to produce services that have value for students, the university requires productive and committed personnel. Productivity is determined by the competence of personnel and the availability of infrastructure required to run the internal processes.
4. The Financial Perspective
   Excellence in the financial sector is expected to guarantee the welfare of the university resources, the effectiveness of the use of funds and the continuity of the educational process. Through excellence in finance, a university can realize the other three perspectives: customer, internal processes, and learning and innovation.

Model

Based on the formulation of the problem, research purposes, and the theories put forth above, then the model analysis in this research can be illustrated in Figure 1 below.

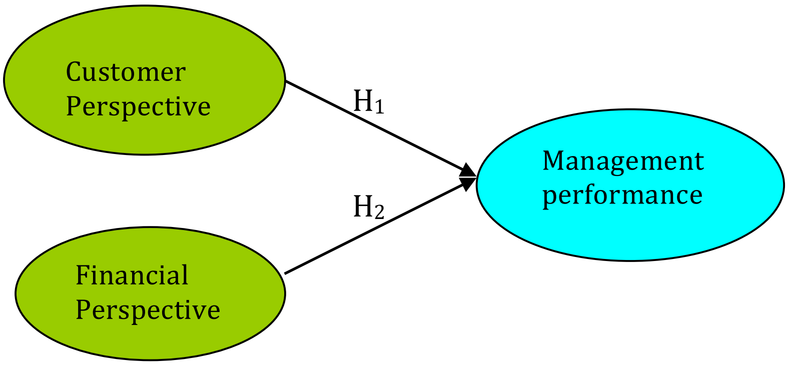


Figure 1. Analisys Model

Hypothesis

H_1 : The perspective of customers positive effect on the college management performance.

H_2 : Financial Perspective significant effect on the college management performance

RESEARCH METHODS

Research Location

The research location is at University of WR Supratman Surabaya which is located at Jalan Arief Rahman Hakim No. 14 Surabaya.

Variable Observed

This study uses several variables, which include:

a. The dependent variable is college management performance
b. The independent variable is the customer perspective (X_1) and financial perspective (X_2)

Data Analysis Technique

The data were analyzed using multiple linear regression assisted by SPSS software version 23. The steps undertaken to analyze the research data are as follow:

i) Validity Test
According to Ghozali (2009: 49), the validity test is used to measure whether a questionnaire is legitimate or invalid. Validity test is done by calculating the level of significance of bivariate correlation of respective indicator scores with a construct total score. An question indicator is stated to be valid if the level of analysis of the correlation value is less than 5% (sig <0.05).

ii) Reliability Test
According to Ghozali (2009: 45) reliability is a mean to measure a questionnaire which is an indicator of variables or constructs. SPSS provides the facility to measure the reliability of the Cronbach alpha statistical test. A construct or variable said to be reliable if the Cronbach alpha value is above 0.6 (NunNunnally, 1960) in Ghozali (2009: 46).

iii) Determine The Equation Model
According Sugiyono (2005: 217), multiple linear regression analysis aims to measure the influence of independent variables. Multiple linear regression is to show an independent relationship with two or more other independent variables.

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + e$
Information:
Y = college management performance
β_0 = constant
$\beta_{1,2}$ = constant of independent variable
X_1= customer perspective
X_2= financial Perspective
e= error term

iv) Classical Assumption Test
Classic assumption test aims to determine whether the regression model shows a significant and representative association. The classical assumption used are (Ghozali, 2007: 91): Normality Test, Autocorrelation Test, Heterocedastity Test and Multicolinearity Test.

RESULTS AND DISCUSSION

Overview of Research Location

University WR Supratman (Unipra) Surabaya is a college that is constantly evolving and until today still exist. Unipra was founded on 10 March 1985, with three faculties, namely the Faculty of engineering, Faculty of social sciences and the Sciences of Politi (political science), and the Faculty of economics. Of the three faculties, in 2010 Unipra founded the Faculty of teacher training courses of primary school teacher education. In order to meet the demands of the community in the year 2006 Unipra also has established a graduate program (Master) with two study programs (master of Science and master of management administration). The number of Unipra students from year to year continues to increase.

Unipra campus is located on Jalan Arief Rahman Hakim No. 14 Surabaya, with acreage covering approximately occupies 1.1 hectares. Availability of own land making it easier for the University to manage the party and expanding it. All of the teachers and the leadership of the Unipra is committed to maintaining the quality of education and teaching.

As a result, at this time all the courses at Unipra Surabaya has got accreditation from the National Accreditation Agency (BAN). Quality education and an easy put out in search of work became one of the attraction of high school students to continue their education in Unipra.

It is supported by human resources (HR) and teachers who have a diversity of experience either from academics or practitioners, so that it is capable of delivering his best work-work according the needs and the dynamics of change in science and the changes on the applicable invitation – militate. To give spirit and reward towards the students getting into Unipra, they are doing gets a variety of convenience and facilities during a lecture at Unipra. One example of the ease with which Unipra offered to high achieving students is the opportunity to become a student of Unipra without going through the test of academic Potential (TPA) and the setting of Compulsory Education Donations (UWP) are relatively low.

Students may choose morning or evening lecture time. This means that the parties of the University provides the opportunity to specify the time in accordance with the needs of the College. The opportunity to become student Unipra without going through admission test can be done in the period of receipt of JKM (line Ability and interest). For other students, the Unipra also provides an opportunity for a Student Academic Potential through the Test Unipra. The whole students (prospective students) will be declared admissible as a student Unipra, after she meets all the requirements set out and acknowledged graduating from high school. The development of the means, the infrastructure and human resources in Unipra done constantly and continuously. Almost an entire room of lectures using AIR CONDITIONING and there is a slide projector.

Validity and Reliability Testing

The result validity and reliability of the testing as shown in table 1 below:

Table 1. The results of Validity and Reliability Test

Validity Test		
Instrument	*Pearson Correlation*	Description
customer perspective		
$X_{1.1}$	0,521	Valid
$X_{1.2}$	0,715	Valid
$X_{1.3}$	0,696	Valid
$X_{1.4}$	0,838	Valid
$X_{1.5}$	0,782	Valid
financial perspective		
$X_{2.1}$	0,831	Valid
$X_{2.2}$	0,842	Valid
$X_{2.3}$	0,871	Valid
performance management		
$Y_{1.1}$	0,858	Valid
$Y_{1.2}$	0,849	Valid
$Y_{1.3}$	0,766	Valid
$Y_{1.4}$	0,731	Valid
Reliability Test		
Variable	Coefficient of Alpha Variation	Description
customer perspective X_1	0,754	Reliable
financial perspective X_2	0,802	Reliable
performance management Y_1	0,806	Reliable

Classical Assumption Test

Test of normality

Test of normality aims to test whether in regression models, residual has a normal distribution (Ghozali, 2009). In this study using normal probability plots will form a straight line diagonally, and ploting residual will be compared with diagonal lines. Based on the results of the data processing is obtained that for the customer perspective (X_1) and financial perspective (X_2) and performance management (Y) data spread around the diagonal line and follow the direction of a diagonal line or chart pattern shows histogram normal distribution, which is shown in Figure 1 below.

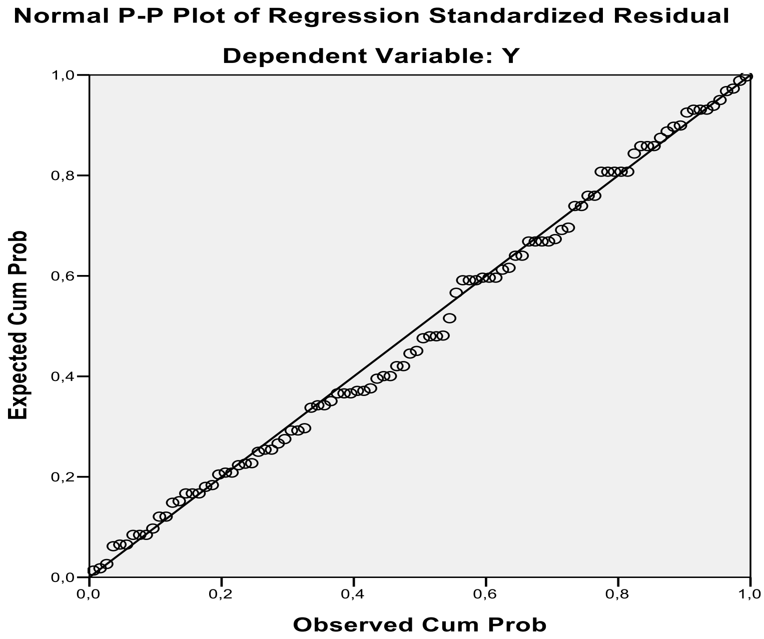


Figure 1. Normal distribution

Based on Figure 1 retrieved data spread around the diagonal line and follow the direction of the diagonal lines indicating patterns of a normal distribution.

Multicolinearity Test

Multicolinearity Test to detect the presence of multicolinearity can be seen from the Variance Inflation Factor (VIF). If the value of VIF > 10 then multicolinearity and if the xalue of VIF < 10 then not happen multicolinearity. The results of this testing get VIF = 1.000 indicates that is not the case the existence of symptoms.

Table 2. The values of the Variance Inflation Factor

No	Variable	Value VIF
1	X_1	4.986
2	X_2	4.986

The test results show that the presence of multicolinearity symptoms did not occur because the value of greater than one VIF and smaller 10.

Heterocedastity Test

Heterocedastity Test is carried out through the analysis of graph scatter plot. If the graph has a scatter plot data distribution patterns form a certain pattern then it shows heterocedastity. Otherwise, if the pattern does not form a scatterplot graph pattern or randomly then showed does happen.

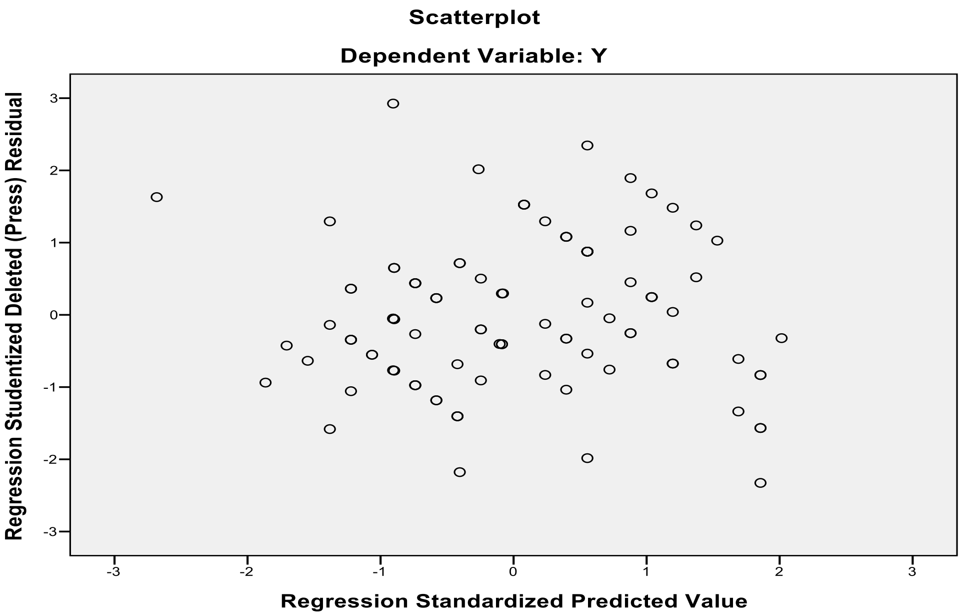


Figure 3. Heterokedastisitas

Results of Multiple Linear Regression Analysis

The results of the calculation in this analysis using SPSS program 23.0 for Windows. multiple linear regression equation is obtained as follows:

$$Y = 0.844 + 0,365X_1 + 0,453X_2$$

From the above equation

a. α = 0.844, meaning that the magnitude of the performance management of 0.365 if customer perspective (X_1) and financial perspective is of zero.
b. X_1 = 0.365 meaning that if the perspective of customers up one unit then it performance management will be up by 0.365 assuming financial perspective variable is zero.
c. X_2 = 0,453 This means that if financial perspective (X_2) up one unit then it performance management will be up by 0.453 assuming the customer perspective variable is zero.

Based on the results of the calculation with the tools the program SPSS version 23.0 then retrieved the results as shown below the customer's perspective (X_1) and financial perspective (X_2) and performance management (Y).

Table 3. The Results Of Multiple Linear Regression

Variable	Regression Coefficient	t count	Significant
Constant	0,844	3,079	
customer perspective (X_1)	0,365	2,345	0.021
financial perspective (X_2)	0,453	3,561	0.001

Based on table 3 obtained multiple regression linear equations that have the value of the correlation coefficient is positive, so that it can be interpreted that the relationship between the free variables with variable bound to form a linear line positive. This means that any non variable increase will be followed by the increase of the variable is bound. Any increase in the perspective of customers will follow the increase in performance management in a financial perspective be considered fixed. Each financial perspective increase followed a rise of performance management in the perspective of the customer are considered fixed.

Hypothesis testing

Hypothesis testing in this study there are two hypotheses proposed, and to test the second hypothesis test used the partial regression significance (t-test) and simultaneous regression significance test (test F).

F-test (Testing against Simultaneous Regression Coefficients)

Table 4. The result of F test

Model	*Sum of Squares*	df	F	significant
1 *Regression*	20,990	2	82,518	.000*
Residual	12,337	97		
Total	33,328	99		

The F-test is used to determine whether the regression model can be used to test between the perspective of customers (X_1) and financial perspective (X_2) together on performance management (Y). Based on the results of the calculation of Significant value are known from both the free variable (the perspective of customers and financial perspective) for 0.000 (< 0.05) such that H_0 is rejected and the H_1 is accepted, which means the regression model fit with data

The t-test (Testing against the regression Coefficient In Partial).

Table 5. The result of t test

Variable	t count	significant
customer perspective (X_1)	2,345	0,021
financial perspective (X_2)	3,561	0,001

This test is used to test whether a customer perspective (X_1) and a financial perspective (X_2) a significant effect on performance management (Y). Based on the results of the calculations on the table known values SPSS significan perspective customers (X_1) of 0.021 (< 0.05) such that H_0 is rejected and accepted, meaning there are H_1 significant effects from the perspective of the customer against the variable variable performance management. Based on the results of the calculation of SPSS on the table of the financial perspective of significant value is unknown (X_2) for 0.000 (< 0.05) such that H_0 is rejected and accepted, meaning there are H_1 significant effects from the financial perspective against variable variables performance management.

DISCUSSION

Discussion of research based on the results of data analysis methods that have been used. Based on a statistical regression testing against multiple linear equations, then the first hypothesis, "Perspectives of influential customers significantly to the College Management performance" is proven. This is due to the value of the customer's perspective of 0.021 significance smaller than 0.05. The results of this research also supported research conducted Gamal and Soemantri (2017) stating that the influential customers significant perspective on performance of private colleges with significance value of 0.014 (< 0.05). In addition backed the opinion of Yuwono *et al.*, (2006:31-43) that the student hopes to realize the success as an investor, the student is entitled to future profits over the teaching and education of acquired.

The success of the student hopes to with indicators of College, namely the existence of a system that works dynamically to produce graduates with effective placements, ensures the quality of instructional and support activities academic as well as a good relationship between the University student trustee.

Based on a statistical regression testing against multiple linear equations, then the second hypothesis "of the Financial Perspective effect significantly to performance management University WR Supratman Surabaya" is proven. This is due to the value of the significance of a financial perspective of 0.001 is smaller than 0.05. The results of this research also supported research conducted Gamal and Soemantri (2017) stating that the financial perspective a significant effect on performance of private colleges with significant value of 0.001 (< 0.05).

In addition backed the opinion of Yuwono et al., (2006:31-43) that excellence in finance are expected to provide a guarantee of well-being on University resources, the effectiveness of the use of funds and continuity of the educational process. Through financial excellence, a University can embody three other perspectives: customer, internal processes, and innovation and learning.

CONCLUSIONS AND SUGGESTION

Conclusion

Based on the deliberations of the conclusion can be made as follows:

1. The perspective of customers positive effect on the College Management performance, because value t calculate the customer's Perspective amounted to 2.345 greater than t table (0.659).
2. Financial Perspective significant effect on the College Management performance, because value t calculate the financial perspective of 3.561 greater than t table (0.659).
3. The Financial Perspective is the dominant influence on the College Management performance because it has a coefficient of determination of partial of 0.116, which means performance management University WR Supratman Surabaya influenced by the Financial Perspective of 11.6%. This greater value from the perspective of customers amounted to 5.38%.

Suggestion

After the analysis is performed on variables observed in this study, then some of the suggestions given for further research is due to the measurement of performance management has been done by University WR Supratman Surabaya is currently only as on aspects of customer and financial aspects only, not yet touched on aspects of non financial business processes such as internal as well as learning and growth, and on further research it needs to be examined more.

BIBLIOGRAPHY

Abdalkrim, G.M. 2014. Using the Balanced Scorecard in Private Sector Organizations: A Case Study of Private Telecommunication Companies in Sudan *International Business Research*; Vol. 7, No. 9.

Ahmad, A.R. and Soon, N.K. 2015. Balanced Scorecard in Higher Education Institutions: What Should Be Consider. ISTMET August 25-27.

Gaspersz, V., 2005. *Integrated Performance management system the Balanced Scorecard with the Six Sigma for business and Government Organizations*. Jakarta: Gramedia Pustaka Utama.

Binden, W, Mziu, H, and Suhaimi, M.A. 2014. Employing the Balanced Scorecard (BSC) to Measure Performance in Higher Education-Malaysia, *International Journal of Information and Communication Technology Research*.Volume 4 No. 1, January.

Elola, L.N, Tejedor, J.P. and Tejedor, A.C.P. 2016. Analysis of the causal relationships in the balance d scorecard in public and private Spanish Universities through structural equation modeling, *The Business and Management Review*, Volume 7 Number 5.

Gamal, A. and Soemantri, A.I., 2017. The Effect of Balanced Scorecard on the Private College Performance (Case Study at the University of WR Supratman Surabaya). *Archives of Business Research*, 5(5), 126-134.

Ghozali, I., 2009, *The application of Multivariate analysis with SPSS Program*, Semarang: University Diponegoro.

Malhotra, N. K. 1996. *Marketing Research, Applied and Orientation*. USA: Prentice Hall International.

Mulyadi, 2009, *System Planning and Management Control*. Salemba Jakarta: Four

Purwoko, B., Gamal, A., and Kunhady, D. 2016. The Leather Industry Development in Tanggulangin in Facing Asean Economic Community (AEC) 2015 with Quantitative Strategic Planning Matrix (QSPM). *Archives of Business Research*, 4(6), December. 25.

Sugiyono, 2014, *Statistics for research*, Bandung: Alfabeta.

Yuwono, Sukarno and Ichsan, 2006. *Practical guidance for drafting the Balanced Scorecard Headed an organization that focuses on strategy*. Jakarta: Gramedia Pustaka Utama.

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.3961.
Badriyah., Widari, N. S., & Gamal, A. (2017). The Relationship of Consumption of Food and Nutritional Status with Students Achievement Academic (Case Study at the University of WR Supratman Surabaya, Indonesian). *Archives of Business Research, 5(12),* 191-197.

The Relationship of Consumption of Food and Nutritional Status with Students Achievement Academic (Case Study at the University of WR Supratman Surabaya, Indonesian)

Dr. Badriyah
University of WR. Supratman Surabaya, INDONESIA

Ir. R. Nyoman Sri Widari, MM
University of WR. Supratman Surabaya, INDONESIA

Ir. Ahmad Gamal, SE, MM
University of WR. Supratman Surabaya, INDONESIA

ABSTRACT

The quality of accounting personnel is determined by the quality of the graduates of the Faculty of Economics in particular, namely accounting, where an accountant is one of the elements of the audit power has an important role. Someone chooses the profession as an accountant has a different motivation, is the perception of someone taking action against the figure accountant will affect the motivation. The method was used a correlational analytic methods using cross sectional approach, independent variables in this study was food consumption and nutritional status, the dependent variable in this study was 62 students achievement Academic. The Population was student achievement students majoring in accounting economic faculty University WR Supratman Surabaya 2015-2016 with simple random technique sampling of data collection methods used ware enclosed questionnaire, data processed by the editing, coding, scoring, and tabulating. status as many as 35 students (56.5%) and then 22 students (35.5%) lowest as many as 7 students (8%). Student Achievement index was very satisfying almost half have a very satisfying Achievement index value by as much as 55 students (88,7%). The results of spearman's correlation test statistics with 95% confidence level (α = 0.05) obtained above the P = 0.000 <0.05 which means that Ho refused and H1 accepted that it can be concluded that There was a Relationship Between food consumption and nutritional status with students achievement Academic majoring in accounting economic faculty University WR Supratman Surabaya 2015-2016. This study is expecting to be used as information for food consumption and nutritional status and academic achievement students majoring in accounting economic faculty University WR Supratman Surabaya 2015-2016 which can assist the institution in making and implementing the design system was readily accepted the teaching of each student and can improve student achievement for the better.

Keywords: food consumption and nutritional status, Student Achievement index

INTRODUCTION

Learning situations are complex and comprehensive nature and involves the interaction of multiple components, often found students who can't achieve an equivalent academic achievement with the ability intelegensianya. Because it is essentially academic achievement is the result of the interaction of several factors that vary from one individual to another individual (Baiquni, 2007). Rangkuti (2013:183) in Gamal and Purwoko (2016:9) argues that the strategy is a comprehensive master planning, which explains how the company would achieve all the goals that have been set upon in the mission that has been set before. This means that the students were also in the College must make strategy so that index high achievements can be reached.

As a basis for efforts increased HR, then mastery of science and technology need to be simultaneous programs and orientation for each agency, including in the process of teaching and learning in higher education. The form of the increased effort be implemented by improving the learning achievements of students in College. These goals can be realized through the effort that was placed on quality improvement of education. Higher education developed in integrated and appropriate in different lines, type and level. Infrastructure of higher education both primary as well as the supporters need to get attention to developed and disseminated evenly in order to help in this effort to improve the quality of higher education in accordance with the the demands of the objective in the community.

In the process of teaching and learning, the excitement for learning needs to get serious attention for the achievements of results can lead to good learning. Nutrition is an integral part of national development, because nutrition is one of the components in improving the quality of human resources. It proves that the food nutritious needs to be given to students that would later influence on intelligence and academic achievement. The achievement is the fruit of the resultant skills continue to focus, insight, reliable and abundant character and has the willingness and ability to cope, adapt and then implementing it (Kerry, 1995:10). The extent to which one's accomplishments can be seen from their capabilities in tailoring a task given by the lecturer, and in order to achieve the desired goal, the students have to study in earnest so as to obtain the expected accomplishments. Learning is a change in who settled in the life of someone who is not genetically inherited. Basically learning is behavior change as a direct result of the experience and not the result of those connections in the nervous system that was brought from birth (Darsono, 2001). As consumers, students are entitled for quality service and education. As investors, students are entitled for future benefits on teaching and education they got (Gamal and Soemantri, 2017).

Learning is a process of growth and changes in personality or behaviour manifested some new response patterns in the form of skills, attitudes and habits, knowledge skills or a process of work done a person to obtain a change of behaviour better overall and continuous, some of the results of his own experience in in teraksi with the surrounding environment.

Achievement of learning outcomes that have been achieved are the students after the teaching and learning process is implemented, with a starting point on the results of the evaluation of the students that have been achieved in a certain period. Experts in formulating the different kinds of learning achievements. Based on a review of the types of learning, at the value of the IPK

The process of awarding of rating (Grading) is the process of translator score test results that have been converted into the evaluative classification according to the norm or the relevant criteria. Nutritional status of nutritional health is the State of a person who is determined by the degree of necessity of nutritional substances obtained from consumption of food each day and their use by the body so as to achieve optimal nutritional health degrees. Measurements are most easily accomplished is by Anthropometry Anthropometry indicator most widely performed for the determination of nutritional status somebody with weight (W), ti-nggi body (TB) or length (PB), sometimes also used size upper arm circumference (LLA).

Consumption is the amount of food that is cooked and served to contain adequate nutrition, then eaten and ingested (Soedarmo, 1995). Food or food consumption is the amount of food (single or diverse) are eaten a person or group of people with a specific purpose

In the aspect of nutrition the purpose of eating is to acquire a number of necessary nutrients the body. Food consumption is a good and sufficient in quality and quantity, meaning his food consumed must contain all essential nutritional substances that require the body in adequate amounts. The purpose of this research is to know the relationship of food consumption and nutritional status with the learning achievements of students. The sample in this research totalled 62 respondents i.e. students majoring in accounting economic faculty University WR Supratman Surabaya 2015-2017. Reasons of sampling with random sampling techniques or randomly obtained sample is truly representative against the population. Free variables in this study are food consumption and nutritional status, whereas the variable bound in the form of learning achievements. Food consumption reveal with food and drink consumed a person in a given period

Nutritional status, in this research are determined using the measurements of Anthropometry and nutritional history, i.e. with a food frequency method (the frequency of eating). The learning achievements of students can be known through the evaluation conducted by the lecturers in the form of semester final exams. High low learning achievement for one student shown by high low achievement Index value the achievements of all courses during a semester, the results are shown in the form of the existing values in the card study results. Research instrument used in this research use the question form, observation and documentation. Data processing using Spearman 's correlation (Sugiyono, 2014)

Food consumption questionnaire using the frequency of eating. Indicators of food consumed consists of a range of consumption, frequency and amount of eating food substances dikon-sumsi students, namely the large number of energy consumption of protein, calcium, and iron the sheets of food frequency. Measurement indicators Anthropometry by doing the weighing weight against students based on weight according to age (W/U), height (TB) and the size of the circumference of the upper arm (LLA), The learning achievements of students in mind by using the documentation for the card study results with indicators with compliments, very satisfying and gratifying

RESULTS AND DISCUSSION

In the 80s several colleges were established in Surabaya. Among the colleges, one that continues to grow and continues to exist until now is the University of WR Supratman (Unipra) Surabaya. Unipra is established on March 10, 1985, with three faculties: the Faculty of Engineering, Faculty of Social and Politics Science (Fisip), and the Faculty of Economics. From the three faculties, in 2010 Unipra founded the Faculty of Teacher Training and Education with the department of Primary School Teachers.

In order to meet society's demands in 2006 Unipra has also established a Magister program (S2) with two courses (Master of Management and Master of Administrative Sciences). The total number of Unipra students at present is about 1,200 students. The students come from various regions in Indonesia.

Unipra campus is located at Jalan Arief Rachman Hakim 14 Surabaya, occupying an area of approximately 1.1 hectares. The availability of land itself makes it easier for the university to manage and develop it. All lecturer and leader in Unipra determined to maintain the quality of education and teaching. As a result, at this moment all courses in Unipra Surabaya has received accreditation from the National Accreditation Board (BAN).

Quality education and easy output to find work become the attractions for high school students to continue their education in Unipra. This is supported by human resources (HR) and faculty who have a diversity of experience from both academics and practitioners, so as able to provide the best works appropriate with the needs and the changing dynamics of science as well as the change of applicable laws. To encourage and reward the students get into Unipra, those who excel receive various conveniences and facilities during study in Unipra. One example of the convenience offered by Unipra to top students is the opportunity to become a Unipra student without going through the Academic Potential Test (TPA) and the determination of Money Donations Compulsory Education (UWP) is relatively low.

The opportunity to be a Unipra student without entrance test can be performed in the acceptance period of Capabilities and Interests Line. For other students, Unipra also provides an opportunity to become a Unipra student through Academic Potential Test. All students (prospective students) will be declared to be accepted as Unipra students after they meet all the requirements set and stated to be graduated from high school. Development of facilities, infrastructure and human resources in Unipra is carried out continuously and sustainably. Thus, one day Unipra can truly realize its vision to become a campus of quality and affordability.

Based on the results of questionnaires which were returned to the researchers counted 62 of 70 respondents (8 respondents did not return), then the stages of research as below are done.

Table 1. Description Gender Respondent

Category	Classification	requency (People)	Percentage (%)
Gender	Male	18	29,0
	Female	44	71,0
	Total	62	100,00

From the data, it is shown that the majority of respondents were female, ie 71.0% while male is amounted to 29.0%.

Table 2. Food consumption and nutritional status Student Undergraduate Accounting Course of University WR Supratman Surabaya

No	food consumption and nutritional status	requency (People)	Percentage (%)
1	Best	22	35,5
2	Enough	35	56.5
3	Minus	5	8.0
	Total	62	100

Based on the table above can be explained that the distribution of food consumption and nutritional status of students of the Undergraduate Studies Program 2015-2016 force Accounting University WR Supratman Surabaya has mostly food consumption and nutritional status as many as 35 students (56.5%) and then 22 students (35.5%) aterendah as many as 7 students (8%).

Nutritional deficiencies in adolescence will have an impact on the aktfitas students in the school, among others, sluggishness (lethargic), easily fatigued/tired, malnourished growth barriers in adulthood, and a decrease in achievement in schools (Elnovriza, 2008). According to Purnakarya (2010), lack of nutrients will reduce the concentration and learning ability of the students

Nutritional status of nutritional health is the State of a person who is determined by the degree of necessity of nutritional substances obtained from consumption of food each day and their use by the body so as to achieve optimal nutritional health degrees. Assessment of nutritional status is to compare the State of nutrition according to measuring results against standards that correspond to individual or group. Assessment of nutritional status in teenagers can be done by measuring the clinical examination, Anthropometry, nutrition and biochemical examination of history. Consumption is the amount of food that is cooked and served to contain adequate nutrition, then eaten and ingested (Soedarmo, 1995). Food or food consumption is the amount of food (single or diverse) are eaten a person or group of people with a specific purpose.

The results showed the existence of a positive and significant relationship between the consumption of food and nutritional health status together with the learning achievements of students, turned out not to deviate from the reference theory nor empirical. This proves that both predictors simultaneously have enough adequate predictive power. This shows how important consumption of food for the students who will be applied on the status of its nutrition value. Karena basically feat to achieve student learning optimally required intake of food consumption and good quality. With a quality food intake, it will achieve a good nutritional status as well as the learning achievements will be reached eventually anyway.

Table 3. Student Achievement index value forces 2015-2017 Accounting Bachelor degree Courses the University WR Supratman Surabaya

No	Student Achievement index	requency (People)	Percentage (%)
1.	compliments	3	4,8
2.	very satisfying	55	88,7
3.	gratifying	4	6,5
Total		62	100,0

From the table above can be explained that the distribution of Student Achievement index value forces 2015-2016 the course of accounting Undergraduate University WR Supratman Surabaya almost half have a very satisfying Achievement index value by as much as 55 students (88,7%)

Student academic performance index value forces 2015-2016 Accounting Bachelor degree Courses the University WR Supratman Surabaya. Based on the table above can be explained that the distribution of student achievement index value forces 2015-2016 S1 study Program Bachelor of Accountancy University WR Supratman Surabaya is almost half of it had very satisfying achievement index value by as much as 55 students (88,7%).

Learning achievement is overall activity measurement, processing, interpretation, and considerations to make decisions about the level of the learning outcomes achieved by the individual. The results of the study pointed to the achievements of the study, whereas the achievement of learning that is an indicator of the existence of degrees of changes in student behaviour (Hamalik O, 2003). There are many factors that affect the achievement of learning either from outside or from inside, which included individuals from the outside that is one of the factors

During live protégé could not prevent ourselves from the natural environment and the socio-cultural environment, while from within the individual i.e. psychological factors among others, interest, intelligence, talent, motivation,. The value of learning achievements can be known through the process of evaluation of student learning outcomes. The results of the study can not be directly visible, without someone doing something that shows the results of the study through a the learning achievements. So, in the achievement of learning outcomes will be

The difference between the achievement level of the one with those of others in reaching what is intended, is due to the difference in the characteristics of individuals. The same person can produce different achievements in different situations so that it can be said that the accomplishment of learning is influenced by individual factors and the factors of the situation, this is in line with the opinion of the

Purwanto (2006) which explains that: "managed to learn it whether or not depends on various factors." After a certain span of time, usually at the end of the semester all the assessment for each field of study written in a transcript of a value called the GPA (Cumulative Achievement Index). This GPA into evidence the success or failure of students in the University. From this value, parents, students and teachers are concerned, teachers can see themselves

Table 4. Relationship Food consumption and nutritional status with student academic achievement

Correlations

			X	Y
Spearman's rho	X	Correlation Coefficient	1,000	,533**
		Sig. (2-tailed)	.	,000
		N	62	62
	Y	Correlation Coefficient	,533**	1,000
		Sig. (2-tailed)	,000	.
		N	62	62

**. Correlation is significant at the 0.01 level (2-tailed).

From the table above can be explained that the results of statistical tests of correlation spearman's with a degree of confidence 95% ($\alpha = 0.05$) above retrieved result $P = 0.000 < 0.05$ meaning Ho denied and H1 Accepted that it can be concluded that there is a relationship between food consumption and nutritional status with academic achievement Student Undergraduate Course 2015-2016 force Accounting University WR Supratman Surabaya

CONCLUSIONS AND SUGGESTION

Conclusion

Based on the results of statistical tests of correlation spearman's with a degree of confidence 95% ($\alpha = 0.05$) above retrieved result $P = 0.000 < 0.05$ then it can be inferred that there is a relationship between food consumption and nutritional status with academic achievement Student force 2015-2016 S1 study Program Bachelor of Accountancy University WR Supratman Surabaya

Suggestion

Based on the conclusion, there are some suggestions as follows:

1. Number of research samples should be supplemented by involving all students both semesters to the late semester.

2. Need for classification of each faculty so that it will obtain very specific results which one truly has a good performance among all faculty in the University of WR Supratman Surabaya.

BIBLIOGRAPHY

Baiquni, A. 2007. *Livelihood Strategies In Crisis*. Ideas Media: Yogyakarta

Darsono. 2001. *Learning and learning*. Semarang: Cv. IKIP Semarang Press

Elnovriza. D. 2008. Factors related to the level of Nutrient intake. Universitas Andalas

Gamal, A., and Soemantri, A. I. 2017. The Effect of Balanced Scorecard on the Private College Performance (Case Study at the University of WR Supratman Surabaya). Archives of Business Research, 5(5), 126-134.

Gamal, A. and Purwoko, B. 2016. EFE & IFE, SWOT, SPACE, IE, *Grand Strategy* dan *Quantitative Strategic Planning Matrix.* Brangkal Mojokerto Indonesian

Kerry Gleson. 1995. *The Personal Efficiency Program*. Jakarta: Arean.

Purnakarya. 2010. The influence of Nutrients on achievement, (online)

Puwanto, N. 2004. *The psychology of education*. Bandung Rosdakarya

Purwoko, B., Gamal, A., and Kunhady, D. 2016. The Leather Industry Development in Tanggulangin in Facing Asean Economic Community (AEC) 2015 with Quantitative Strategic Planning Matrix (QSPM). *Archives of Business Research*, 4(6), December. 25

Sugiyono, 2014, *Statistics for research*, Bandung: Alfabeta

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.3987.
Utama, A. G. S. (2017). "Framing Corporate Social Responsibility On the Websites Of Company (Mudflow Incident)". *Archives of Business Research, 5(12),* 198-205.

SOCIETY FOR SCIENCE AND EDUCATION

"Framing Corporate Social Responsibility On the Websites Of Company (Mudflow Incident)"

A Gde Satia Utama
Accounting Department, Economics and Business Faculty
Airlangga Universit, Indonesia;

ABSTRACT
The research conduct through the official website of the company which is engaged in energy and oil gas drilling (mudflow incident). The purpose of this research to frame of the company from their official website to reveal the CSR program, especially incorporate governance, environmental, and social. The research focus on three main areas : corporate governance and reporting, environmental policy, and social policy. Measurement of the quantity of information presented using the index as an indicator of Publicity. Data will analyzed with frame analysis. The data obtained and processed using qualitative software called Nvivo11. The results of this research will inform Publicity of CSR by the company that involved mudflow incident.

Keyword: Corporate Social Responsibility (CSR), official website, Publicity Index, Mudflow Incident

INTRODUCTION

Overview

Initially, many companies are only oriented towards profit maximization to demonstrate its performance. These companies to modernize and seek progress in the economic field. However, the success achieved by the company are not followed by the company's concern to the community and the environment, as also happens in Indonesia. Penecemaran case of Buyat Bay by PT Newmont Minahasa Raya, environmental pollution and social issues related to operational PT Caltex Pacific Indonesia, and the conflict between PT Freeport Indonesia with local communities related to customs violations and the socio-economic gap that occurs. These problems should be a thing that is focused by the company through a development program of Corporate Social Responsibility (Reverte, 2008).

Many social problems faced by companies in Indonesia due to weak enforcement of regulations regarding corporate social responsibility, such as labor regulations and environmental pollution. Statement of Financial Accounting Standards (IAS) 1 (revised 2009) paragraph 12 only suggested to express the form of corporate responsibility on social issues. The statement is as follows: "Entities can also be present, apart from the financial statements, reports on the environment and report value added (valued added statement), especially for industries where environmental factors play an important role and for an industry that considers its employees as a group of users report plays an important role. Additional reports are beyond the scope of Financial Accounting Standards. "

Statement of Financial Accounting Standards can be explained that the company is not required to disclose information about the form of corporate responsibility towards the environment surrounding the company. Consequently, there is a voluntary information disclosure practices. Anggraini (2006) stated that the company will consider the costs and benefits gained by disclosing social information. When the benefits greater than the cost of putting it, then the company will voluntarily disclose such information.

Progress on implementation of corporate social responsibility or Corporate Social Responsibility (CSR) also seems to be a logical consequence of the implementation of the practice of Good Corporate Governance (GCG), which in principle expressed the need of companies consider the interests of its stakeholders in accordance with existing regulations and establish cooperation actively with stakeholders for the sake of long-term survival of the company. There are five principles of Good Corporate Governance (GCG), which transparancy, accountability, responsibility, independence, and fairness. Of the five principles, the principle of responsibility is a principle which has the closest relationship with CSR. By applying this principle, it is expected the company increasingly aware that in conducting its operations, the company also has a role to be responsible and provide added value not only to shareholders but also other stakeholders (Frankl, 2007: 12).

Entire companies in Indonesia increasingly required to provide transparent information on their social activities, so that the disclosure of the Corporate Social Responsibility (CSR), the role of social responsibility accounting (Anggraini, 2006). According to Boone and Kurtz (2007), the notion of social responsibility (social responsibility) in general is management support to the obligation to consider the profit, customer satisfaction and the welfare of society as equals in evaluating the company's performance. Tamam Achda B. (2007) defines CSR as the company's commitment to account for the impact of its operations in the social, economic, and environmental and continuously ensure that the impact will benefit the community and the environment.

Inawesnia (2008) stated that CSR is a business practice that is transparent and based on ethical values. CSR pays attention to employees, society and the environment, and is designed to gain legitimacy from the public in general and also of the shareholders. Companies developing this CSR program as a form of business responsibility is oriented to meet the public's expectations that the company gained legitimacy from the public.

Gossling and Voucht (2007) says that CSR can be viewed as a liability the business world to be accountable to all stakeholders, not just for one stakeholder alone. If the company does not provide accountability to all stakeholders that includes employees, customers, communities, local environment / global, eventually the company will be considered bad and would not get support from the community.

Most companies assume that communicating CSR program is as important as doing it's own CSR activities. By doing so, the company intends to encourage more people who know the social activities of the company, so the company can reduce the level of risk in the face of social unrest. Thus, it can be concluded that the CSR report to the public would enhance the social value of hedging the company.

Research on CSR already is not new anymore, but research has focused on the presentation of CSR in the company's official website only a few who do. In this study will only measure Publicity Index, ie the quantity of CSR information presented in this case is information about CSR is presented on the company's official website.

The problem in this research is: "How to looking at disclosure of Corporate Social Responsibility (CSR) on the official website of the companies involved in the case of Lapindo mudflow?". The goal of this research is to see whether the company has leveraged its official website to disclose CSR program, in terms of corporate governance, environmental, and social. Given this research, the expected benefits is that it can provide new inputs that can assist companies in disclosing Corporate Social Responsibility (CSR) in the company's official website.

LITERATURE REVIEW

Corporate Social Responsibility (CSR)

Many experts have suggested a definition of Corporate Social Responsibility (CSR). One is the notion of CSR according to Kotler and Nancy (2005) that Corporate Social Responsibility is the company's commitment to improve the welfare of the community through good business practices and contributes most of company resources. Meanwhile, According to the World Bank (2009) in Nurkhin (2009), the definition of CSR is the commitment of business to contribute to sustainable economic development, working with employees of the company, the family employee, as well as local communities and society as a whole, in order to improve the quality of life .From the several definitions cited above, it can be concluded that Corporate Social Responsibility is the company's commitment to provide long-term contribution to the community and the surrounding environment so as to create a better environment. Social responsibility can take many forms, for example: reduce waste and pollution, grants, provision of expert assistance from the company, the provision of employment, and so forth.

CSR Disclosure On Company's Website

Development of communication no longer possible for an organization to cover up a fact. The existence of today's Internet technology led to the development of information could not be separated by sea or land boundary. With increasingly rapid internet technology makes information easy to obtain.

In terms of communicating CSR, web media selection has strategic reasons because "the web organisasi Also offers the opportunity to design messages that do not have to follow the dictates of gatekeepers as with print and electronic media "(Chaudri & Wang, 2007) and website characterized as "an ongoing and interactive process, rather than an annual static product. "In addition, most activists or those who have concern for the issue of CSR will monitor activity Companies with looking through his website. According to Lodhia (2004), reporting the company through the company website has advantages and disadvantages as follows:

Table 1. Advantages and Disadvantages Website

Benefits	Limitations
a) Global reach and mass communication b) Timelines and updateability c) Interaction and feedback d) Presentation flexibility and visibility e) Navigational ease f) Increased information (downloadable) and analysis g) Cost beneficial h) Archieved information can be kept and users of websites can be tracked i) Integration j) Push information	a) Developed/Developing country digital divide b) Costs and expertise c) Information overload d) Security problems e) Authentication, attestation and legal impediments f) Poor website design and advertising g) User preference and competence

Publicity Index

Publicity Index is divided into 3 main areas, and each area has 5 categories. The following are the 15 categories will be described:

Corporate Governance and Reporting as follows :

- Does the company explains in detail the structure of the management company?
- Does the company comply with the law / rules of corporate governance?
- Does the company report information on financial audit?
- Does the company explained on shareholders' rights policies?
- Does the company report and explain the company's internal code of conduct?

Environmental Policy as follows :

- Does the company states adhere to industry-specific rules, in accordance with national regulations and / or international standards regarding the environment?
- Does the company include the names of individuals (management and / or board members) or the department responsible for environmental management and dedication to the environment?
- Does the company report on the use of energy and water?
- Does the company report environmental performance, including efficiency?
- Does the company incorporate environmental aspects into circuit inventory management wisdom?

Social Policy as follows :

- Does the company disclose compliance with national regulations and / or international human rights and / or employment?
- Does the company reported a sponsorship program or as an advocate for community activities?
- Does the company explained on employee development, or policy interests of employees?
- Does the company explain the policy on health and safety?
- Does the company explained about the policy positions?

Previous Research

The previous study used as a support is the research conducted by the East-West Management Institute (2004) entitled "Report on a survey of corporate social responsibility of the Reviews largest listed company in Hungary". The purpose of these studies is to raise awareness and practical application of the principles of CSR among companies, investors, and regulators who are in Hungary. East-West Management Institute (2004) Report on a survey of corporate social responsibility of the Reviews largest listed company in Hungary Both studies use the index as the index measurement publicity studies which are carried out by the East-West Ma-nagement Institute uses some companies in Hungary as an object of research.

Ati Harmoni and Ade Andreyani (2008) Disclosure of corporate social responsibility (CSR) in the company's official website Studies in PT. Unilever Indonesia Tbk Both studies used the publicity index as the index is measured, and the official website as the research object Research Ati Harmoni and Ade Andreyani conducted in 2008, the company studied is a company engaged in the field of Home and Personal Care and Food and Ice Cream Product.

Ati Harmoni (2009) Interactivity CSR issues in the company's official page. Studies in PT. Indocement Tunggal Prakasa TBK Both studies use the official company website as the research object Research conducted Ati Harmoni conducted in 2009 and does not use the index as the index measurement publicity

RESEARCH METHODS

Research Approach

This study used a qualitative approach. Moleong (2007: 6) states that the study used a qualitative approach is research that aims to understand the phenomenon of what is experienced by the subject of the study such behavior, perception, motivation, action and others, holistically, and by way of description in the form of words words and language, in a specific context by using various natural and scientific methods.

The research approach used by the writer is descriptive qualitative approach with content analysis method (Weber, 1990: 9). The purpose of this study is to provide a systematic overview, actual and accurate information on the facts available, the nature and character, as well as the relationship between the phenomena being studied, ie disclosure of corporate social responsibility in the company's official website.

The Scope Of Research

The scope of this study is limited to the following matters:

- This study examines only the disclosure of CSR by companies involved in the case of Lapindo mudflow through its official website.
- This study will measure the index only publicity, ie the quantity of CSR information presented on the company's official website.

Types and Sources of Data

Data used in this study is qualitative data. Qualitative data is data that is not expressed in the form of numbers, which in this study in the form of Annual Report and Sustainability Report as well as the Code of Conduct of the company.

Data Collection Procedures

Data collection methods used in this research is the method of online data searches. Burhan Bungin (2008: 125) states that the method of data searches online are ordinances perform data searches through online media such as the Internet or media other network providing online facilities, thus enabling researchers can utilize data online information in the form of data or information theory, as quickly or as easily as possible, and accountable academically.

Techniques Analysis

The analysis was conducted based on data of companies that will be used by the authors to address issues raised. In this study, the authors process the data obtained using a software program called Nvivo11. In this study, the stages of data analysis carried out as in the following table:

Table 2. Techniques Analysis

Stages Analysis	Input	Process	Output
Preparation 1	Searching website of company	Google	Access official website company
Preparation 2	Download installer Nvivo11	Meng-install software Nvivo11	Software Nvivo11
Collecting Data	Access Website mudflow incident	Download Annual Report , Sustainability report, and Code of Conduct	Annual Report , Sustainability report, andCode of Conduct
Data Processing	Login Nvivo11	Nvivo11	Analysis and Discussion (Framing Analysis)

RESULTS AND DISCUSSION

Measurement CSR Index Publicity

In the tables presented below are categories of CSR expressed by EMP and MedcoEnergi on its official website. Each category expressed receive the value of one (1), while an undisclosed will have a value of zero (0). Assessment score is performed as follows:

- Very Less: 1-3
- Less: 4-6
- Pretty Good: 7-9
- Good: 10-12
- Very Good: 13-15

Table 3. Presentation CSR PT EMP 2006 - 2011

Statements	2006	2007	2008	2009	2010	2011
Corporate Governance						
1. Structure						
• Board structure	O	O	O	O	O	O
• Responsibilities of board members	O	O	O	O	O	O
• Composition of the board	O	O	O	O	O	O
• Names and biographical details of board members	O	O	O	O	O	O
• Individual responsible for implementation	O	O	O	O	O	O
2. Code	O	O	O	O	O	O
3. Financial Audit						
• Composition and task of Audit committee	O	O	O	O	O	O
• Procedure for appointment of External auditor	O	O	O	O	X	X
• Policy on rotation of external auditors	X	X	X	X	X	X
• Statement regarding audit fees and non-audit fees	X	X	X	X	O	O
• Independence of auditor	O	O	O	O	O	O
4. Shareholders policy	O	O	O	O	O	O
5. Code of ethics	O	O	O	O	O	O
Environmental Policy						
1. Regulation environmental standard	O	O	O	O	O	O
2. Individual name/department environmental responsibility	O	O	O	O	O	O
3. Energy and water use	X	X	X	O	O	O
4. Emision minimum or management wasted	X	O	O	O	O	O
5. Environmental aspects as a inventory management policy	X	X	X	X	X	X
Social Policy						
1. Human Rights and/or Working standard	X	X	O	O	O	O
2. Sponsor	O	O	O	O	O	O
3. Employee development	O	O	O	O	O	O
4. Healthy and safety work policy	O	O	O	O	O	O
5. Work position policy	O	O	O	O	O	O

O = YES X= NO Source: proceed, 2016

From the table above it can be seen that in 2006, EMP get a score of 9 so it is quite good in presenting CSR. Then in 2007, the score increased to 10 and increased again to 11 in 2008, then in 2009 to 2011, EMP got a score of 12. It can be concluded that in 2007 and 2001, EMP has presented CSR is well on its official website.

Table 4. Presentation of CSR PT Medco Energi 2006 to 2011

Statements	2006	2007	2008	2009	2010	2011
Corporate Governance						
1. Structure						
• Board structure	O	O	O	O	O	O
• Responsibilities of board members	O	O	O	O	O	O
• Composition of the board	O	O	O	O	O	O
• Names and biographical details of board members	O	O	O	O	O	O
• Individual responsible for implementation	O	O	O	O	O	O
2. Code	O	O	O	O	O	O
3. Financial Audit	O	O	O	O	O	O
• Composition and task of Audit committee	O	O	O	O	O	O
• Procedure for appointment of External auditor	O	O	O	O	O	O
• Policy on rotation of external auditors	X	X	X	X	X	X
• Statement regarding audit fees and non-audit fees	X	X	X	X	X	X
• Independence of auditor	O	O	O	O	O	O
4. Shareholder policy	O	O	O	O	O	O
5. Code of ethics	O	O	O	O	O	O
Environmental Policy						
1. Regulation environmental standard	O	O	O	O	O	O
2. Individual name/department environmental responsibility	O	O	O	O	O	O
3. Energy and water use	O	O	O	O	O	O
4. Emision minimum or management wasted	O	O	O	O	O	O
5. Environmental aspects as a inventory management policy	X	X	X	X	X	X
Social Policy						
1. Human Rights and/or Working standard	O	O	O	O	O	O
2. Sponsor	O	O	O	O	O	O
3. Employee development	O	O	O	O	O	O
4. Healthy and safety work policy	O	O	O	O	O	O
5. Work position policy	O	O	O	O	O	O

O = YES X= NO Source: Proceed, 2016

From the table above it can be seen that from 2006 to 2011, MedcoEnergi always got a score of 12. It can be concluded that MedcoEnergi has presented the CSR well on its official website.

CONCLUSION

Based on the analysis and discussion that has been described in the previous chapter shows that the EMP and MedcoEnergi has leveraged its official website performs well in terms of CSR disclosure has been made by both companies, both in terms of corporate governance, environmental policy and social policy. The results showed that the index Publicity EMP is increasing every year, while the index MedcoEnergi Publicity is always stable and high. This is a proof that the EMP and MedcoEnergi has been implementing sustainable CSR and getting better every year.

MedcoEnergi must be present in full on its official website about the sustainability report. In addition, further research can be expected to examine the CSR disclosure before and after the Lapindo mud disaster.

FUNDING

This work was supported by Faculty of Economics and Business, Universitas Airlangga research grants 2016

References

Achda, B. Tamam. 2008. *Konteks Sosiologis Perkembanga Corporate Social Responsibility (CSR) dan Implementasinya di Indonesia.* http://www.menlh.go.id/serbaserbi/csr/sosiologi.pdf.

Andre Rahmanto. 2009. Wacana CSR dalam Website Korporasi. http://andrerahman.staff.uns.ac.id/2009/08/11/wacana-csr-dalam-website-korporasi/.

Anggraini, F.R.R., 2006, *Pengungkapan Informasi Sosial dan Faktor-Faktor yang Mempengaruhi Pengungkapan Informasi Sosial dalam Laporan Keuangan Tahunan (Studi Empiris pada Perusahaan-Perusahaan yang Terdaftar di Bursa Efek Jakarta)*, Simposium Nasional Akuntansi 9 Padang.

Ashok, Kriti. 2010. *Framing Corporate Social Responsibility On The Websites of Fortune 10 Green Giant*s. San Jose State University.

Boone dan Kurtz. 2007. Contemporary *Business; Pengantar Bisnis Kontemporer: Buku 1*, Salemba Empat, Jakarta.

Bungin, Burhan. 2008. Penelitian Kualitatif: Komunikasi, Ekonomi, Kebijakan Publik, dan Ilmu Sosial Lainnya. Edisi Kedua. Jakarta: Prenada Media Group.

Chaudri, Vidhi & Wang Jian. 2007.*Communicating CSR on the Internet: A Case Study of the top 100 IT Companies in India*. Management.

East-West Management Institute. 2004. Report on a Survey of Corporate Social Responsibility of the Largest Listed Companies in Hungary. Budapest: Hungarian Enviromental Economic Center.

Gossling, T dan C. Voucht, 2007, "Social Role Conception and CSR Policy Success", *Journal of Business Ethics,* Vol. 74, Hal. 363-372.

Harmoni, Ati dan Ade Andriyani. 2008. Pengungkapan Corporate Social Responsibility Pada *Official Website* Perusahaan Studi Pada PT. Unilever Indonesia Tbk. Seminar Ilmiah Nasional Komputer dan Sistem Intelijen (KOMMIT 2008) Auditorium Universitas Gunadarma, Depok , 20-21 Agustus 2008.

Harmoni, Ati. 2009. Interaktivitas Isu CSR Pada Laman Resmi Perusahaan Studi Pada PT. Indocement Tunggal Prakarsa Tbk. Seminar Nasional Aplikasi Teknologi Informasi 2009 (SNATI 2009). Yogyakarta, 20 Juni 2009.

Ikatan Akuntansi Indonesia. 2009. *Pernyataan Standar Akuntansi Keuangan (PSAK) No. 1*. Jakarta: Salemba Empat.

Kotler, Philip and Nancy Lee. 2005. Corporate Social Responsibility. New Jersey: John Wiley and Sons,Inc.

Lodhia, Sumit K. 2004. Corporate Enviromental Reporting Media: A Case for the World Wide Web. Electronic Green Journal, UCLA Library, UC Los Angels.

Lodhia, Sumit K. 2007. The World Wide Web and Enviromental Communication: A Study into current practices in the Australian Minerals Industry. The Australian National University.

Maher, T. Michael. 2001. *Framing: An Emerging Paradigm or a Phase of Agenda Setting*. In Stephen D. Reese, Oscar H. Gandy, & August E. Grant (Eds.), Framing public life: Perspectives on media and our understamding of the social world (pp. 83-94). Mahwah, NJ: Lawrence Erlbaum Associates .

Maignan, I & Ferrell, OC 2004, 'Corporate social responsibility and marketing: an intergrative framework', *Journal of the Academy ofMarketing Science*, vol.32, no.1, pp. 3-19.

Moleong, Lexy J.2007. *Metodologi Penelitian Kualitatif.* Edisi Revisi. Bandung: PT. Remaja Rosdakarya.

Republik Indonesia. 2003. Undang-undang Nomor 19 Tahun 2003 Tentang Badan Usaha Milik Negara. Jakarta: Badan Pengawasan Keuangan dan Pembangunan. 2007. Undang-undang Nomor 40 Tahun 2007 Tentang Perseroan Terbatas. Jakarta: Badan Pengawasan Keuangan dan Pembangunan.

Reverte, C. 2008. "Determinants of Corporate Social Responsibility Disclosure Ratings by Spanish Listed Firms", *Journal of Business Ethics (2009)* 88:351–366 DOI 10.1007/s10551-008-9968-9.

Severin, Werner J. & Tankard, James W. 2005. Teori Komunikasi Sejarah, Metode, dan Terapan di dalam Media Massa. Jakarta: Prenadia Media.

Susanto, A.B, 2009. Corporate Social Responsibility, Jakarta: The Jakarta Consulting Group.

Weber, Robert Philiph. 1990. *Basic Content Analysis*. California: Sage Publication.

Wibisono, Yusuf. 2007. *Membedah Konsep dan Aplikasi CSR: Corporate Social Responsibility*. Gresik: Fascho Publishing.

Yin, Robert K. 2006. Studi Kasus: Desain dan Metode. Jakarta : PT.Raja Grafindo Persada .

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.4008.
Hunter, R. J., Shannon, J. H., & Lozada, H. R. (2017). "Business Crimes" in Entertainment and Sports: A Primer and Discussion in the Subtext of the Olympics and International Sports. *Archives of Business Research, 5(12),* 206-226.

"Business Crimes" in Entertainment and Sports: A Primer and Discussion in the Subtext of the Olympics and International Sports

Richard J. Hunter, Jr.
Seton Hall University, South Orange, NJ, USA

John H. Shannon
Seton Hall University, South Orange, NJ, USA

Héctor R. Lozada
Seton Hall University, South Orange, NJ, USA

ABSTRACT

An important area of law involves crimes committed in the business environment. Part I of this article is a discussion of "business property crimes," such as larceny, burglary, robbery, and others. Part II then introduces the category of offenses termed "White-Collar Crimes." The authors provide examples in the context of sports and entertainment, which intersect in the cases of O.J. Simpson and Norby Walters. Part III offers a discussion on international implications emanating from enforcement actions relating to corruption and bribery under the Foreign Corrupt Practices Act (FCPA) in the context of the Olympic Games and other international sporting events. The authors propose a revision of the FCPA, "The Olympic Bribery Act," to remedy deficiencies in the current statutory framework.

Keywords: Business Crimes; White-collar Crimes; Mail and Wire Fraud; Foreign Corrupt Practices Act; Olympics

INTRODUCTION

Consider these two factoids:

On September 18, 2007, Orenthal James (O.J.) Simpson was charged with three other individuals in a criminal complaint relating to the armed robbery of sports memorabilia collectors in a Las Vegas casino (Criminal Complaint, 2007). The complaint alleged conspiracy to commit a crime, a misdemeanor; conspiracy to commit kidnapping, a felony; conspiracy to commit robbery, a felony; first degree kidnapping with use of a deadly weapon, a felony; burglary while in possession of a deadly weapon, a felony; robbery with the use of a deadly weapon, a felony; assault with a deadly weapon, a felony; and coercion with the use of a deadly weapon, a felony, in connection with events that had transpired on September 13 of that year. The criminal complaint, which was later amended, initially contained allegations of seven felonies and one misdemeanor. The final complaint contained allegations of ten separate felonies and one misdemeanor (Associated Press, 2007). O.J. Simpson was convicted and was sentenced to thirty-three years in Nevada prisons.

A second instance of criminal activity is occurring in the burgeoning area of youth sports, which offers a unique opportunity for criminality. Pennington (2016) points out that according to the National Center for Charitable Statistics youth sports organizations in the United States (approximately 14,000) take in annual revenue of about $9 billion. What is remarkable is that law enforcement authorities, as well as league officials, experts on nonprofit organizations, and news organizations have reported the prosecution of people who volunteered as treasurers and other officers for Little Leagues and sports clubs across the U.S. for misappropriating of funds (for example, $220,000 in Washington, $431,000 in Minnesota, $560,000 in New Jersey) from the clubs' coffers (Pennington, 2016). There appears to be haphazard and scattered oversight of those sums of money because no national agency exists in the country to watch over youth sports. Pennington (2016) asserts that investigators and prosecutors in several states have acknowledged that embezzlement investigations involving youth sports have become common, and tend to be committed by unpaid board members who are highly regarded in their communities.

> *It is difficult to say whether the problem with embezzlement has worsened or if the growth of the leagues simply means more cases; there is no clearinghouse comprehensively tracking fraud in youth sports. But investigators say the problem gets little public discussion even as, by some measures, there are signs of mounting cases. In the last five years, there have been hundreds of arrests and convictions in 43 states involving 15 sports, based on a study of news accounts and a database compiled by the Center for Fraud Prevention, an organization that aims to mitigate embezzlement in youth sports (Pennington, 2016: p. A1 of the NY printed edition)*

In most cases, disputes in the area of commercial law are civil in nature—where a party is seeking either a "legal" remedy in the form of monetary damages (Calamari & Perillo, 1977), or a remedy "in equity" in the form specific performance (Schwartz, 1979) in order to "put the injured party in as good a position as that in which he would have been put by full performance of the contract" (Murphy & Speidel, 1970). The remedy of specific performance is generally *not* available in cases of a breach of a personal service contract (*Philadelphia Baseball Club v. Lajoie*, 1902). Damages are often awarded based upon an allegation of breach of contract, or in the sports arena, tortious interference with an existing contractual relationship (Romano. 2009; Dosh, 2011; Heitner, 2011). (See Appendix I). For example, a case was filed in 2004 where Sports Quest, Inc. had asserted a claim against Dale Earnhardt alleging breach of contract, fraud, and tortious interference with its business relationships (*Sports Quest, Inc. v. Dale Earnhardt, Inc.*, 2004).

In this article, we will focus first on an area of law that involves *crimes* committed against business property. After the discussion of "business property crimes," we will proceed into a discussion of a category of offenses often perpetrated by businesspersons in the conduct of a range of illegal activities termed "white-collar crimes." There are many examples in the context of a discussion of sports and entertainment law, the intersection of which is seen in the cases of O.J. Simpson, Norby Walters, and others (Epstein, 2009; Payne, 2015). We will then extend the discussion into the international arena by looking into the potential implications of the Foreign Corrupt Practices Act (FCPA), where we will argue for a revision of the Act to remedy deficiencies in the current statutory framework.

PART I – CRIMES AGAINST PROPERTY

Crimes Involving Theft

The first category involves crimes committed directly against property under the generic rubric of *theft*. These include robbery, burglary, and larceny. In this regard, courts often distinguish between major and minor crimes—for example, petty larceny and grand larceny, which depend on the value of any property that had been taken.

Larceny

Under the common law, *larceny* was defined as the wrongful and fraudulent taking of the property of another. Larceny may involve the illegal taking of tangible property, but may also include the misappropriation of certain forms of intellectual property such as trade secrets

(Ford, 2017) or computer programs. Larceny also involves the commission of what is commonly known as simple theft and may take the form of a party stealing an automobile or its contents, local "kids" removing the football equipment from a storage room of an opponent prior to the "big game," or even an activity commonly known as pickpocketing. Larceny does not involve the use of any force on the part of a perpetrator or the physical entry of a business premise. The civil law equivalent of theft may be known as trespass to chattels—trespass *de bonis asportatis*—more commonly (at least to law students) as *trespass d.b.a.* (Balganesh, 2008).

Because of the frequency of credit and debit card transactions in the modern economy, a crime of theft (and, perhaps, forgery) occurs if a person steals and uses a credit or debit card or their "personal identification number" (PIN), which permits the thief to access a wide variety of personal and business accounts. For example, a cashier at a local sports memorabilia convention steals the credit card information from a patron and uses it to buy an expensive autograph for his or her own self.

The business of "sports authentication" has provided fertile grounds for the possibility of theft (Jamal & Sunder, 2007). One such case involved a professional "sports authenticator."

State v. Regan (2014)

In November of 2012, Forrest Ewing arranged for the purchase of a baseball card via Craigslist from Appellant, Frank Regan. The card was encased in plastic and had been alleged certified by Professional Sports Authenticator Frank Regan. Regan had used various aliases to sell the cards, as well as an untraceable email address and cell phone number. Forrest Ewing paid $8,700 for the purchase of the proffered Mickey Mantle baseball card from Regan. Ewing then placed the baseball card on EBay, and subsequently learned the card was not genuine. Ewing reported the transaction to the Westerville Police Department, who then contacted Regan. Appellant (Regan) offered to repay the money for the card, but the investigating officers would not accept the payment without bringing charges. Regan was then indicted on one count of theft, a felony of the fourth degree, and one count of forgery, a felony of the fifth degree.

The investigation uncovered appellant's previous sale of similar fraudulent baseball cards in Mentor, Ohio and Bergen, New Jersey. Neither New Jersey nor Ohio had prosecuted appellant due to his offer to repay both parties the money paid for the fraudulent cards on the prior occasions.

The case then proceeded to trial. The jury returned a verdict of guilty on both counts of the indictment. The trial court sentenced appellant to a term of five years community service, with the conditions that he pay restitution, pay the costs of prosecution, and serve one-hundred and fifty days in the county jail.

Burglary

Burglary was defined under the common law as "breaking and entering a dwelling at night" with the intent on the part of the perpetrator to commit a felony. For example, in May of 2017, three football players at the University of Illinois were dismissed from the team following charges being brought against them for attempting to rob a fellow student. The players claimed that it was a "prank gone wrong." Authorities disagreed (Farnelli, 2017). Today, most jurisdictions have modified their criminal statutes to include theft that occurs during the daytime hours and thefts from commercial as well as from a residential dwelling. The concept of "breaking" has largely been abandoned as well. As a result, any unauthorized entry into a building through an unlocked door would qualify under the "breaking" requirement. A burglary accompanied by the element of being armed is sometimes termed *aggravated burglary* and would normally involve the imposition of more serious criminal penalties.

Robbery

Under the common law, *robbery* is defined as the taking of an item of personal property from the person of another accompanied by or effected using force or fear. The critical distinction between robbery and other types of takings requires the element of force and fear. For example, a robber enters into the local convenience store at night and threatens the cashier with physical harm unless the young person surrenders the contents of the lottery cash drawer—this is a classic commission of a robbery. A second example occurred in March of 2010 when a college basketball player, who had been dismissed from the Seton Hall University basketball team, was arrested on the charges of kidnapping and armed robbery. The player eventually pleaded guilty and was sentenced to probation (Associated Press, 2011). However, the actions of the surreptitious pickpocket undertaken without the use of force or fear, while clearly a larceny, are not the actions of a robber. Similar to an aggravated burglary, a robbery accomplished with a deadly weapon such as a gun or knife is considered aggravated robbery and will likewise result in the imposition of a much harsher penalty.

The actions of the recently paroled O.J. Simpson qualified as both robbery and burglary—with the element of aggravation involved.

Receipt of Stolen Property

Suppose that an individual is approached with a “great deal” on two Leroy Neiman lithographs being sold for $1,500 each—when it turns out that the real price would be at least $15,000 apiece. Under these circumstances, might the buyer find him or herself in some legal jeopardy? It is also a crime to be *in possession* of stolen property under certain circumstances. Louis Bland, then a linebacker at Washington State University, was arrested in 2011 for possession of marijuana, possession of a controlled substance, *and* possession of stolen property—a stolen stop sign (Floyd, 2011). No matter the seriousness of the allegation, the elements of proof are standard.

First, the recipient must knowingly have received the stolen property. Second, the receipt of the property must be with the intention to deprive the rightful owner of that property. However, as described below, the requirements of knowledge and intent can be inferred from the circumstances. The stolen property can be any item of tangible property.

For example, the criminal code of Georgia (OCGA, 2016) states that a person commits the offense of theft by receiving stolen property when he receives, disposes of, or retains stolen property which he knows or should know was stolen. In *Whitehead v. State of Georgia* (1984), the defendant contended that the evidence presented by the state was insufficient to show that he knew or should have known that the item at issue, a stereo system, was stolen property. The facts of the case are interesting and instructive.

A stereo system, identified as one of a number stolen in late November 1982 from a J. C. Penney Warehouse, was found by police officers in appellant's bedroom on January 27, 1983. The serial number on the stereo had been purposefully scratched out. In December 1982, appellant bought the stereo from his friend, Walter Gibbs, who approached appellant to buy it and who told appellant that it had been left in the trunk of Gibbs' car. At the time appellant first saw the stereo, it was one of three in Gibbs' home. Appellant paid Gibbs between ten and forty dollars.

The price included the cancellation of a debt owed by appellant to Gibbs. Neither appellant nor Gibbs could testify as to the exact cash amount which was paid or even an approximate amount of the debt. Appellant knew the stereo to be new and worth between $169 to $189. The investigating officer estimated the value of the stereo to be $149.

Under these circumstances, the court stated: "we find the foregoing sufficient evidence on which to base the revocation of appellant's probation. Knowledge that the goods are stolen is an essential element of the crime. This guilty knowledge may be inferred from circumstances which would excite suspicion in the mind of an ordinary prudent man." Perhaps most importantly, and in a reflection of common sense, the court noted that "buying at a price grossly less than the real value is a sufficient circumstance to excite suspicion" (citing *LaRoche v. State*, 1976).

PART II – WHITE-COLLAR CRIMES

Crimes More Likely To Be Committed By Businesspersons

Evidence indicates that certain types of crimes are more likely to be committed by businesspeople than others in society. These types of crimes rarely, if ever, involve physical force or threats of force; rather, white-collar crimes normally involve deceit, fraud, a breach of a fiduciary duty by an agent, trustee, corporate treasurer, accountant, lawyer, etc., or acts which amount to undue influence (*Odorizzi v. Bloomfield School District*, 1966).

Forgery

In addition to forging a signature of a party, the crime of *forgery* may be committed under circumstances where a written document is fraudulently created and/or altered such as to affect the liabilities or rights of a party. (Recall that forgery serves as an absolute or real defense in cases involving the legitimacy of collection efforts relating to commercial paper in determining whether a holder of the paper is a "mere holder" (subject to all defenses—both real and personal) or is a "holder in due course" who is subject only to "real defenses" against the instrument).

Common examples of forgery as a business crime would involve counterfeiting, falsifying a public record (for example, altering a birth certificate to qualify an age-inappropriate athlete for participation in a Little League tournament—referred to as "age cheating"), or the material alteration of a legal document (for example, forging the signatures of parents indicating consent to participate in interscholastic (high school) activities, or, once again in the area of commercial paper, adding or deleting a security party or surety in an application for a business loan).

Perhaps the most egregious example of "age cheating" occurred in 2001. Danny Almonte (who was actually born April 7, 1987) played in the Little League World Series for his Bronx, New York, Little League All-Star team despite being over the cutoff age for the league. His parents had provided a "doctored" birth certificate misrepresenting his birth year as 1989. A writer for *Sports Illustrated* discovered the discrepancy when Almonte's Dominican elementary school records gave his correct birth year (Armas, 2011)

Forgery is likewise an "intent crime," and is not one of strict liability. Thus, signing another person's signature without the intent to defraud is not necessarily forgery. Cheeseman (2002) points out that a spouse does not commit an act of forgery if one spouse signs the payroll check or other similar document for deposit in a joint checking or savings account.

In other cases, the facts may point clearly to the existence of a crime. In *Foster v. State of Georgia*, the State's evidence established that there had been a burglary in which a checkbook and a check encoder machine had been stolen. Two of the checks from that checkbook were then cashed. The authorized individual on the account testified that she was the only one authorized to sign checks on the account, and that she did not sign either check cashed. A handwriting examiner testified the same person had endorsed both checks.

> *Once again, the State of Georgia provides a statutory exemplar where a person commits the offense of forgery in the first degree when with intent to defraud he knowingly makes, alters, or possesses any writing in a fictitious name or in such manner that the writing as made or altered purports to have been made by another person, at another time, with different provisions, or by authority of one who did not give such authority and utters or delivers such writing (OCGA, 2016).*

In *Foster*, the jury had properly been instructed on the elements of forgery, and on the burden of proof placed upon the prosecution to prove the essential elements of the crime, including the *intention* to defraud and *knowledge* that a signature is unauthorized, and that the elements of knowledge and intention could be shown by indirect or circumstantial evidence. In fact, the court noted that criminal intent and knowledge are factual issues which can seldom be proved by direct evidence (*Foster*, citing *Johnson v. State*, 1981). In a case of the sale of an antique sports card, if the seller had traced the real signature of a famous player for the purpose of presenting it as genuine, that act could be considered as forgery as well.

Extortion

Extortion involves obtaining property from another party which is induced by actual (real) or threatened force, violence, or fear. (In a literary reference known to most readers: "I'll make him an offer he can't refuse.") An infamous case involving Norby Walters, an erstwhile collegiate sports' agent, provides a striking example of extortion, where Walters threatened a college athlete who had reneged on his promise to avail himself of his representation with a "broken leg." The case is also important because it also implicates issues relating to mail and wire fraud. These aspects of the case will be discussed separately below.

Extortion may extend to circumstances where a person threatens to publicly expose something about another person unless the extorted party gives money or property. The crime of extortion is commonly referred to as "blackmail." One such case occurred in 2010, with the alleged blackmail of Kansas Athletic Director Lew Perkins by a former athletics department employee who had accused Perkins of accepting $35,000 of exercise equipment in exchange for securing “premium men’s basketball tickets” for the equipment of the company’s owners (Corcoran, 2010).

Adjunct Computer Crimes

Three statutes are relevant to the discussion of “white-collar crimes,” as the means by which criminal activity is conducted. Congress enacted the *Counterfeit Access Device and Computer Fraud and Abuse Act* (1984) (Henderson, 2013). The Act focused on computer use related to:

1. Improper accessing of government information protected for national defense or foreign relations;
2. Improper accessing of certain financial information from financial institutions; and
3. Improper accessing of information on a government computer (Podgor, 2004).

There are seven types of criminal activity enumerated in the Act: obtaining national security information, compromising confidentiality, trespassing in a government computer, accessing to defraud and obtain value, damaging a computer or information, trafficking in passwords, and threatening to damage a computer. An attempt to commit these crimes is also criminally punishable. Specifically, the Act makes it a federal crime to access a computer knowingly to obtain:

- restricted federal government information;
- financial records of financial institutions; and
- consumer reports of consumer reporting agencies such as TransUnion, Equifax, and Experian.

The Act further makes it a crime to use counterfeit or unauthorized access devices, such as code numbers or access cards to obtain "things of value" in order to transfer funds or to "traffic" in such devices (*United States v. Morris*, 1991).

A second statute, the *Electronic Funds Transfer Act* (1978), regulates the payment and deposit of funds using electronic funds transfers into a variety of financial institutions, and transactions involving automatic teller machines (ATMs). The Act makes it a federal crime to "use, furnish, sell, or transport" a counterfeit, stolen, lost, or fraudulently obtained ATM card, code number, or other device used in conducting electronic funds transfers. The Act contains penalties of up to 10 years imprisonment and fines up to $10,000 per violation (15 U.S.C. Section 1693; Brandel & Schellie, 2011).

Finally, the *Wiretap Act* (1968, as amended 1986) establishes criminal liability and/or civil penalties for anyone who "intentionally intercepts, endeavors to intercept, or procures any person to intercept or endeavor to intercept, any wire, oral, or electronic communication" (Barnes, 2006). State law provisions that criminalize acts dealing with the unauthorized use of computers, tampering with computers, computer trespass, and the unauthorized duplication or use of computer-related materials (New York Session Laws, 1986) frequently bolster federal protections.

Other White-collar Crimes

Embezzlement

Embezzlement is the fraudulent conversion of property by a person to whom property had been entrusted. A classic case that embroiled a host of entertainment and sports figures involved Bernie Madoff, who embezzled an estimated $20-$65 billion dollars from clients in his "fictional" investment advising firm, promising returns of "50% on investments in only 90 days" (Hunt, 2010; Yang, 2014). Some notable examples of individuals caught in this version of a classic "Ponzi Scheme," which targeted sports, entertainment, and other celebrities, were Mort Zuckerman, the (Senator Frank) Lautenberg Family Foundation, Elie Wiesel, Kevin Bacon, Sandy Koufax, and the Wilpon Family (owners of the New York Mets).

Embezzlement differs from theft (robbery, burglary, and larceny) because the crime of embezzlement requires the element of *entrusting* of property in the first instance. The criminal actions of the local Little League Treasurer or "Pop Warner" League President (discussed earlier) would qualify as embezzlement (Pennington, 2016).

Criminal Fraud

Criminal fraud is an act that is accomplished through some form of deception or trickery (Green, 2005). Criminal fraud is often involved with receiving property through false pretenses. The elements of deception or trickery have their roots in the requirement of *scienter* (knowledge of falsity or reckless disregard of the truth) which is likewise an element of proving civil fraud (*Spiess v. Brandt*, 1950).

The criminal code of Utah (1953) provides a representative statement of the legal requirements for proving fraud, also called theft by deception:

> *(1) A person commits theft if he obtains or exercises control over property of another by deception and with a purpose to deprive him thereof. (2) Theft by deception does not occur, however, when there is only falsity as to matters having no pecuniary significance, or puffing by statements unlikely to deceive ordinary persons in the group addressed. "Puffing" means an exaggerated commendation of wares or worth in communications addressed to the public or to a class or group" (U.C.A., 1953).*

In order to prove that a defendant has committed theft by deception, the State must prove beyond a reasonable doubt that the defendant has (1) obtained or exercised control over the property of another; (2) by deception and; (3) with a purpose to deprive that person of the property.

The Code continues:

> *Deception occurs when a person intentionally: ... Promises performance that is likely to affect the judgment of another in the transaction, which performance the actor does not intend to perform or knows will not be performed; provided, however, that failure to perform the promise in issue without other evidence of intent or knowledge is not sufficient proof that the actor did not intend to perform or knew the promise would not be performed (U.C.A., 1953).*

Criminal fraud is often accomplished through *mail or wire fraud*, which can also be prosecuted as crimes in themselves if the government is unable to meet its burden of proof relating to the underlying allegation of criminal fraud. However, as shown in the *Walters* case, the use of the mail or wire (telegram/telegraph) must be an integral part of the crime itself, a not a mere incident to it (Wang, 2015).

Issues relating to mail and wire fraud provided the backdrop to the criminal prosecution of Norby Walters, a case that also involved the crime of extortion, discussed above (*United States v. Norby Walters*, 1993; Cox, 1992).

A Reprise of Norby Walters: A "Nasty and Untrustworthy Fellow"

Seeking to enter the lucrative field of athletic representation, Walters recruited fifty-eight football players "willing to fool their universities and the NCAA" by signing with an agent prior to exhausting their athletic eligibility. However, Walters soon discovered "that they were equally willing to play false with him." Only two of the fifty-eight players whom Walters had recruited fulfilled their end of the bargain; the other fifty-six kept the cars and money provided by Walters, and then signed with other agents. The athletes relied on the fact that their representation contracts had literally been locked away until after the collegiate bowl season and had been dated in the future. In fact, the success of the scheme depended on the element of secrecy. The court noted that it was highly unlikely that Walters would initiate a suit to enforce the athletes' promises under these circumstances. In addition, when the fifty-six athletes refused to accept Walters as their agent (nor would they return the payments), Walters resorted to threats. One player, Maurice Douglass, was told that his legs would be broken before the pro draft unless he repaid Walters' firm.

Walters and his partner Lloyd Bloom were charged with criminal conspiracy, extortion (based on the physical threat), and mail fraud. The government alleged that Walters and Bloom had committed fraud by causing the universities where the athletes were enrolled to award athletic scholarships to students who had become ineligible as a result of entering into agency contracts. The indictment alleged that Walters and Bloom had committed mail fraud, in that each university had required its athletes to verify their eligibility to play, and then the universities had sent copies of these eligibility statements by mail to the conferences in which the universities were competing. The court, however, was not convinced. Did the defendants commit mail fraud?

Mail fraud derives from the actions of a party who conceives of a scheme to defraud, for the purpose of obtaining money or property, by means of false pretenses, and then who causes "any matter" to be sent or delivered by way of the United States Postal Service. The United States Code defines mail fraud as follows:

> *Whoever, having devised ... any scheme or artifice to defraud, or for obtaining money or property by means of false or fraudulent pretenses, representations, or promises ... places in any post office or authorized depository for mail matter, any matter or thing whatever to be sent or delivered by the Postal Service ... or knowingly causes [such matter or thing] to be delivered by mail commits the crime of mail fraud (18 U.S.C. Section 1341, 1948).*
>
> *The United States Supreme Court has amplified upon this definition by stating that mailing by a third party (in this case, by the individual universities) suffices if it is "incident to an essential part of the scheme" (Pereira v. United States, 1954).*

Thus, the use of the mails must be an integral part of the underlying fraud and not a mere incident to it. The question turned on whether Walters had caused the universities to use the mail system. While stating that Walters was a "nasty and untrustworthy fellow," the court found no evidence that Walters actually knew that the college would mail the athletes' forms. The court concluded: "Ultimately, the forms verifying the eligibility of the athletes to play did not help Walters plan succeed; the mailing to the Big Ten Conference had nothing to do with the plans success."

While the use of the mails can turn ordinary fraud into mail fraud, the Supreme Court has limited the reach of the mail fraud statute by stating that the statute "does not purport to reach all frauds, but only those limited instances in which the use of the mails is a part of the execution of the fraud" (*Kann v. United States*, 1944). In *Kann*, the Court raised several questions that would be helpful in determining if mail fraud had occurred: "Did the schemers foresee that the mails would be used? Did the mailing advance the success of the scheme? Which parts of a scheme are "essential"?

In dismissing the mail fraud count against Walters, the court concluded that as a matter of law, "no reasonable juror could give an affirmative answer" to these questions. (*Walters* also involved the application of the *Racketeered Influenced and Corrupt Organizations Act* (1970), better known as RICO, but which was held to be inapplicable in the case on a similar basis.)

It is also a crime to engage in *bribery—an* act in which something of value is paid either to a private business or to a government official (*Dixson v. United States*, 1954) in return for something of value—usually in the form of awarding a contract. In the case of bribery, intent is once again a critical element of proof. As noted by Cheeseman (2002, p. 190), there are *two potential crimes* that may be committed in the context of bribery. The offeror of a bribe commits a crime at the point the bribe is tendered or offered. The offeree is guilty of the crime of bribery when the bribe is actually accepted. The person who tenders the bribe may be found guilty of the crime even if the offeree rejects the offer (Holden & Rodenberg, 2016).

Instances of Sports Bribery

Sports.com (2017) notes that "[e]xamples of sports bribery abound throughout modern history, as almost every sport has, at some point or another, been rocked by such a scandal." The history sports in the United States are riddled with examples (ISLaws.com, 2016; Farmer, 2011). Of special note are the activities of Ty Cobb and Tris Speaker fixing baseball games in 1926; the CCNY basketball bribery basketball scandal of 1951-1951; the University of Michigan basketball scandal in the '90s in which bribes were paid to players in order to launder money from sports gambling (Hakim, 2002); the 1961 point-shaving scandal at Seton Hall University; seven University of Toledo football and basketball players who pleaded guilty to conspiracy for accepting money, meals, groceries and gambling chips to either alter their play or provide "inside" information about their team or their opponents from 2004 through 2006 (White, 2015); and the Southern Methodist University football scandal of 1986 when collegiate football players were bribed with thousands of dollars, which resulted in Southern Methodist being given the "Death Penalty" by the NCAA in 1987 (Farmer, 2011).

The issue of sports bribery (Holden & Rodenberg, 2016) has been specifically addressed in a provision of the United States Criminal Code (U.S. Code, Section 224, 1994) which states:

> *Whoever carries into effect, attempts to carry into effect, or conspires with any other person to carry into effect any scheme in commerce to influence, in any way, by bribery any sporting contest, with knowledge that the purpose of such scheme is to influence by bribery that contest, shall be fined under this title, or imprisoned not more than 5 years, or both.*

On the international level (Frecka, Cleveland, Favo & Owens, 2009; Ramasastry, 2011), Roger Pielke (2016), writing for the *Transparency International Global Corruption Report: Sport*, comments on the following well-known instances of corruption and bribery in the international arena:

- The International Olympic Committee (IOC) was involved in a scandal in the 1990s over the Salt Lake City Winter Olympic Games concerning alleged bribes for votes. The episode led to the IOC instituting reforms to encourage greater transparency and accountability, including the creation of an Ethics Commission and the introduction of conflict of interest guidelines.
- The Fédération Internationale de Football Association (FIFA), the body that oversees international football (soccer), has faced a barrage of allegations over its process for selecting the venues of the 2018 and 2022 World Cups, won by Russia and Qatar, respectively. The accusations range from the sordid – cash in brown paper envelopes – to the incredible – alleged gifts of paintings from the archives of Russia's State Hermitage Museum in St Petersburg – and everything in between (Ramasastry, 2011; Esposito, 2016; Sheu, 2016),
- The International Weightlifting Federation (IWF), located in Budapest, Hungary, has faced accusations of financial mismanagement because of its lack of accountability for millions of dollars provided by the IOC.
- The International Volleyball Federation, (FIVB), located in Switzerland, has faced accusations of illegitimate political actions to keep a leadership regime in power, as well as complaints of financial mismanagement of funding.
- The Union Cycliste Internationale (International Cycling Union or UCI), also located in Switzerland, has faced accusations of bribery and financial conflicts of

interest. Additionally, it was entangled in the doping scandal involving Lance Armstrong and his teammates.

- The International Association of Athletics Federations stands accused of covering up institutionalized doping by Russian athletes and of other corrupt practices.
- CONCACAF, one of the regional football federations within FIFA, discovered alleged bribery and tax evasion within its leadership in a 2013 integrity investigation.

Because so many U.S. businesses involved in both sports and entertainment now operate in the highly competitive international market, including seeking out sponsorships and advertising opportunities, combating bribery has taken on a new importance. American companies may find themselves in legal jeopardy if they involve themselves in instances of bribery and corruption with state actors throughout the world on international sports.

PART III – POSSIBLE IMPLICATIONS OF THE FOREIGN CORRUPT PRACTICES ACT: A CONUNDRUM AND A POSSIBLE SOLUTION

An Introduction to the Foreign Corrupt Practices Act

The *Foreign Corrupt Practices Act of 1977* (FCPA) makes it illegal for an American company, or its officers, directors, agents, or employees, to bribe a foreign official, a foreign political party official, or a candidate for foreign political office with the intent to influence the awarding of new business or the retention of an ongoing business activity.

The Guidelines offered by the Fraud Section, Criminal Division of the Department of Justice (2017), note that "The Foreign Corrupt Practices Act of 1977, as amended, … was enacted for the purpose of making it unlawful for certain classes of persons and entities to make payments to foreign government officials to assist in obtaining or retaining business." The Guidelines continue:

> *Specifically, the anti-bribery provisions of the FCPA prohibit the willful use of the mails or any means of instrumentality of interstate commerce corruptly in furtherance of any offer, payment, promise to pay, or authorization of the payment of money or anything of value to any person, while knowing that all or a portion of such money or thing of value will be offered, given or promised, directly or indirectly, to a foreign official to influence the foreign official in his or her official capacity, induce the foreign official to do or omit to do an act in violation of his or her lawful duty, or to secure any improper advantage in order to assist in obtaining or retaining business for or with, or directing business to, any person.*

However, payments made to secure ministerial, clerical, or routine government actions have generally been found *not* to violate the Act. These payments are often referred to as "facilitation" or "grease payments." Facilitation payments may include:

- Obtaining permits, licenses, or other official documents to qualify a person to do business in a foreign country;
- Processing governmental papers, such as visas and work orders;
- Providing police protection, mail pick-up and delivery, or scheduling inspections associated with contract performance or inspection related to transit across country; or
- Providing phone service, power and water supply, loading and unloading cargo or protecting perishable products or commodities from deterioration.

In addition, under the terms of the 1988 Amendments, it is not a violation of the Act if a payment is legal under the written laws of the country or where a defendant is able to show that the amount of the payment was reasonable and was in fact a bone fide expense related to the furtherance of or execution of a contract.

Under the terms of the Act, an American company must keep "accurate books and records" of all foreign transactions and must install internal accounting controls to assure that any payments or transactions are legal and are fully authorized (Hunter, Mest & Shannon, 2011; Hunter & Mest, 2015). A firm can be fined up to $2 million for each occurrence of bribery, and an individual can be fined up to $100,000 and imprisoned for a period up to five years for a violation of the Act.

Statistics show, however, that issues relating to the FCPA have persisted until today. Critics alternatively argue that the law is too weak and riddled with exceptions, or that the Act has placed many U.S. businesses at a competitive disadvantage in conducting international business in markets or regions of the world where commercial bribery is a fact of the market and where actions of competitors are not so constrained (see Koehler, 2010).

The FCPA, Corporate Sponsorships, and the Olympics: Signs of Danger?

The stakes are enormous when discussing the economics of the Olympic Games. Chapman (2016), while acknowledging that the modern Games began as a celebration of non-professional sport, now asserts that "the movement has long-since thrown off any facade of amateurism and is now more flush with corporate cash than ever before." We agree with Chapman. The obvious reason is the influx of big money into what was once considered the worldwide showcase of amateur athletics.

The IOC generates revenues from two major sources: corporate sponsorships and media (ISPO, 2016). Chapman (2016) notes that in 2016 the IOC received more than $4 billion from TV companies for the rights to screen the 19-day Rio Games. Additionally, the eleven global sponsors that financed Rio 2016 had a combined market value of over $1.5 trillion, and used that financial might to lavish more money on the event than ever because of the expectation that the Games would bring in about $9.3 billion in marketing revenues (Chapman, 2016).

To expand on the above, here are the IOC (2017) sources of income over the past six quadrenniums (in millions of U.S. dollars):

Source (in USD millions)	1993-1996	1997-2000	2001-2004	2005-2008	2009-2012	2013-2016
Broadcast	1,251	1,845	2,232	2,570	3,850	4,157
TOP Programme	279	579	663	866	950	1,003
OCOG Domestic Sponsorship	534	655	796	1,555	1,838	2,037
OCOG Ticketing	451	625	411	274	1,238	527
OCOG Licensing	115	66	87	185	170	74
Total	**2,630**	**3,770**	**4,189**	**5,450**	**8,046**	**7,798**

Partner-sponsors are permitted to use Olympic trademarked terms such as "Olympics" and "Rio 2016." More importantly, partners are also allowed to use the Olympic logo alongside their individual brand logo in any advertising campaigns. Coca-Cola is one of the oldest Olympic partners, dating back to 1926.

The sponsors of the most recent 2016 Olympic Games in Rio provided an estimated two billion Euros (US $2.36 billion) for the International Olympic Committee (IOC) just for these Games. In fact, these partnership-sponsorships are the second largest sources of income for the Summer Games, next to the value of broadcast (mainly TV) rights holders.

There were different groups or levels of sponsors at the Olympic Games 2016 in Rio. Eleven international "giants" are permitted to call themselves **"***Worldwide Olympic Partners***,"** who conclude longer-term contracts over at least one Olympic cycle of four years (Epstein, 2014). Those were Coca Cola, McDonald's, Visa, Bridgestone, Samsung, Panasonic, Omega, Procter & Gamble (P&G), General Electric (GE), Dow, and Atos. Each of these companies paid an estimated 100 million Euros (US $118 million) to the IOC for the four-year period from 2013 to 2016, and in return can advertise directly with the Olympic Games.

The second group was the **"***Official Sponsors of the 2016 Rio Olympic Games,***"** contributed directly to Rio's Olympic Organizing Committee. Aside from the automotive partner Nissan, these were mostly Brazilian companies like Embratel, Bradesco, Claro, Net, and Correios.
According to ISPO (2016), there have been three major Olympic Sponsors in the past:

- Coca Cola began its support at the Olympic Games in the Summer Games of 1928, when the drink was offered for the first time to athletes and spectators. As such, he beverage giant has the longest connection with the Olympics. In social media, Coca Cola uses the hashtag #THATSGOLD. At the 2016 Olympics decathlon star Ashton Eaton and soccer player Alex Morgan, were among the athletes featured.
- The Swatch Group's master brand Omega has been responsible for timekeeping at the Olympic Games, with a few exceptions, since 1932 in Los Angeles. When a running a time or world record time is displayed, the logo goes around the world. As a sponsor, the company has also been a "Worldwide Olympic Partner" of the IOC since 2004. Its hashtag: #OmegaVivaRio at the 2016 Olympics featured Michael Phelps, among others.
- In the Olympic sports facilities you can only pay with cash or a Visa credit card. The company has been involved as a top sponsor since 1986, and is especially famous for its spots with significant Olympic moments. The hashtag: #TeamVisa at the 2016 Olympics featured the refugee team at the Rio Olympic Games made of over 350 athletes from around the world.

In the category of **"***Official Supporters of the Rio 2016 Olympic Games***"** were ten companies, including Cisco, Globo, and Latam Airlines. Another thirty companies were **"***Official Suppliers of the Rio 2016 Olympic Games.***"** Among them were firms such as Nike, Microsoft, Airbnb, Eventim, and C&A.

There have been some recent developments. Beginning in 2017, Intel has joined the group of Olympic "top-partners" along with Alibaba, and Toyota. Surprisingly, McDonald's has decided to end its partnership after forty-one years (Buss, 2016)

In this mix, opportunities for corruption and bribery loom everywhere (Lane, 2016). Corporations are not only competing for lucrative sponsorship deals with the IOC, but also for the right to be associated with individual athletes both during the Olympics themselves and during the professional careers. Seddon (2016) identified sixteen examples of "alleged" corruption in the Sochi games. The Rio games were no different (Purcell, 2017). Sports such as boxing, wrestling, and track and field were rife with allegations of doping (Dimant & Deutscher, 2015) and wide-spread cheating on the part of individual athletes and national Olympic committees (Hunter & Shannon, 2016).

There is a major problem however, in seeking to apply the FCPA to cases of bribery in the Olympics setting: The Act *may* not apply.

On its face, the FCPA may not strictly apply to an American corporation allegedly bribing an official of the IOC or an official of a national Olympic committee (unless the national Olympic Committee it is organized as an "official government entity" or is recognized as such because of government influence, direct or indirect financing, or organizational control) because such a party might not strictly qualify under the definition of a "covered party" (government official, etc.) subject to being bribed.

Possible Solutions to the Problem of Sports Bribery

What solutions might be possible?

One solution would be for the Department of Justice, which is charged with FCPA enforcement, to adopt a broad interpretation of the term "foreign official." In analyzing the discreet elements of the FCPA, it might be argued that the IOC should in fact not be considered strictly as a "private party" and should instead be considered as a *quasi-public organization* (see, e.g., Kosar, 2011) with deep ties to national Olympic committees (many of which are closely aligned with sponsoring governments), thus subject to the FCPA. As a result, potential corporate sponsors from the United States would be required to take precautions not to run afoul of prohibitions associated with bribery and other illegal activities. Is their any precedent for moving in this expansive direction?

The Department of Justice might be persuaded to use the definition of a quasi-public entity or institution found in American case law and apply that definition either to the IOC or to a national Olympic committee. Under *Hy-Grade Oil v. New Jersey Bank* (1975), for example, a quasi-public institution was held to be one that "deals with a large number of people," solicits the public's business, or one that "deals in a necessary and/or vital service" (Hunter, Shannon, Amoroso & O'Sullivan, 2017, p.183). The argument can be made that the IOC or a national Olympic committee is such an institution or entity.

However, given the reluctance of the courts, as exemplified in *Walters*, to move beyond the literal meaning of the words found in a criminal statute—and in the FCPA itself—that approach may be problematic.

Is there a second solution? If the FCPA is not applicable, an American company who engages in bribery in connection with the Olympics might still be prosecuted under more conventional statutory authority.

Commercial bribery (Rose-Ackerman, 2010; Klaw, 2012) is a form of bribery that involves corrupt dealing with the agents or employees of potential buyers to secure an advantage over business competitors. Commercial bribery is a form of corruption that does not necessarily involve government personnel or facilities. However, would a commercial bribery statute reach activities in connection with Olympic Officials who are not strictly "buyers" of services or goods, but rather who offer "commercial opportunities" in connection with the various forms of Olympic sponsorships?

We acknowledge that there is no *federal* statute that by its terms expressly prohibits commercial bribery. Commercial bribery is punishable under state law. At present, thirty-six states have enacted laws specifically prohibiting commercial bribery. Among them are California, Delaware, Massachusetts, New Jersey, New York, and Texas. New Jersey supplies a

representative state statutory approach:
Commercial Bribery and Breach of Duty to Act Disinterestedly (2013):
a. A person commits a crime if he solicits, accepts or agrees to accept any benefit as consideration for knowingly violating or agreeing to violate a duty of fidelity to which he is subject as:

(1) An agent, partner or employee of another;
(2) A trustee, guardian, or other fiduciary;
(3) A lawyer, physician, accountant, appraiser, or other professional adviser or informant;
(4) An officer, director, manager or other participant in the direction of the affairs of an incorporated or unincorporated association;
(5) A labor official, including any duly appointed representative of a labor organization or any duly appointed trustee or representative of an employee welfare trust fund; or
(6) An arbitrator or other purportedly disinterested adjudicator or referee.

b. A person who holds himself out to the public as being engaged in the business of making disinterested selection, appraisal, or criticism of commodities, real properties or services commits a crime if he solicits, accepts or agrees to accept any benefit to influence his selection, appraisal or criticism.
c. A person commits a crime if he confers, or offers or agrees to confer, any benefit the acceptance of which would be criminal under this section.
d. If the benefit offered, conferred, agreed to be conferred, solicited, accepted or agreed to be accepted in violation of this section is $75,000.00 or more, the offender is guilty of a crime of the second degree. If the benefit exceeds $1,000.00, but is less than $75,000.00, the offender is guilty of a crime of the third degree. If the benefit is $1,000.00 or less, the offender is guilty of a crime of the fourth degree.

Professor Boles (2014) expounds upon the New Jersey approach, which centers on a breach of a fiduciary duty (pp. 692-693):

> *Fiduciary duty violations also form the crux of private bribery agreements. Employees and other agents in the private sector owe their principals a fiduciary duty of loyalty that requires the agents to act in their principals' best interests by putting the principals' interests above all others in matters connected to the agency relationship. This affirmative duty arises by virtue of the principal-agency relationship, and virtually all employment agreements encompass the duty as an implied contractual condition. If private sector agents accept bribes from third parties when performing their workplace obligations, they violate this duty of loyalty. Agents do not demonstrate undivided loyalty to their principals if the agents solicit or receive bribes in exchange for acting on their bribers' behalf when conducting their principals' affairs. By accepting bribes, agents further their own interests at their principals' expense, in automatic violation of their fiduciary duty. Indeed, legislatures criminalize private bribery "on the theoretical premise that such acts represent a violation of the duty of loyalty that an employee owes to an employer (Boles citing Noonan, 1984, p. XI).*

However, one obvious disadvantage of this approach is that not all states have chosen to *criminalize* "commercial bribery" and prosecutions would be subject to a variety of state approaches and statutory schemes. Professor Boles (2014, p. 686) offers this general comment on the efficacy of state statutory regimes:

> *Within the United States, state legislatures radically differ in their treatment of private bribery. Some states criminalize the offense, while others do not. Those states that criminalize private bribery can be separated into further categories. Some states*

penalize the offense as a felony carrying potentially heavy incarceration sentences and fines, whereas other states choose to penalize the offense as a misdemeanor with minimal jail time and/or minor fines. State governments rarely prosecute private bribery, and the offense has earned a reputation as "the most under-prosecuted crime in penal law (Boles, 2014, citing Wacker, 1988, p. B1).

It might also be possible to prosecute commercial bribery as a "scheme or artifice to defraud" if the mail or interstate wire facilities are used in the commission of the illegal act. However, recall that under *Walters*, the use of the mails or wire must be an integral part of the criminal act itself and not merely incidental to it. The same legal reasoning would apply if a prosecution were brought based on the RICO statute. Professor Bowles (2014) notes that these statutes contain application provisions that limit their ability to address domestic and transnational bribery comprehensively.

Another possible basis of liability lies in the application of the *Travel Act* (1961). Subsection (a) of the statute sets forth the elements of the offense. This act prohibits interstate or foreign travel, or use of the mails or any facility in interstate or foreign commerce, for the purpose of distributing the proceeds of an unlawful activity, committing a crime of violence in furtherance of an unlawful activity, or to promote, manage, establish, carry on an unlawful activity. Subsection (b) of the statute defines *unlawful activity* as including illegal gambling, the sale of liquor on which the Federal excise tax has not been paid, controlled substance offenses, prostitution, arson or extortion or bribery which violate either Federal law or the laws of the state in which the acts are committed. The inclusion of state-crimes in the Act provides the means to federalize certain state laws that may not have *analogous provisions* at the Federal level (Diamant & Fleming, 2012), such as laws prohibiting commercial bribery.

The case of *United States v. Control Components, Inc.* (2009) is an example of the relationship between the FCPA and the Travel Act. In 2009, Control Components pleaded guilty to charges that it violated both the FCPA and the Travel Act. Violations of the FCPA related to corrupt payments to officials and employees of foreign state-owned companies, and the Travel Act related to similar payments to employees of foreign and domestic private companies. Charges were based on Section 641.3 of the California Penal Code (2009) which prohibits commercial bribery.

The circular dilemma is once more present in attempting to apply the Travel Act to alleged bribery in the Olympic setting. Under the FCPA, the *bribed party* must be either a foreign public official or an employee of a state-owned company; or the state in which the alleged act of bribery was committed must have adopted a *commercial bribery statute* that covers the alleged conduct. Boles (2014) asserts that if the bribery transpires within a state that has not criminalized the offense, federal prosecutors may not use these federal statutes to prosecute the offense.

So, is there another solution? Faced with ethical and practical challenges presented by the fact of corruption and bribery in the Olympic setting and elsewhere in international sports, we would urge Congress to enact a new statutory framework, in the form of the *Olympic Bribery Act,* and to do so as an amendment to the FCPA. The amendment should be broad in its approach and application. It will make it a crime for *any person, entity, corporation or organization* in the United States to commit *any act of bribery* in connection with *any aspect* of the Olympic Games through the "use of the mails" or "any facility or instrumentality in interstate or foreign commerce." We would also urge Congress to extend the reach of the statute to *any* "international sports competition."

Whether this approach would receive the support of the business community is another matter. Recall who are among the major American Olympic *partners* and *sponsors*: Coca-Cola, Intel, Visa, Bridgestone, General Electric, Dow, Nike, and Microsoft. Given that currently it appears that bribery by corporate Olympic sponsors might be beyond the reach of either the FCPA or many state commercial bribery statutes, there might be reluctance on the part of Congress to undertake such a process in the current regulatory environment.

PART IV— CONCLUSION

Our intention here was multi-purposed. First, we introduced and discussed the many business "property crimes" that have afflicted the sports and entertainment sector in recent times. We presented examples of these crimes (ranging from theft to forgery, to extortion) and discussed how they involved and affected sports figures and the world of sports.

In Part II, we focused on how, in advancing a business plan or capitalizing on a business opportunity, businesspersons often resort to "white-collar" crimes. The term white-collar crime now refers to a full range of fraudulent activities committed by business and government professionals. These crimes are characterized by deceit, concealment, or result from a violation of a fiduciary duty, and are not dependent on the application or threat of physical force or violence. Because the motivation behind these crimes tends to be financial—to obtain or avoid losing money, property, or services or to secure a personal or business advantage (see FBI.gov, 2017) —our position is that the sports and entertainment industry has been quite susceptible to such types of criminal activities.

To extend the discussion, we introduced in Part III the potential implications of the *Foreign Corrupt Practices Act*, as it may relate to prominent international sports events, most especially the Olympic Games. Allegations of corruption plagued both the Rio and Sochi Games (Lane, 2016; Seddon, 2016). Because of this, our objective is to shine a light on the financial entanglements that may complicate business transactions such as sponsorships in these types of events. We have provided a statutory remedy that we believe might be effective in the fight against corruption and bribery in the Olympics and in other international sporting events, the Olympic Bribery Act.

What our study indicates is that while doping and sexual assault scandals have come to the forefront in very prominent displays, the perils of white-collar crimes are equally evident in the sports world. Athletes, sports teams, regional, national and international sports and business organizations face high economic stakes, particularly at the international level. We believe that this makes them more vulnerable not only to allegations of doping, but also to allegations of white-collar crimes— especially corruption in the form of embezzlement or bribery. We expect this discussion to become more heated as we approach international sporting events such as the 2018 Winter Olympics in PyeongChang, South Korea, FIFA's 2018 World Cup in Moscow, and the 2020 Summer Olympics in Tokyo. To support our claim, please note that baseball and softball will be coming back at the 2020 Summer Games. Both sports were part of the Olympics up until the 2008 Games in Beijing after which they were voted out because of concerns around building stadiums, a lack of professional players, and doping. Caple (2016) asserts that the IOC wants baseball, specifically, to send its very best major leaguers, as do most other sports, such as basketball. This would heighten the interest in TV coverage.

While the opportunities for international exposure through the Olympics and other international sports sponsorships are great, given the record of persistent and pervasive illegal activities, so are the potential risks. American business must be aware of their jeopardy if they engage in questionable or illegal activities of any kind in pursuit of their own "Olympic Gold" and should realize they will pay a steep price if they do so.

APPENDIX I: ELEMENTS OF TORTIOUS INTERFERENCE

The elements of a tortious interference cause of action, although varying from jurisdiction to jurisdiction, include:

- The existence of a contractual relationship or beneficial business relationship between two parties;
- Knowledge of that relationship by a third party;
- Intent of the third party to induce a party to the relationship to breach the relationship;
- Lack of any privilege on the part of the third party to induce such a breach;
- The contractual relationship is in fact breached; and
- Damage to the party against whom the breach occurs.

References

Armas. G. C. (2011). Almonte all grown up now. *Times Union*. Available: http://www.timesunion.com/sports/article/Almonte-all-grown-up-now-1994325.php (August 13-14).

Associated Press (2007). O.J. Simpson charged with 10 felonies, including kidnapping in hotel robbery. *Fox News* (online). Available: http://www.foxnews.com.story/2007/09/18 (September 18).

Associated Press (2011) Robert Mitchell sentenced to probation. Available: http://www.espn.com/mens-college-basketball/story/_/id/7385052/former-seton-hall-pirates-player-robert-mitchell-sentenced-five-years-probation (December 24).

Balganesh, S. (2006). Property along the tort spectrum: trespass to chattels and the Anglo-American doctrinal divergence. *Common Law World Review*, 35(4). Available: http://journals.sagepub.com/doi/abs/10.1350/clwr.2006.35.2.135.

Barnes, W. (2006). Rethinking spyware: questioning the propriety of contractual consent to online surveillance. *University of California Law Review*, 39:1545-1620.

Boles, J. (2014). The two faces of bribery: international corruption pathways meet conflicting legislative regimes. *Michigan Journal of International Law*, 35(4):673-713.

Brandel, R.E. & Schellie, P.D. (2011). Electronic Fund Transfer Act— Regulation E. *Comptroller's Handbook, Comptroller of the Currency* (October).

Buss, D. (2017). McDonald's ends long-running Olympics sponsorship. *Brandchannel*. Available: http://www.brandchannel.com/2017/06/16/mcdonalds-olympics-061617/ (June 16).

Calamari, J.D. & Perillo, J.M. (1977). *Contracts*. St. Paul, Minn.: West Publishing.

California Penal Code. (2009). Section 641.3.

Caple, J. (2016). Baseball is returning to the Olympics, but for how long? ESPN.com. Available: http://www.espn.com/mlb/story/_/id/17223754/baseball-returning-olympics-how-long (August 4).

Chapman, B. (2016). Rio 2016: The richest Games in 120 years of Olympic history. *The Independent* (Online). Available : http://www.independent.co.uk/news/business/analysis-and-features/rio-2016-olympic-games-richest-ever-usain-bolt-mo-farah-a7171811.html. (August 4).

Cheeseman, H.R. (2002). *The legal and regulatory environment* (3rd Ed.). Upper Saddle River, N.J.: Prentice Hall.

Corcoran, T. (2010). Details of alleged blackmail surface, *The Topeka Capital-Journal* (online). Available: http://cjonline.com/sports/2010-05-30/details-alleged-blackmail-surface (May 30).

Counterfeit Access Device and Computer Fraud and Abuse Act. (1984). Public Law 98-473, Title II.

Cox, L. (1992). Targeting sports agents with the mail fraud statute: United States v. Norby Walters & Lloyd Bloom. *Duke Law Journal*, 4:1157-1210.

Diamant, M. & Fleming, B. (2012). FCPA + Travel Act: double trouble? Available: http://www.gibsondunn.com *(April 3).*

Dimant, E. & Deutscher, C. (2015). The economics of corruption in sports: the special case of doping. *Edmund J. Safra Working Papers*, No. 55. Available: https://ssrn.com/ abstract=2546029 (January 20).

Dixson v. United States (1984). 465 U.S. 482 (United States Supreme Court).

Dosh. K. (2013). Do Baylor and other Big 12 schools have tortious interference claim against the SEC? Available: http://businessofcollegesports.com/2011/09/09/do-baylor-and-other-big-12-schools-have-tortious-interference-claim-against-the-sec/ (September 9).

Electronic Funds Transfer Act. 1978. 15 U.S.C. Section 1693 et seq.

Epstein, A. (2009). Incorporating the criminal law in sports studies. *The Sports Journal*, 9(3). Available: https://thesportjournal.org/article/incorporating-the-criminal-law-in-sport-studies/ (July 10).

Epstein, A. (2014). The Olympics, ambush marketing and Sochi media. *Arizona State University Sports and Entertainment Law Journal,* 3(2):110-131.

Esposito, C. (2016). Red card for FIFA: corruption and scandal in the world's foremost sports association. *Richmond Journal of Global Law and Business*, 16:45-60.

Farmer, D. (2011). A compendium of corruption: some of the notorious (and some alleged) scandals in sports history. *Los Angeles Times.* Available: http://articles.latimes.com.2011/ jun/04/sports/la-sp-sports-scandals-20110605 (June 4).

FBI.gov. (2017). What we investigate: white-collar crime. Available: https://www.fbi.gov/investigate/white-collar-crime (Accessed August 13.)

Floyd, B. 2011. Louis Bland arrested for drugs and a stolen stop sign. Available: https://www.cougcenter.com/2011/5/24/2187906/louis-bland-arrested-marijuana-stolen-stop-sign (May 24).

Ford, R.A. (2018 forthcoming). Trade secrets and information security in the age of sports analytics. *The Oxford Handbook of American Sports Law*.

Foreign Corrupt Practices Act of 1977. (1977). 15 U.S.C. Section 78dd-1 et seq.

Fornelli, T. (2017). Illinois dismisses three players following residential burglary charges. *CBS Sports (Online)*. Available: https://www.cbssports.com/college-football/news/illinois-dismiss es-three-players-following-residential-burglary-charges/ (May 24).

Foster v. State of Georgia (1989). 387 S.E.2d 737 (Georgia Court of Appeals).

Fraud and Swindles. (1948). 18 U.S.C. Section 1341.

Frecka, T.J., Cleveland, M.O., Favo, C. & Owens, C.E. (2009). Trends in the international fight against bribery and corruption. *Journal of Business Ethics*, 90(Supp. 2):199-244. Available: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1527470 (December 23).

Green, S.P. (2005). Theft by coercion: extortion, blackmail, and hard bargaining, *Washburn Law Journal*, 4(3):553-581.

Hakim, D. (2002). Michigan punishes basketball program, *New York Times* (online). Available: https://www.questia.com/newspaper/1G1-94175220/michigan-punishes-basketball-program (November 8).

Heitner, D. (2011). Kent State's buyout clause and tortious interference claims. HEITNERLEGAL (Blog). Available: http://heitnerlegal.com/2011/05/15/kent-states-buyout-clause-and-tortious-interfer ence- claims/ (May 15).

Henderson, T.K. (2013). Computer fraud and abuse act— an effective tool for employers in non-compete and theft of trade secret litigation. *ssdlaw.com.* Available: http://ssdlaw.com/ computer-fraud-and-abuse-act-an-effective-tool-for-employers-in-non-compete-and-theft-of-trade-secret-litigation (July 31).

Holden, J.T. & Rodenberg, R.M. (2015). The sports bribery act: a law and economics approach, *Northern Kentucky Law Review*, 42(3):453-475.

Hunt, C. (2009). Evil has a new name (and a new narrative): Bernard Madoff, *Michigan State Law Review*, 2009:947-987.

Hunter, R.J., Jr. & Mest, D. (2015). An update on major enforcement actions: under the accounting provisions of the Foreign Corrupt Practices Act or FCPA. *International Journal of Management Sciences*, 6(4):176-186.

Hunter, R.J., Jr., Mest, D. & Shannon, J.H. (2011). A focus on the Foreign Corrupt Practices Act [FCPA]: *Siemens* and *Halliburton* revisited as indicators of corporate culture. *Atlantic Law Journal,* 13:60-90.

Hunter, R.J., Jr. & Shannon, J.H. (2017). Athletes banned, athletes cleared, athletes reinstated: the court of arbitration for sport: does the United States need a similar court for resolving issues in sports? *Journal of Education and Social Policy,* 4(2): Article 2 (online).

Hunter, R.J., Jr., Shannon, J.H., Amoroso, H.J. & O'Sullivan-Gavin, S.A. (2017). *Law, business and regulation*. South Orange, N.J.: Create Space.

Hy-Grade Oil v. New Jersey Bank. (1975). 350 A.2d 279 (Superior Court of New Jersey).

International Olympic Committee (IOC) (2017). *Olympic marketing fact file: 2017 Edition.* Available: https://stillmed.olympic.org/.../olympic_marketing_fact_file_2016.pdf.

ISLaws.com (2017). *An overview of sports bribery*. Available: http://criminal.islaws.com/ bribery/sports-bribery.

ISPO (2016). Sponsors at the Olympics: the multi-billion dollar business of the IOC. Available: http://www.ispo.com/en/markets/id_78544462/2-billion-what-the-sponsors-are-paying-at-the-olympics.html (July 29).

Jamal, K. & Sunder, S. (2007). Regulation, competition and independence in a certification society: financial reports vs. baseball cards, *University of Alberta School of Business Research Paper*, No. 2013-1007. Available: http://dx.doi.org/102139/ssrn.913703 (June 11).

Johnson v. State (1981). 158 Ga. App. 183, 279 S.E.2d 483 (Georgia Court of Appeals).

Kann v. United States (1944). 323 U.S. 88 (United States Supreme Court).

Klaw, B.W. (2012). A new strategy for preventing bribery and extortion in international business transactions. *Harvard Journal on Legislation*, 49(2):303-371.

Koehler, M. (2010). The façade of FCPA enforcement. *Georgetown Journal of International Law,* 41(4):907-1009.

Kosar, K.R. (2011). The quasi government: hybrid organizations with both government and private sector legal characteristics. *Congressional Research Service*, 7-5700. Available: https://fas.org/sgp/crs/misc/RL30533.pdf *(June 22).*

Lane, C. (2016). Corruption is killing the Olympic Games— or should. *New York Post* (online). Available: http://nypost.com/2016/05/21/corruption-is-killing-the-olympic-games-or-should (May 21).

LaRoche v. State. 1976). 140 Ga. App. 509, 231 S.E.2d 368 (Georgia Court of Appeals).

Murphy, E.J. & Speidel, R.E. (1970). *Studies in contract law*. Mineola, N.Y.: Foundation Press.

Noonan, J.T. (1984). *Bribes* (Oakland, Cal.: University of California Press).

Odorizzi v. Bloomfield School District (1966). 54 Cal. Rptr. 533 (Court of Appeals of California).

Official Code of Georgia Annotated (OCGA). 2016. Section 16-8-7 (a), Code Ann. Section 26-1806.

Pennington, B. (2016). The trusted grown-ups who steal millions from youth sports. *New York Times* (online). Available: https://www.nytimes.com/2016/07/10/sports/youth-sports-embezzlement-by-adults.html (July 11).

Pereira v. United States. (1954). 347 U.S. 1 (United States Supreme Court).

Philadelphia Ball Club v. Lajoie. (1902). 51 A. 973 (Supreme Court of Pennsylvania).

Pielke, R. Jr. (2016). Obstacles to accountability in international sports governance, *Transparency International, global corruptions report: Soccer*. Available: http://www.transparency.org/sportintegrity.

Podgor, E.S. (2004). Counterfeit access device and computer fraud and abuse act of 1984, in *Major Acts of Congress* (Brian K. Landsberg ed.).

Purcell, A. (2017). Rio's Olympic legacy: corruption and people power. *Magazetini*. Available: http://www.magazetini.com/news/rios-olympic-legacy-corruption-and-people-power (August 5).

Racketeered Influenced Corrupt Organizations Act. 1970. 18 U.S.C. Section 1961(1)(A).

Ramasastry, A. (2011). Stopping bribery in international sports: why FIFA's proposed good governance framework is a good beginning, but just a beginning. *Justia.* Available: https://verdict.justia.com/2011/11/08/stopping-bribery-in-international-sport (November 8).

Romano, R.J. (2009). Coaches: be careful when breaking a contract. *ctsportslaw.com*. Available: https://ctsports.com/2009/02/18/coaches-be-careful-when-breaking-a-contract (February 18).

Rose-Ackerman, S. (2010). The law and economics of bribery and extortion, *Annual Review of Law and Social*

Science, 6:217-236.

Schlager, B. (2015). Federal investigation into DraftKings, FanDuel scandal reportedly begins in Florida. *SportingNews*. Available: http://www.sportingnews.com/fantasy/football/news/daily-fantasy-sports-scandal-draftkings-fanduel-insider-trading-federal-grand-jury-lawsuit-nvestigation/7zgypl30hy911rbdlq9u6nok3 (October 10).

Schwartz, A. (1979). The case for specific performance. *Yale Law School Legal Scholar Repository*. Available: http://digitalcommons.law.yale.edu/fus_papers/1118.

Seddon, M. (2014). 16 Eye-popping examples of alleged corruption at the Sochi Olympics. *BuzzFeed News*. Available: https://www.buzzfeed.com/maxseddon/eye-popping-excerpts-from-a-report-alleging-corruption-at (January 27).

Sheu, V. (2016). Corrupt passions: an analysis of the FIFA indictments. *Texas Review of Entertainment and Sports Law*, 18:65-84.

Speiss v. Brandt. (1950). 41 N.W.2d 561 (Supreme Court of Minnesota).

Sports Quest, Inc. v. Dale Earnhardt, Inc. (2004). 2004 N.C. BC 3 (North Carolina Superior Court).

State of New Jersey (2013). *Commercial bribery and breach of duty to act disinterestedly*, NJ Rev. Stat. Section 2C:21-10.

New York Session Laws (1986). Chapter 515.

State of Nevada, Plaintiff, v. Orenthal James Simpson, et al. (2007). Case Number 07F19288A-D (Justice Court, Las Vegas Township, Clark County, Nevada).

State v. Regan. (2014). Ohio 3797 (Court of Appeals, 5th Appellate District of Ohio).

Travel Act. (1961). 18 U.S.C. Section 1952.

United States Department of Justice. (2017). *Foreign Corrupt Practices Act: An overview.* Available: https://www.justice.gov/criminal-fraud/foreign-corrupt-practices-act.

United States v. Control Components, Inc. (2009). Number: 09-CR-162-JVS (Case filed on July 22, 2009, Central District of California).

United States v. Morris (1991). 928 F.2d 504 (2nd Circuit Court of Appeals).

United States v. Norby Walters (1993). 997 F.2d 1219 (7th Circuit Court of Appeals).

U.S. Code (1994). Bribery in sporting contests. 18 U.S. Code Section 224. Available: https://www.law.cornell.edu/uscode/text/18/224.

Utah Criminal Code (1953). Section 76-6-405.

Wacker, B. (1988). Inside the case of commercial bribery: how a kickback scheme in Hawaii led to LI sting. *Newsday,* p. B1 (February 8).

Wang, W.K.S. (2015). Application of the federal mail and wire fraud statutes to criminal liability for stock market insider trading and tipping. *University of Miami Law Review*, 70:220-299.

White, E. (2015). Three more probation sentences in Toledo sports bribery probe. *CBS Detroit (Online)*. Available: http://detroit.cbslocal.com/2015/03/31/3-more-probation-sentences-in-toledo-sports-bribery-probe/ (March 31).

Wiretap Act. (1968, as amended 1986). 18 U.S.C. Section 2511.

Yang, S. (2014). 5 years ago Bernie Madoff was sentenced to 150 years in prison— here’s how his scheme worked. *Business Insider*. Available: http://www.businessinsider.com/how-bernie-madoffs-ponzi-scheme-worked-2014-7 (July 1).

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.4005.
Toscano Moctezuma, J. A., & García Benau, M. A. (2017). Why The Big 4 Are Leaders in The Audit Market? A Literature Review. *Archives of Business Research,* 5(12), 227-244.

Why The Big 4 Are Leaders in The Audit Market? A Literature Review

Juan Alfonso Toscano Moctezuma
Institute of Social Sciences and Management
Autonomous University of Ciudad Juarez

María Antonia García Benau
School of Economics, University of Valencia

ABSTRACT
The leadership of the large audit firms has generated great interest in the accounting doctrine to explain about the concentration factors of the audit market. The objective of this paper was to make an extensive review about the empirical studies published in the international literature about the reasons why the Big 4 are leaders in the audit market. The methodology used to review the literature contains an important theoretical background, since it is based on a thorough documentary review of the most relevant theoretical and conceptual approaches of international literature. The results indicate that the leadership of the Big 4 in the audit market is due to factors such as; the concentration of the market, the specialization of the audit service by sector and size of the companies audited, the economies of scale, the structured audit methodologies, the demand for the audit service with differentiated quality and the demand of an auditor with reputation.

Keywords: Audit Market Concentration Factors, Audit Services Differentiation, Auditor with Reputation.

INTRODUCTION

The international literature has been collecting various empirical studies on the audit markets of different countries, and through which, researchers have shown in their work the existence of a high concentration of the audit market in the world in favor of a few audit firms, currently known as the Big 4. (Zeff and Fossum, 1967; Metcalf Report, 1976; Danos and Eichenseher, 1986; Beattie and Fearnley, 1994; Pong, 1999; Sarbanes-Oxley Act of 2002; Beattie et al., 2003; GAO 2003; Asthana et al., 2004; Oxera Report, 2006; Abidin et al., 2007; 2010; Ballas and Fafaliou, 2008; European Commission, 2010; Eguasa and Urhoghide, 2017; among others).

This has led accounting research to study the *factors* of the concentration in the audit market by which it can be explained why the Big 4 seem to have a certain competitive advantage in relation to the rest of the other audit firms active in that market (Jensen and Meckling, 1976; Dopuch and Simunic, 1980; De Angelo, 1981; Dopuch, 1984; Turpen, 1990; Craswell and Taylor, 1991; Craswell et al., 1995; Hogan and Jeter, 1999; Francis, 2004; American Assembly Report, 2005; Barton, 2005; Abidin et al., 2006; Velte and Stiglbauer, 2012; Gao et al., 2013; Cairney and Stewart, 2015; Koshykova, 2017; among others).

In this same line, the accounting investigators of the market of audit of the different countries have been analyzed the behavior of the agents involved in this market in *two* lines of study:
On the one hand, there is the line of study on the analysis of the strategic behavior of the Big 4 to get their clients (Eichenseher and Danos, 1981; Simunic, 1980; Dopuch and King, 1996; Kwon, 1996; De Beelde, 1997; DeFond et al., 2000¸ among others).

And on the other hand, there is the line of study on the determination of the behaviors of the companies audited in regard to the election of auditor (Jensen and Meckling, 1976; Dopuch and Simunic, 1980; De Angelo, 1981; Balsam et al., 2003; among others).

Regarding the line of study on the analysis of the strategic behavior of the Big 4 to get their customers, some of the variables or explanatory factors that have aroused more interest among the students of the audit market to submit them to the empirical analysis from the point of view of the strategies followed by the Big 4 audit firms, it has been the *specialization* implemented by these large international firms, taking into account the *sector* of the activity of the audited companies and the *size* of these, as well as the used of *economies of scale* based on their business *size* and the use of structured *audit methodologies.* This line of study is based on the *hypothesis of difference in efficiency* in the audit market (Dopuch and Simunic, 1980; DeAngelo, 1981; Danos and Eichenseher, 1982; Dopuch and Simunic, 1982; Kinney, 1986; Palmrose, 1986; Cushing and Loebbecke, 1986; Simunic and Stein, 1987; Turpen, 1990; Craswell et al., 1995; De Beelde, 1997; Ritson, et al., 1997; Ferguson et al., 2006; Toscano and García Benau, 2011; among others).

The other line of research study about the determination of the behaviors of the companies audited in regard to the election of the auditor, the international literature indicates that following the proposals and results obtained through the studies Empirical studies on the choice of auditor in the Anglo-Saxon audit markets, have been describing different theories or approaches to the processes of auditor election, which have served accounting researchers as a *theoretical* reference *framework* for the completion of empirical studies about the choice of auditor (De Angelo, 1982; Dopuch, 1984; Balvers et al., 1988; Francis and Wilson, 1988; Beattie and Fearnley, 1995, Kwon, 1996; García Benau et al., 1998; Toscano and García-Benau, 2015; among others). This line of study in turn is divided into two groups:
First, there is the group of empirical studies that considers that the provision of the audit service by itself, is not capable of differentiating it due mainly to the regulation of its norms and procedures, the price of the audit service being therefore the determining factor for the election of the auditor. This is what is known as the *homogeneity hypothesis of the audit service* (Simunic, 1980; Doogar and Easley, 1998; Willekens and Achamadi, 2003; McMeeking et al., 2007; among others).

Secondly, there is the group of empirical studies that considers that there are qualitative aspects in the provision of the audit service that allow the differentiation of the existing service among the different audit firms that participate in the audit market. This is what is known as *the audit service differentiation hypothesis* (Shockley and Holt, 1983, Francis and Wilson, 1988, Turpen, 1990, Craswell et al., 1995, Toscano and García-Benau, 2016).

The objective of this paper was to make an extensive review about the empirical studies published in the international literature about the reasons why the Big 4 are leaders in the audit market.

The methodology used to review the literature contains an important theoretical background, since it is based on a thorough documentary review of the most relevant theoretical and conceptual approaches of international literature. International data resources (Google Scholar, SSRN, EBSCO, Science Direct) were included in this literature review. The keywords used in the targeted search were “audit market concentration”, “factors of the concentration in the audit market”, “auditor choice”, “auditor with reputation”, “Big 4 audit firms”. Due to the limited number of studies available it was not practical to restrict our studies to a certain period of time.

After this introduction, the present work is structured as follows: The second section is devoted to describe the most relevant theoretical and conceptual approaches published in the international literature on the factors of the concentration of the audit market and the possible reasons for leadership of the Big 4 in the audit market. The third section shows the results of this research on some of the most important previous empirical studies published in the international literature. Finally, the last section serves to describe the conclusions about the empirical evidence published in the international literature.

CONCEPTUAL AND THEORETICAL FRAMEWORK

The specialization of the Big 4 audit firms by sector of activity and size of its clients.

The international literature points out that in order to understand the nature of the competition of a particular market it is necessary to analyze the conditions of the cost structure and market demand, placing at the center of the analytical interest the strategies followed by the companies in relation to your leadership in a certain market (Bueno and Morcillo, 1993; among others).

For this reason, *the hypothesis of efficiency difference in the audit market*, has led researchers to accept that the structure of the market and therefore the concentration, is not an exogenous variable but it is explained, both by the basic conditions of the audit market, and in particular by the structure of costs of the industry and the nature of the demand, as well as by the strategic behavior of the large auditing firms that participate in that market (Dopuch and Simunic, 1980; Danos and Eichenseher, 1982; Campbell and McNiel, 1985; Garcia Benau, et. al., 1998; Culvenor and Godfrey, 2000; Dunn et al., 2000; Balsam et al., 2003; among others).

These new variables become the fundamental aspects to understand the dynamics of market functioning and are the determining factors of concentration (Danos and Eichenseher, 1982; among others). Thus, accounting researchers raise the possibility that audit firms may enjoy a certain competitive advantage due to their own strategic behavior (Toscano and García-Benau, 2011; among others).

The two variables that have aroused most interest among accounting researchers have been the *specialization* by *sector* of the activity of the audited companies and the specialization due to the *size* of the companies audited, since it is proposed by the students of the audit market the possibility that there is a specific "accounting technology" by sector of activity, because in certain cases the application and selection of accounting policies are unique for a specific sector of activity.

With regard to the demand for *specialization* of audit firms according to the activity *sector* of the audited companies, the investigation shows that audit firms, in order to meet said demand, will perform certain strategic conducts.

Such strategies are presented as an investment in specialized knowledge, that is, the acquisition of a skill and experience above the average experience required in the audit market, such as recruitment and training of personnel, opening of offices, software development and sophisticated decision tools, which enables these audit firms to enjoy both economies of scale and economies of scope to offer their services in specific segments of the market. say, specialized services at a lower cost than other competing audit firms could offer.

In this same script, the investigation has reached the conclusion that the audit market can be segmented, allowing *specialization* according to the nature of the audited company, being one of the fundamental aspects with respect to the *sector* of activity to which belong the audited company (Shockley and Holt, 1983, Simunic, 1987; Williams and Dirsmtih, 1988; Turpen, 1990; Craswell et al., 1995; Gramling and Stone, 2001; Casterella et al., 2004; among others).

In regard to the demand for *specialization* of audit firms according to the *size* of the audited company, accounting researchers consider that the demand for it derives from the size of the audited company, as aspects such as; The planning of the audit, the internal control compliance tests, and the audit program are dependent on the size of the audited company. However, in practice it is difficult for a given company to follow only one of these strategies indicated in a pure sense, either in terms of leadership in *costs* or *specialization*, there being rather a combination of both strategies.

Economies of scale and structured audit methodologies used by the Big 4 audit firms

The international literature also highlights that the study of the relationships between the offer of audit services and market structure can not only be made from a perspective of the analysis of the strategic behavior of auditors, but also studies can be carried out where the strategic variable or behavioral is not the explanatory variable.

In this same line, accounting researchers have always shown great interest in inferring the existence of relationships between the *size* of audit firms and their market power, especially as a result of the controversial Metcalf Report (1978), for the reason that the Big 4 audit firms, due to their high market share in the audit market, could influence their favor over the regulatory bodies of the US accounting profession and thereby prevent the existence of adequate competition with respect to the rest of the other, firms audit.

For this reason, the research has considered important to analyze the way in which there can be an empirically testable relationship between business *size* and *cost* leadership strategy, acquiring special importance in terms of the audit market exploit the advantages of having a position more favorable in the curve of average costs and the use of technologies that allow the production of the audit service at more competitive prices.

Thus, accounting researchers distinguish *two* variables or explanatory factors that can explain the high concentration of the audit market, such as the existence of *economies of scale* and the possible use of structured audit *methodologies*.

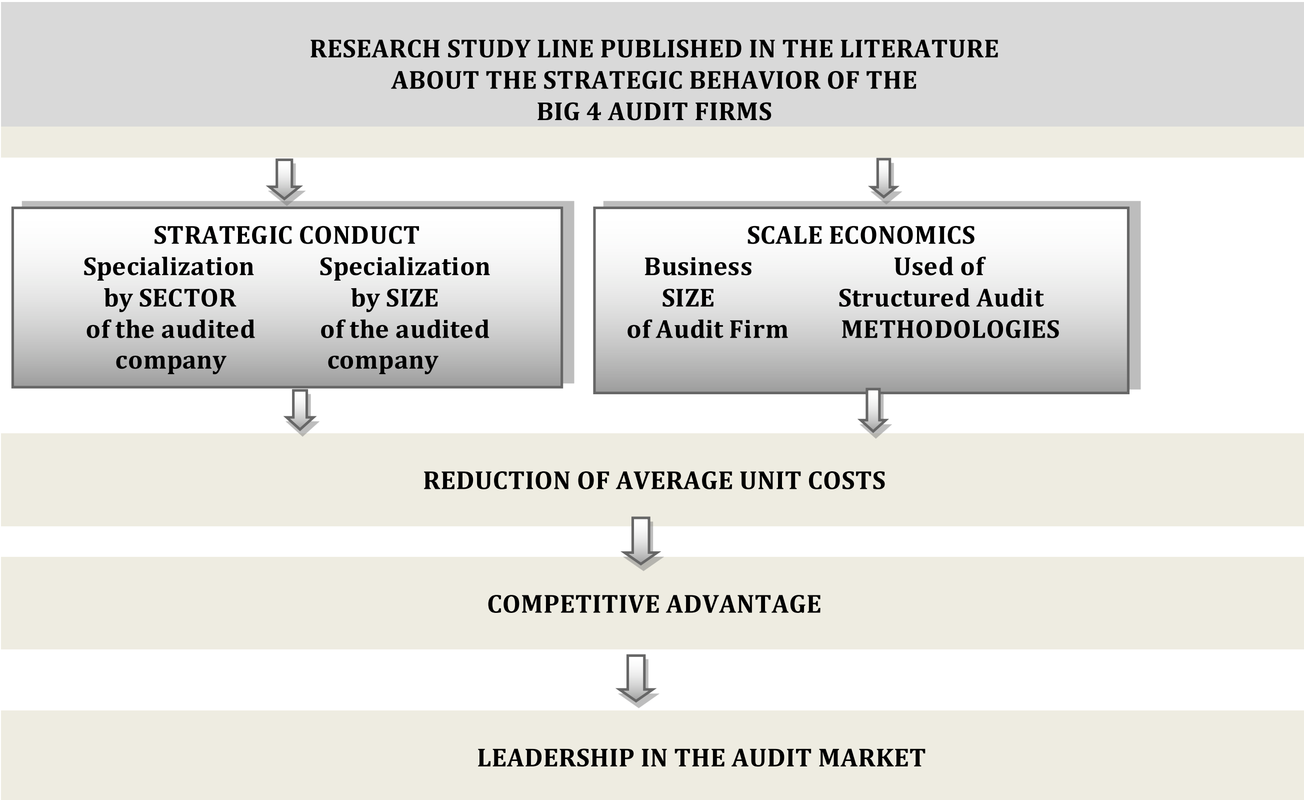
As regards the existence of *economies of scale*, the literature highlights the possibility that certain auditing firms, due to their size, may be more efficient than others by reducing costs of the service offered.

Based on this premise, the accounting researchers study if the high market shares held by large international audit firms could be explained by the existence of these economies of size (Francis and Stokes, 1986; among others).

Regarding the use of structured *methodologies* of audits, the research shows that their use can also be an element that allows the audit firms to reach a competitive position through the reduction of average unit costs, since it is presumed that the recurrent use of contrasted procedures and methods must, in principle, lead to a reduction in costs. However, it should be noted that this is questionable, for the reason that the same methodology can not necessarily be applied with the same level of effectiveness to two different companies audited.

Next, in graphic 1., the study lines followed by the accounting researchers on the relationships between the offer of audit services and market structure from a point of view of large audit firms are synthesized.

GRAPHIC 1.



The homogeneous audit service.

The international literature points out that the audit service has some unique characteristics that make it different from other professional services, due to its mandatory nature and the deep regulation that affects it, that is, certain companies, particularly those that arouse more interest for the company. society, are required to submit their financial statements to the review process involved in the audit.

The obligation of certain companies to submit their financial information to the control of the audit is justified from a normative point of view because it is considered that through this activity a better informed and organized society is enabled, aspects that can increase the general welfare of the same.

Likewise, although the contracting of the audit service may be voluntary on the part of any entity, the reality is that the vast majority of the auditing services demanded come from contracts for the execution of mandatory audits of the annual financial statements.

Thus, the situation can be presented that certain companies that must choose an auditor do not perceive the prior need to hire the audit service on a voluntary basis.

If this is the case, in principle, it is assumed that the process of choosing the auditor will not have in itself the greatest relative importance with respect to the type of auditor necessary, since, there is no internal stimulus for the demand for the audit, this It would then result that, in view of the companies obliged to hire the independent audit service, they could not see any difference between all the audit firms that offer this service.

In this sense, the auditor election process is simply reduced to the mere fact of hiring any auditor in order to cover their obligation, and in that case, the most rational solution for certain companies, it seems that is, the hiring of the auditor who offers the service at the lowest possible *price.*

In addition, the practice of auditing the financial statements of companies is highly regulated both by the technical standards issued by the organized profession, as well as by the procedures and other legal requirements imposed by the supervisory bodies in relation to their own execution and the substrate in which it is carried out, that is, the financial information.

Therefore, based on the fact that the audit is a professional service subject to permanent regulation and considering that all the suppliers of the audit service adequately apply it, the hypothesis can be established that there is little capacity for different auditors to provide the audit service in different ways, or at least that there is less differentiation capacity than if the service were provided in an environment with little regulation.

Based on this premise, the argument of rational choice of certain companies to hire the mandatory audit and the reduced possibility of finding differences between the different suppliers of the audit service, would be the choice of the auditor that offers the service at a lower possible price.

Therefore, *the hypothesis* of homogeneity in the provision of the audit service consists, then, in the consideration of the price as an explanatory variable of the auditor election processes.

Finally, the international literature highlights that these approaches of accounting researchers based on the premise of the homogeneity of the audit service, represent the starting point of a series of works on the behavior of the agents of the audit markets fundamentally of the English-speaking countries (Simunic, 1980; DeAngelo, 1981; Francis, 1984; Danos y Eichenseher, 1986; Kinney, 1986; Palmrose, 1986; Kaplan, 1990; Turpen, 1990; Pong and Wittington, 1994; among others).

Tbe differentiated audit service.

As a counterpart to what is considered in the studies referred to in the previous sub-section, the international literature also highlights a second group of scientific studies on audit markets that considers that *the audit service is not homogeneous*.

This is equivalent to saying that their claimants can differentiate the service provided by the different auditors, for the reason that they perceive the existence of different qualities.

Thus, the works based on the differentiation of the audit service, describe different scenarios in which the companies that demand the audit service require the contracting of a certain audit service, that is, an audit service with a *quality differential* (Chow, 1982; Watts and Zimmerman, 1983; Simunic y Stein, 1987; Francis y Wilson, 1988; Beatty, 1989; Wilson and Grimlund 1990;

DeFond, 1992; Beattie y Fearnley, 1995; Tomczyk, 1996; Colbert and Murray, 1998; Toscano and Garcia-Benau, 2016; among others).

One of these scenarios is made up of companies that produce high agency costs, such as companies that have a large shareholder dispersion.

In these cases, the accounting researchers have focused on analyzing the behavior of certain companies that due to their corporate characteristics could be expected to demand superior quality services, that is, the corporate characteristics of these companies will be the determinants of the benefits can they get a quality audit (Francis y Wilson, 1988; Knapp, 1991; DeFond, 1992; Agrawal y Knoeber, 1996; Garcia-Benau et al., 1999; among others).

Among the corporate features that have generated the most attention in the international literature are the *agency costs* that take place within the companies.

Since Jensen and Meckling (1976) argued that the audit requires a special highlight to control agency costs, part of the research has been oriented to the analysis of how the nature of these agency costs in certain audited companies can explain a differentiated demand of the quality of the audit service and, therefore, the election of a given auditor.

Likewise, the international literature points out scenarios such as those presented in those companies that, for the first time, will launch their shares on the stock market. In these cases, the international literature pays attention to the type of auditor chosen by these companies, revealing in their work that companies prefer to prefer large international audit firms for their reputation and image (Palmrose, 1984; Firth and Smith, 1992; Moizer, 1997; Lennox, 1999; Fargher et al., 2001; Krishnamurthy at al., 2002; Mayhew and Wilkins, 2002; entre otros).

In this way, they can serve as a means to reduce uncertainties among future investors, and thus be able to ensure an exit to financial markets in the most favorable conditions (Menon and Williams, 1991; Simunic and Stein, 1995; Hogan, 1997; among others).

Finally, the international literature has also been gathering various works in which the accounting researchers instead of defining a priori the scenarios in which certain audits are demanded, that is, audits with a quality differential, let them be their own audited companies that make clear which are the attributes that define the concept of quality. To this type of studies, the accounting investigators frame them within which it could be denominated like the theory of the behavior or signals (Schroeder et al., 1986; Sutton and Lampe, 1990; Beattie and Fearnley, 1995; Butterworth and Houghton, 1995; among others).

Next, in figure 2, we synthesize the main aspects that make up each of the two theories.

GRAPHIC 2.

THEORIES PUBLISHED IN THE INTERNATIONAL LITERATURE ABOUT THE DEMAND OF THE AUDIT SERVICE BY THE CLIENTS OF THE BIG 4 AUDIT FIRMS

PREMISE

The Audit Service does not admit easy differentiation | **Audited companies can differentiate between qualities of the audit service**

HYPOTHESIS

The homogeneity of the audit service
The price is the only variable that affect the process of choosing auditor

The differentiation of the audit service
There are multiples factors that affect the process of- choosing auditor

APPROACHES FROM WHICH THE MOST RELEVANT WORKS ARE PRESENTED

Predatory pricing policy	**Scenarios that demand quality auditing**
Scale economics	**Agency costs**
Structured methodologies	**Securities issues on the stock market**
Scope economies	**Behavioral theory or signals**

RESULTS OF LITERATURE REVIEW

More than four decades ago, the international journal *The Accounting Review* published the article entitled "An Analysis of Large Audit Clients" by the authors Zeff and Fossum (1967), which provided empirical evidence on the worrying high level of market concentration audit.

From the pioneering work of Zeff and Fossum (1967) the analysis of the concentration of the audit market has been to this day, a topic widely debated both in the academic and professional fields (Rhode et al., 1974; Moizer and Turley, 1989; Beattie and Fearnley, 1994; Johnson et al., 1995; García-Benau, et al., 1998; Wolk et al., 2001; Thavapalan et al., 2002; Beattie et al., 2003; Toscano and Garcia-Benau, 2014; among others).

In this same sense, the different regulatory and professional bodies have also ceased to express their concern regarding the great power achieved by the large international firms, especially due to the negative consequences that could derive for the proper functioning of the audit market. by the fact that the supply of audit services in the world is dominated by a few audit firms (Metcalf Report, 1976; AICPA Report, 1978; The Sarbanes-Oxley Act of 2002; GAO Report, 2003; Accountancy Age, 2005; American Assembly Report, 2005; The Oxera Report, 2006; European Commission-Green Paper, 2010).

Therefore, we present a brief description of the previous studies that we believe are the most important that have been published in the international literature:
The academic researchers Dopuch and Simunic, 1980; Eichenseher and Danos (1981), Danos and Eichenseher (1982), Campbell and McNiel, 1985; Kwon (1996) and Hogan and Jeter (1999) focused on the study of concentration in different segments of the US audit market, as well as observing specialization in certain segments.

De Beelde (1997), carries out a research work on the specialization industry of the large auditing firms, as well as on the level of concentration of the audit market in Belgium. The results indicate that the level of market concentration for the first four auditing firms (C4) is variable in terms of specialized countries and industries, and that the presence of the Big Six or Big 6 in certain specific industries is not consistent among the countries analyzed.

For their part, Simunic (1980), Dopuch and Simunic (1980), Danos and Eichenseher (1982) and Tonge and Wootton (1991), with respect to the analysis of the prices established in the audit market, observed that these prices were consistent with a competitive situation, that is, regardless of whether the audit market at that time was divided into different segments.

Bigus and Zimmermann (2008) analyze auditors' market shares and concentration in Germany on the basis of audit fees, which have been subject to disclosure since 2005. Audit firms specialize in certain industries or stock market segments. Market concentration increases over time. At present, concentration seems to be higher in Switzerland, although it is lower in the United States of America (USA) and the United Kingdom (UK).

Bills et al., (2015) examine the audit pricing effects when auditors specialize in industries conducive to transferable audit processes. The results indicate that industry specialists charge incrementally lower fees in industries with homogenous operations, and particularly in industries with both homogenous operations and complex accounting practices.

Empirical studies on the factors of concentration in audit markets argue that economies of scale in the preparation of audits of client companies benefit the high concentration of the supply of services held by a few audit firms (Eichenseher and Danos, 1981, Danos and Eichenseher, 1986, Toscano and García-Benau, 2011, among others).

Among the studies that focus on analyzing whether different audit firms can effectively exploit economies derived from their business size, that is, economies of scale as a means of explaining efficiency differences, we highlight those of Palmrose (1986) and Danos and Eichenseher (1986). They have verified the existence of economies of scale in the US audit market, which means that the high market shares of large international audit firms are explained because they operate at lower costs, an aspect that is consistent with the hypothesis of that the choice of auditor is determined by the price of the service.

The search by auditing firms of economies of increasing scales has aroused academic interest in the effect that mergers among large international firms can have on concentration levels (Tonge and Wootton, 1991, Minyard and Tabos, 1991; Wootton et al., 1994; among others). In this sense, several studies have shown that the choice of auditor is explained by the economies of scope; among them, the works of Simunic (1984), Beck et al. (1988) and Turpen (1990).

The works of Kinney (1986), Kaplan et al. (1990) and Mutchler and Williams (1990) have shown that the pressure of competition, the need to control labor costs, as well as the need to reduce audit risk, are factors that cause auditing firms to make efforts to improve the audit process through the use of structured methodologies, which allow the development of work in a shorter time and with greater precision. This produces a positive effect on the prices of the audit that these firms can offer, and there is empirical evidence that shows that companies that use structured methodologies obtain a greater number of clients. These ideas have given rise to many investigations that try to explain the behavior of the market by observing different levels in the execution of the audit work and, therefore, in the possibility that there is an overprice in the provision of the audit service (Palmrose, 1986, De Fond et al., 2000, and Casterella et al., 2004, Toscano and García-Benau, 2011).

Traditionally, it is considered that the audit market has to show the characteristics of monopolistic markets with their associated drawbacks, due to the dominance exercised by the large international firms. However, when this market is dissected in different segments (for example, the segment of large customers) it is observed that the established prices are consistent with a competitive situation (Simunic, 1980, Danos and Eichensher, 1982, Simon et al., 1986, Tonge and Wootton, 1991, García Benau, et al., 1998, Pong and Burnett, 2006).

Davies and Lyon (1982) point out that companies prefer to use the so-called differentiation of products rather than entering into the price war. However, we must not forget that the evidence of many of the works of recent years, including the contribution of DeAngelo (1981 and 1982), which have highlighted the position contrary to that put forward by Davies and Lyon to emphasize the practice of offering audit services below cost, which in the Anglo-Saxon literature is usually expressed using the term "*low balling*", using it as a barrier to entry to avoid auditor change (Simon and Taylor, 1997; Dopuch and King, 1996; among others).

Ferguson and Scott (2013) examines intra-Big 4 audit fee premiums in the Australian market. During the period examined (2002–2004), they find the main feature of the Australian audit market over this period is a PwC brand premium, which suggests price competition and thus no collusive pricing. Within the Big 4, audit pricing effects are likely to be a growing area of inquiry in future audit pricing literature. Overall, the study implies that regulatory concerns about a lack of a competition in the audit market during this period are inconsistent with the audit pricing evidence.

Cairney and Stewart (2015) examine the relationship between a client industry's homogeneity and audit fees. They find that specialist auditors charge lower fees in homogenous industries. They observe a lower standard deviation of fees in more homogenous industries. Together, these results suggest that auditors sustain lower costs in audits of homogenous clients and that the similarly lower costs incurred across auditors are passed on to clients in the form of lower fees.

In other previous works collected by the international literature, other factors have been identified that potentially affect the choice of the auditing firm, such as the level of rivalry existing in a given industry and the prices set by the auditor. In particular, the investigations of Eichenseher and Danos (1981), Kwon, (1996), and Hogan and Jeter (1999) conclude that the level of competition in a given industry is a factor that affects the choice of auditor while the company The client may be reluctant to hire a firm that audits its direct rivals.

Among the corporate features that have generated the most attention in the international literature are the agency costs that take place within the companies. Since Jensen and Meckling (1976) argued that the audit requires a special emphasis to control the costs of agency, part of the research has been oriented to the analysis of how the nature of these agency costs, can explain a differentiated quality demand of the audit and, therefore, the election of a given auditor (Fan and Wong, 2005; Huang et al., 2016; Eguasa and Urhoghide, 2017).

In this sense, the specialized literature has collected several works that have investigated factors related to the costs of agency of the company that explain that the demand for audits of higher quality and, therefore, a greater demand for the audit services provided by the large auditing firms. In particular, it has been found that factors such as the diffusion of property, the existence of incentive contracts based on results and the future issuance of debt are positively related to the demand for higher quality audits (DeFond, 1988; Francis and Wilson, 1988, Palmrose, 1988, Arruñada, 2000, Piot, 2001, among others).

The literature has also been collecting various works in which accounting researchers instead of defining a priori the scenarios in which certain audits are demanded, that is, audits with a quality differential, allow the audited companies themselves to that they reveal the attributes that define the concept of quality (Barton, 2005, Francis and Wang, 2008, Monterrey and Sánchez-Segura, 2008, Cahan et al., 2011, Lawrence et al., 2011, Boone et al. , 2012, Veltea and Stiglbauer, 2012, Francis et al., 2013, Choi et al., 2016, among others).

To this type of studies, the accounting researchers frame them within what could be called the theory of behavior or signals (Mock and Samet, 1982, Schroeder et al., 1986, Sutton and Lampe, 1990, Beattie and Fearnley, 1995, Butterworth and Houghton, 1995, Hay and Davis, 2004, among others).

Francis and Wilson (1988), DeFond (1992), Citron and Manalis (2001), Eisenberg and Macey, 2003; Hay and Davis (2004), Barton (2005) and Monterrey and Sánchez-Segura (2008) contrast the hypothesis that there is a demand for quality audits, as it is empirically contrasted that those companies in which the highlighted situations take place systematically choose the large international firms (Carlin et al., 2008).

In this sense, although from the side of the demand of the companies, the researchers De Fond (1988) and Francis and Wilson (1988) focused their work in shaping the relationship that exists between the factors that intervene in the costs, the companies (the existence of incentive contracts based on results and the future issuance of debt) and the demand for higher quality audits (Citron and Manalis, 2001, Toscano and García-Benau, 2016, Huang et al., 2016, Eguasa and Urhoghide, 2017; among others).

Another type of study focuses on the launch of a package of shares, and to guarantee a maximum price, auditors that offer high quality in their service use as a means of reducing the uncertainties of future investors. Among this type of studies, they would highlight the empirical works of Simunic and Stein (1987), Balvers et al. (1988), Beatty (1989), Menon and Williams (1991), Hogan (1997), Wallace, 1998 and Pittman and Fortin (2004).

Dopuch and Simunic (1980), DeAngelo (1981), Francis and Wilson (1988), Boone et al., (2000) and Wolk, et al., (2001), observed that the Big 8 achieved high quotas of the audit market because they provided differentiated quality audit services and also had a high reputation. Based on these results, another group of works related to the study of the effects on the audit market derived from mergers among large international firms (see, Tonge and Wootton, 1991, Minyard and Tabor, 1991, Wootton et al. al., 1994; Wolk et al., 2001; and Thavapalan et al., 2002, among others).

The international literature points out scenarios such as those presented in those companies that, for the first time, will launch their shares on the stock market. In these cases, the literature pays attention to the type of auditor chosen by these companies, revealing in their work that companies prefer to prefer large international firms for their reputation and image. In this way, they can serve as a means to reduce uncertainties among future investors, and thus ensure an exit to financial markets in the most favorable conditions (Menon and Williams, 1991, Simunic and Stein, 1995, García-Benau et al., 2000, Citron and Manalis, 2004, Pittman and Fortin, 2004, Barton, 2005, Toscano and García-Benau, 2016, Huang et al., 2016, Eguasa and Urhoghide, 2017).

CONCLUSIONS

In this article, we have presented a research paper whose objective was to make an extensive

review of the most relevant empirical studies published in the international literature on some of the factors that may explain the concentration of the market in favor of the Big 4. After the elaboration of this work, we have reached the following conclusions:
The main research published by the international literature points to a series of *factors* that explain the high level of concentration in the audit markets (Francis, 1984, Simon, 1985, Baber et al., 1987; Haskins and Williams, 1990, Craswell and Taylor, 1991, Steven, 1991, Beattie and Fearnley, 1994, Corona Romero et al., 1995, Simunic and Stein, 1995, Taylor, 1997, García-Benau et al., 1998, Taylor and Simon, 2003, Abidin et al., 2007; among others).

Among the *factors* that accounting research has also highlighted as explanations of the high concentration in power of the large international firms, currently known as the Big 4, are the strategic behaviors on the part of the audit firms to *specialize* in both the *size* of the company audited as the economic *sector* of the audited company (Eichenseher and Danos, 1981, Danos and Eichenseher, 1982, Ritson et al., 1997, Hogan and Jeter, 1999, Neal and Riley, 2004; among others).

Likewise, the *factors* that explain the reasons for the high concentration is the provision of the audit service at more competitive prices in the presence of *economies of scale* and *structured audit methodologies*, sometimes offering prices below the cost of the audit service. (Dopuch and King, 1996), a phenomenon that was pointed out more than two decades ago by DeAngelo (1981) and known as *low balling*.

Finally, the effect of *reputation* is another determining *factor*, that is, it is based on the fact that the offered audit service is not homogeneous, therefore there are different qualities, so that the *differential quality* appears as a explanatory variable that implies the hiring of a certain type of auditor to the detriment of the remaining auditors (Beattie, 1989, Wilson and Grimlund, 1990, Craswell et al., 1995, Tomczyk, 1996, Moizer, 1997, Fargher et al., 2001, Doogar et al., 2003, Barton, 2005, Toscano and Garcia-Benau, 2016; among others).

BIBLIOGRAPHIC REFERENCES

ABIDIN, S. ; BEATTIE, V. Y GOODACRE, A. (2006) : "Audit Market Concetration and Auditor Choice in the UK", University of Stirling, Working paper, pp. 1-15.

ABIDIN, S. ; BEATTIE, V. Y GOODACRE, A. (2007) : "An Analysis of UK Audit Market Concentration and Fee Rates: Pre and Post Andersen Demise (1998-2003)", University of Stirling, Working paper.

ACCOUNTANCY AGE (2005) : "DTI investigates big four´s dominance", *AccountancyAge,*http://www.accountancyage.com/big-three-dti-asks.

AGRAWAL, A. Y KNOEBER, C. (1996) : "Firm performance and mechanisms to control agency problems between managers and shareholders", *Journal of Financial and Quantitative Analysis,* Vol. 31 (3), pp. 377-397.

AMERICAN ASSEMBLY REPORT (2005): *The Future of the Accounting Profession: Auditor Concentration*.

ARRUÑADA, B. (2004): "Audit Failures and the Crisis of Auditing", *European Business Organization La Review,* 5, pp. 635-643.

ASTHANA, S. BALSAM, S. Y KIM, S. (2004): "The effect of Enron, Andersen, and Sarbanes-Oxley on the market for audit services, availabre at SSRN: http://ssrn.com/abstract=560963.

BABER W.; BROOKS, E. Y RICKS, W. (1987): "An Empirical Investigation of the Market for Audit Services in the Public Sector", *Journal of Accounting Research,* Vol. 25 No. 2, Autum, pp. 293-305.

BALSAM, S.; KRISHNAN, J. Y YANG, J. (2003): "Auditor industry specialization and earnings quality, *Auditing: A Journal of Practice and Theory*, vol. 22(3), pp. 71-97.

BALVERS, R. J.; MCDONALD, B.; Y MILLER, R. E. (1988): "Underpricing of new issues and the choice of auditor as a signal of investment banker reputation", *The Accounting Review,* 58(4), pp. 605-622.

BALLAS, A. AND FAFALIOU I. (2008): "Market shares and concentration in the EU auditing industry: The Effects of Andersen's Demise", *International Advances in Economic Research*, 14(4) pp. 485-497.

BARTON, J. (2005): "Who Cares About Auditor Reputation?" *Contemporary Accounting Research,* 22(3), pp. 549-586.

BEATTIE, R. (1989): "Auditor Reputation and the Pricing of Initial Public Offerings", *The Accounting Review*, No. 4, p. 693-707.

BEATTIE, V. Y FEARNLEY, S. (1994): "The Changing Structure of the Market for Audit Services in the UK–A Descriptive Study". *British Accounting Review*, Vol. 26, December, pp. 301-322.

BEATTIE, V. Y FEARNLEY, S. (1995): "The importance of audit firm characteristics and the drivers of auditor change in UK listed companies", *Accounting and Business Research*, 25, pp. 227-239.

BEATTIE, V.; GOODACRE A. Y FEARNLEY S. (2003): "And then there were four: A study of UK audit market concentration - causes, consequences and the scope for market adjustment", *Journal of Financial Regulation and Compliance,* 11 (3) pp. 250-265.

BECK, P.; FRECKA, T. Y SOLOMON, I. (1988): "A Model of the Market for MAS and Audit Services: Knowledge Spillovers and Auditor-Auditee Binding", *Journal of Accounting Literature*, pp. 50-64.

BIGUS, J.; AND ZIMMERMANN, R.C. (2008): Non-audit fees, market leaders and concentration in the German audit market: A descriptive analysis. *International Journal of Auditing* 12 (3): 159-179.

BILLS, K., JETER, D. AND STEIN, S. (2015): "Auditor industry specialization and evidence of cost efficiencies in homogeneous industries". *The Accounting Review*, 90 (5): 1721-1754.

BOONE, J. P.; KHURANA, I. K. AND RAMAN, K. K. (2012): Audit market concentration and auditor tolerance for earnings management. *Contemporary Accounting Research* 29 (4): 1171-1203.

BUENO, E. Y MORCILLO, P. (1993): *Fundamentos de economía y organización Industrial*, McGraw-Hill, Madrid.

BUTTERWORTH, S. Y HOUGHTON, K. (1995): "Auditor Switching: The Pricing of Audit Services", *Journal of Business Finance & Accounting*, Vol. 22, No. 3, pp. 323-344.

CAHAN, S., JETER, D. AND NAIKER, V. (2011) "Are all industry specialist auditor are the same?", *Auditing: A Journal of Practice & Theory,* 30 (4): 191-222.

CAIRNEY, T.; AND STEWART, E. (2015): "Audit fees and client industry homogeneity. *Auditing: A Journal of Practice & Theory* 34 (4): 33-57.

CAMPBELL, T. Y MCNIEL, D. (1985): "Stochastic and Non stochastic Determinants of Changes in Client-Industry Concentrations for Large Public-Accounting Firms", *Journal of Accounting and Public Policy,* No. 1, pp. 317-328.

CARLIN, T.; FINCH, N. Y LAILI, N. (2008): "Questioning the Big 4 Audit Quality Assumption: New Evidence from Malaysia", MGSM Working Paper in Management, No. 2008-9, Electronic copy available at SSRN.

CASTERELLA, J. R.; FRANCIS J. R.; LEWIS, B. L. Y WALKER, P. L. (2004): "Auditor industry specialization, client bargaining power and audit pricing, Auditing", *A Journal of Practice and Theory*, No. 23 (1), pp. 123-140.

CHOI, J.H., KIM, J. AND RAMAN, K. K. (2016): "Did the 1998 merger of Price Waterhouse and Coopers & Lybrand increase audit quality? Contemporary Accounting Research, (forthcoming).

CHOI, J. B., KIM, J. B. AND SUNWOO, H, Y. (2017): "Audit Market Concentration and Audit Fees: An International Investigation, workshop participants at the Korean Accounting Association´s annual meeting.

CHOW, C. W. (1982): "The demand for external auditing: Size, debt and ownership influences". *The Accounting Review,* Abril, pp. 272-291.

CITRON, D.B. Y MANALIS, G. (2001): "The International audit firms as new entrants to the statutory audit market: an empirical analysis of auditor selection in Greece, 1993-1997", *European Accounting Review,* Vol. 10(3), pp. 439-459.

COLBERT, G. Y MURRAY, D. (1998): "The association between auditor quality and auditor size: An analysis of small CPA firms, *Journal of Accounting, Auditing and Finance,* Vol. 13(2), pp. 135-150.

CORONA ROMERO, E.; GARCÍA BENAU, M.A.; RUÍZ BARBADILLO, E. Y VICO MARTÍNEZ, A. (1995): "The Audit Market in Spain. An Analysis of the Top 250 Non-Financial Companies", Paper presented at the *European Accounting Congress*, Birmingham.

CRASWELL, A. Y TAYLOR, S. (1991): "The market structure of auditing in Australia: The hole of industry specialization*, Research in Accounting Regulation*, Vol. 5, pp. 55-77.

CRASWELL, A. T.; FRANCIS, J.R. Y TAYLOR S. L. (1995): "Auditor Brand Name Reputations and Industry Specializations", *Journal of Accounting and Economics*, pp. 297-322.

CULVENOR, J. Y GODFREY, J. M. (2000): "The derived demand for specialist auditor services", 23th Annual Congress of the European Accounting Association, Munich Germany.

CUSHING, B. Y LOEBBECKE, J. (1986): *Comparison of audit methodologies of large accounting firms,* Accounting Research Study, no. 26, American Accounting Association.

DANOS, P. Y EICHENSEHER, J. (1982): "Audit Industry Dynamics: Factors Affecting Changes in Client Industry Market Shares", *Journal of Accounting Research*, Vol. 20, pp. 604-616 Autumn.

DANOS, P. Y EICHENSEHER, J. (1986): "Long-Term Trends Toward Seller Concentration in the U. S. Audit Market", *The Accounting Review*, Vol. 61, No. 4, pp. 633-650.

DAVIES, S. W. Y LION, B. R. (1982): "Seller Concentration: The Technologial Explanation and Demand Uncertainty", *The Economic Journal,* December, pp. 903-919.

DE ANGELO, L. E. (1981): "Auditor Independence, Lowballing, and Disclosure Regulation", *Journal of Accounting and Economics*, Vol. 3, pp. 113-127.

DEANGELO, L. (1981): "Auditor Size and Audit Quality", *Journal of Accounting & Economics*, 3, pp. 183-199.

DE ANGELO, L. E. (1982): "Mandated Successful Efforts and Auditor Choice", *Journal of Accounting and Economics*, No. 4, pp. 171-203.

DE BEELDE, I. (1997): "An Exploratory Investigation of Industry Specialization of Large Audit Firms", *The International Journal of Accounting*, Vol. 32, No. 3, pp. 337-355.

DEFOND, M.L. (1988): "The Association between Changes in Client Firm Agency Costs and Auditor Switching", *Auditing: A Journal of Practice & Theory*, Vol. 11, No. 1: pp. 16-31.

DEFOND, M. L.; FRANCIS, J. R. Y WONG, T. J. (2000): "Auditor industry specialization and market segmentation: Evidence from Hong Kong", *Auditing: A Journal of Practice and Theory*, 19 (1) Spring, pp. 49-66.

DOOGAR, R. Y EASLEY, R. F. (1998): "Concentration without differentiation: A new look at the determinants of audit market concentration. *Journal of Accounting and Economics* 25, pp. 235-253.

DOOGAR, R.; SOUGIANNIS, T. Y XIE, H. (2003): "The Impairment of Auditor Credibility: Stock Market Evidence from the Enron-Andersen Saga", *SSRN Working Paper.*

DOPUCH, N. (1984): "The demand for quality-differentiated audit services in an agency cost setting: An empirical investigation: Discussion, *Auditing Research Symposium,* University Urbana, pp. 253-263.

DOPUCH, N; Y KING, R. R. (1996): "The effects of low-balling on audit quality: an experimental markets study", *Journal of Accounting, Auditing and Finance,* Vol. 11(1), pp. 45-68.

DOPUCH, N. Y SIMUNIC, D. (1980): "The Nature of Competition in the Auditing Profession: A Descriptive and Normative View", *Regulation and the Accounting Profession,* Buckley, J. W. y Weston, J. F. Lifetime Learning Publications, pp. 77-94.

DOPUCH, N. Y SIMUNIC, D. (1982): "Competition in Auditing: An Assessment", *Fourth Auditing Research Symposium*, University of Illinois, Champaign, IL.

DUNN, K. A.; MAYHEW, B. W. Y MORSFIELD, S. G. (2000): "Auditor industry specialization and client disclosure quality". Document of work.

EGUASA, B. E. AND URHOGHIDE, R. O. (2017): "Audit Market Concentration and Quality in Nigeria", *Journal of Business and Management,* Vol. 19, Issue 9, Ver. IV. pp. 01-09.

EICHENSEHER, J. Y DANOS, P. (1981): "The Analysis of Industry-Specific Auditor Concentration: Towards an Explanatory Model", *The Accounting Review,* Vol. 56, No. 3, pp. 479-492.

EISENBERG, T. Y MACEY, J.R. (2003): "Was Arthur Andersen Different" An Empirical Examination of Major Accounting Firm Audits of Large Clients", *Journal of Empirical Legal Studies,* 1(2), pp. 263-300.

EUROPEAN COMMISSION, (2010): *Audit Policy: Lessons from the crisis. Green Paper.* Brussels.

FAN, J., AND WONG, T.J. (2005): "Do external auditors perform a corporate governance role in emerging markets? Evidence from East Asia", *Journal of Accounting Research* 43 (1): 35-72.

FARGHER, N.; TAYLOR, M. Y SIMON, D. (2001): The demand for auditor reputation across international markets for audit services, *The International Journal of Accounting,* Vol. 36(4), pp. 407-421.

FERGUSON, A.C.; FRANCIS, J. R. Y STOKES, D.J. (2006): "What matters in audit pricing: Industry specialization or overall market leadership?", *Accounting and Finance,* 46(1), pp. 97-106.

FERGUSON, A., AND SCOTT, T., (2013): "What if there were three?" Audit pricing within the Big 4 and the PricewaterhouseCoopers' premium in the Australian audit market", *International Journal of Auditing,* 18 (1): 57-67.

FIRTH, M. Y SMITH, A. (1992): "Selection of auditor firms by companies in new issue market", *Applied Economics*, 24, pp. 247-255.

FRANCIS, J. (1984): "The Effect of Audit Firm Size on Audit Prices, a Study of the Australian Market", *Journal of Accounting and Economics*, Vol. 6 January, p. 133-151.

FRANCIS, J. (2004): "What do we know about audit quality?", *British Accounting Review,* Vol. 36(4), pp. 345-368.

FRANCIS, J. Y STOKES, D. (1986): "Audit prices, product differentiation, and scale economies: further evidence from the Australian audit market", *Journal of Accounting Research,* 24, pp. 383-393.

FRANCIS, J. Y WILSON, E. (1988): "Auditor Changes: A Test of Theories Relating to Agency Cost and Auditor Differentiation", *The Accounting Review,* Vol. 63, No. 4, pp. 663-682.

FRANCIS, J., AND WANG, D., (2008): "The joint effect of investor protection and Big 4 audits on earnings quality around the world", *Contemporary Accounting Research,* 25 (1): 157-191.

FRANCIS, J.R., MICHAS, P.N. AND SEAVEY, S. (2013): "Does audit market concentration harm the quality of audited earnings? Evidence from audit market in 42 countries", *Contemporary Accounting Research,* 30 (1): 322-355.

GAO (2003): *Public Accounting Firms: Mandated Study on Consolidation and Competition*, (General Accounting Office) retrieved July 3rd, 2003, from http://www.gao.gov.

GARCÍA-BENAU, M. A.; RUIZ BARBADILLO, E. Y VICO MARTÍNEZ, A. (1998): *Análisis de la estructura del mercado de servicios de auditoría en España*. VI Premio de investigación Contable "José María Fernández Pirla". ICAC, Ministerio Economía y Hacienda, Madrid.

GARCÍA-BENAU, M. A.; RUIZ BARBADILLO, E. Y VICO MARTÍNEZ, A. (2000): "Factores que condicionan la elección y el cambio de auditor en la empresa española", *Revista de Contabilidad*, vol. 3, No. 6, pp. 49-80.

GARCÍA-BENAU, M. A.; GARRIDO, P.; VICO, A.; MOIZER, P. Y HUMPREY, C. (1999): "La calidad del servicio de auditoría: los auditores vistos por sus clientes", *Revista Española de Financiación y Contabilidad,* Vol. 28, No. 102, pp. 1005-1042.

GRAMLING, A.; JOHNSON, V. Y KHURANA, I. (2001): "The association between audit firm industry experience and financial reporting quality. Working paper, Georgia State University.

HASKINS, M. Y WILLIAMS, D. (1990): "A contingent model of intra-Big Eight auditor changes", *Auditing: A Journal of Practice and Theory*, Vol. 9, No. 3, pp. 55-74.

HAY, D. Y DAVIS, D. (2004): "The voluntary choice of an audit of any level of quality, *Auditing: A Journal of Practice and Theory*, Vol. 23(2), pp. 37-54.

HOGAN, C. E. (1997): "Costs and Benefits of Audit Quality in the IPO Market: A Self-Selection Analysis", *The Accounting Review,* Vol. 72, No. 1, p. 67-86.

HOGAN, C. E. Y JETER, D. C. (1999): "Industry Specialization by Auditors", *Auditing: A Journal of Practice & Theory*, Vol. 18, No. 1, pp. 1-17.

HUANG, T., CHANG, H. AND CHIOU, J. (2016): "Audit market concentration, audit fees, and audit quality: Evidence from China", *Auditing: A Journal of Practice & Theory,* 35 (2): 121-145.

JENSEN, M. C. Y MECKLING, H. (1976): "Theory of the firm: Managerial Behaviour, Agency Costs and Ownership Structure", *Journal of Financial Economics,* October, pp. 305-360.

JOHNSON, E.; WALKER, K. Y WESTERGAARD, E. (1995): "Supplier Concentration and Pricing of Audit Services in New Zealand", *Auditing: A Journal of Practice & Theory,* No. 2, pp. 74-89.

KAPLAN, S. MENON, K. Y WILLIAMS, D. (1990): "The effect of the audit structure on the audit market", *Journal of Accounting and Public Policy,* pp. 197-215.

KINNEY, W. (1986): "Audit Technology and Preferences for Auditing Standars, *Journal of Accounting and*

Economics, march, pp. 73-89.

KNAPP, M. (1991): "Factors that audit comitte members use surrogates for audit quality". *Auditing: A Journal of Practice & Theory,* Vol. 10, No. 1.

KRISHNAMURTHY, S.; ZHOW, J. Y ZHOW, N. (2002): "Auditor Reputation, Auditor Independence, and the Stock Market Reaction to Andersen´s Clients", *SSRN Working Paper.*

KWON, S.Y. (1996): "The Impact of Competition within the Client's Industry on the Auditor Selection Decision", *Auditing: A Journal of Practice & Theory,* Vol. 15, No. 1, pp. 53-70.

LAWRENCE, A., MINUTTI-MEZA, M. AND ZHANG, P. (2011): "Can Big 4 versus non-Big 4 differences in audit-quality proxies be attributed to client characteristics?", *The Accounting Review* 86 (1): 259-286.

LENNOX, C. (1999): "The relationship between auditor accuracy and auditor size: An evaluation of reputation and deep pockets arguments", *Journal of Business, Finance and Accounting*, Vol. 26(7&8), pp. 779-806.

MAYHEW, B. Y WILKINS, M. (2002): "Audit firm industry specialization as a differentiation strategy: Evidence from fees charged to firms going public. Working paper, SSRN.

MCMEEKING, K. PEASNELL, K. Y POPE P. (2007): "The effect of large audit firm mergers on audit pricing in the UK", *Accounting and Business Research*, 37(4), pp. 301-319.

MENON, K. Y WILLIAMS, D. (1991): "Auditor Credibility and Initial Public Offerings", *The Accounting Review*, No. 2, p. 313.

METCALF REPORT (1976): *The Accounting Establishment: A Staff Study*. U.S. Senate Committee On Government Operations, Re-impressing in *The Journal of Accountancy,* January 1978, pp.89-96.

MINYARD, D. H. Y TABOS, R. H. (1991): "The Effect of Big Eight Mergers on Auditor Concentration", *Accounting Horizons,* Vol. 5, pp. 79-90.

MOIZER, P. (1997): "Auditor reputation: The international empirical evidence", *International Journal of Auditing*, Vol. 1(1), pp. 61-74.

MOIZER, P. Y TURLEY, S. (1989): "Changes in the UK Market for Audit Services: 1972-1982", *Journal of Business Finance and Accounting*, Vol. 16, pp. 41-53.

MONTERREY, J. Y SÁNCHEZ A. (2008): "Gobierno corporativo, Conflictos de Agencia, y Elección de Auditor", *Revista Española de Financiación y Contabilidad,* Vol. XXXVII, No. 137, pp. 113-156.

MUTCHLER, J. Y WILLIAMS, D. (1990): "The Relationship between Audit Technology, Client Risk Profiles, and the Going-Concern Opinion", *Auditing: A Journal of Practice & Theory,* Vol. 9, No.3, pp. 39-54.

NEAL, T.L. Y RILEY, R.R. (2004): "Auditor Industry Specialist Research Design", *Auditing: A Journal of Practice & Theory,* 23(2), pp. 169-177.

NIEVES CARRERA, M.; GUTIÉRREZ, I. Y CARMONA, S. (2005): "Concentración en el Mercado de Auditoría en España: Análisis Empírico del Período 1990-2000", *Revista Española de Financiación y Contabilidad,* Vol. XXXIV, No. 125 April-June 2005, pp. 423-457.

OXERA REPORT (2006): "Competition and choice in the UK audit market, *Prepared for Britain's accounting regulator, (FRC) and the Department of Trade and Industry,* pp. 01-152.

PALMROSE, Z. (1986): "Audit fees and auditor size: Further evidence", *Journal of Accounting Research*, Vol. 24, No. 1, pp. 97-110.

PIOT CH. (2001): "Agency Costs and Audit Quality: Evidence from France", *The European Accounting Review,* vol. 10(3), pp. 461-499.

PITTMAN, J. Y FORTIN, S. (2004): "Auditor choice and the cost of debt capital for newly public firms", *Journal of Accounting and Economics,* 37, pp. 113-136.

PONG, C. K. P. (1999): "Auditor Concentration: A Replication and Extension for the UK Audit Market (1991-1995), *Journal of Business Finance and Accounting*, Vol. 26, No. 3-4, pp. 451-475.

PONG, C.K.M. Y BURNETT, S. (2006): "The implications of merger for market share, audit pricing and non-audit fee income", *Managerial Auditing Journal*, 21(1), pp. 7-22.

PONG, C. Y WHITTINGTON, G. (1994): "The Determinants of Audit Fees: Some Empirical Models", *Journal of Business Finance & Accounting,* vol. 21, no. 8, pp. 1071-1045.

RHODE, J.; WHITSELL, G. Y KELSEY, R. (1974): “An Analysis of Client Industry Concentrations for Large Public Accounting Firms”, *The Accounting Review*, Vol. 49, No. 4, pp. 772-786.

RITSON, B.; JUBB, C. Y HOUGHTON, K. (1997): “Specialisation in the market for audit services: Its role in explaining auditor/client realignment”. Working paper, University of Melbourne.

ROBERTS, R. W., GLEZEN, G. W. Y JONES, T. W. (1990): “Determinants of auditor change in the public sector”, *Journal of Accounting Research*, No. 18, pp. 220-228.

RUIZ BARBADILLO, E.; GÓMEZ AGUILAR, N.; DE FUENTES-BARBERA, C. Y GARCÍA-BENAU, M. A. (2004): “Audit quality and the going-concern decision making process: Spanish evidence”, *The European Accounting Review,* 13, pp. 597-620.

SARBANES-OXLEY ACT, (2002): “Corporate Responsibility Public Law, 107th Congress of the United States, pp. 107-204.

SCHROEDER, M. S.; SOLOMON, I.; Y VICKREY, D. (1986): “Audit Quality: The Perceptions of Audit-Committee Chairpersons and Audit Partners”, *Auditing: A Journal of Practice and Theory,* vol. 5, no. 2, pp. 86-94.

SHOCKLEY, R. A. Y HOLT, R. N. (1983): “A Behavioral Investigation of Supplier Differentiation in The Market for Audit Services, *Journal of Accounting Research,* pp. 545-565.

SHROEDER, M. S.; SOLOMON, I. Y VICKREY, D. (1986): “Audit Quality: The Perceptions of Audit-Committee Chairpersons and Audit Partners”, *Auditing: A Journal of Practice and Theory*, Vol. 5, No. 2, pp. 86-94.

SIMON, D. (1985): “The audit services market: Additional empirical evidence, *Auditing: A Journal of Practice and Theory*, Vol. 5(1), pp. 71-78.

SIMON, D.T. Y TAYLOR, M.H. (1997): “The market for audit services in Pakistan”, *Advances in International Accounting,* 10, pp. 87-101.

SIMON, D.T.; RAMANAN, R. Y DUGAR, A. (1986): “The market for audit services in India: an empirical examination”, *International Journal of Accounting Education and Research,* Vol. 21, pp. 27-35.

SIMUNIC, D. (1980): “The Pricing of Audit Services: Theory and Evidence”, *Journal of Accounting Research,* Vol. 18. n. 1, pp. 161-190.

SIMUNIC, D. A. Y STEIN, M. (1987): “*Product Differentiation in Auditing: A Study of Auditor Choice in the Market for New Issues*”, Canadian Certified General Accounts Research Foundation, Monograph 13.

SIMUNIC, D. Y STEIN, M. (1995): “Research into markets for auditing services, working paper presented on The Advance Course in Audit Research, October, Maastricht Netherlands.

SUTTON, S. Y LAMPE, J. (1990): “Formulating a Process Measurement System for Audit Quality”, *In Proceedings of the 1990 University of South California Audit Judyment Symposium.*

STEVEN, M. (1991): *The Big Eight,* New York: Macmillan.

TAYLOR, M.H. (1997): “The market for audit services in Japan, Pacific”, *Accounting Review*, Vol. 9, pp. 59-74.

TAYLOR, M.H. AND SIMON, D.T. (2003): “Audit markets in emerging economies: evidence from Nigeria”, *Research in Accounting in Emerging Economies*, Vol. 5, pp. 165-175.

THAVAPALAN, S.; MORONEY, R. Y SIMNETT, R. (2002): “The Effect of the PricewaterhouseCoopers Merger on Auditor Concentration in Australia: A Note”. *Accounting and Finance,* Vol. 42, pp. 153-167.

TOMCZYK, S. (1996): “Auditor reputation and initial public offerings by foreign companies”, *Journal of International Accounting, Auditing & Taxation,* 5(2), pp. 249-263.

TONGE, S.D. Y WOOTTON, C.W. (1991): “Auditor Concentration and competition Among the Large Public Accounting Firms: Post-Merger Status and Future Implications”, *Journal of Accounting and Public Policy*, Vol. 10, pp. 157-172.

TOSCANO, J. A. AND GARCIA-BENAU, M. (2011): “Strategies of the Big Four Companies of Audit in Mexico” *Revista Europea de Dirección y Economía de la Empresa,* Vol. 20, 1, pp. 89-104.

TOSCANO, J. A. AND GARCIA-BENAU, M. (2016): “Differentiation in the Quality of the Financial Audit Services in Mexico”, *Advances in Social Sciences* Research Journal, Vol. 3, No. 11, 252-266.

TURPEN, R. (1990): “Differential Pricing on Auditor’s Initial Engagements: Further Evidence”, *Auditing: A Journal of Practice & Theory,* Vol. 4, No. 1, p. 60-76.

VELTE, P. AND STIGLBAUER, M. (2012): “Audit Market Concentration and Its Influence on Audit Quality”, *International Business Research,* Vol. 5, No. 11; 2012, 146-161.

WATTS, R. Y ZIMMERMAN, J. (1983): "Agency problems, auditing, and the theory of the firm: Some evidence", *Journal of Law and Economics*, Vol. 26(3), pp. 613-633.

WILSON, T. Y GRIMLUND, R. (1990): "An examination of the importance of an auditor's reputation, *Auditing: A Journal of Practice and Theory*, Vol. 9(2), pp. 43-59.

WILLEKENS, M. Y ACHAMADI, C. (2003): "Pricing and supplier concentration in the private client segment of the audit market: Market power or competition?". *The International Journal of Accounting*, 38: pp. 431-455.

WILLIAMS, D. Y DIRSMTIH, M. (1988): "The effect of the technology on auditor efficiency: auditing and the timelines of client earnings and announcements", *Accounting Organisations and Society*, vol. 13, no. 5, pp. 487-508.

WOLK, C. M.; MICHELSON, S. E. Y WOOTTON CH. W. (2001): "Auditor Concentration and Market Shares in the US: 1988-1999 A Descriptive Note", *British Accounting Review*, 33, pp. 157-174.

WOOTTON, C. W.; TONGE, S.D. Y WOLK, C.M. (1994): "Pre and post Big Eight Mergers: Comparison of Auditor Concentration", *Accounting Horizons*, 8 (3) September, 58-74.

ZEFF S. Y FOSSUM, R. (1967): "An analysis of Large Audit Clients", *The Accounting Review*, Vol. 42, No. 2. April, pp. 298-320.

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.3165.
Ongeri, J. M., & Ongeri, B. O. (2017). Export Promotion Schemes and Export Performance in the East African Community: A Comparative Analysis. *Archives of Business Research, 5(12),* 245-260.

Export Promotion Schemes and Export Performance in the East African Community: A Comparative Analysis

Jutine Mogendi Ongeri
University of Dar Es Salaam
Box 35091. Dar Es Salaam, Tanzania

Benedicto Onkoba Ongeri
School of Economics,
University of Nairobi, Kenya

ABSTRACT

This study analyzed the impact of various fiscal incentives (export promotion schemes) in the East African Community on promoting exports in the region. The schemes in place are; the manufacturing under bond scheme, export processing zones and duty remission facility for Kenya; Duty draw back scheme, excise duty relief, export processing zones and VAT exemption scheme for Tanzania; for Uganda it has duty drawback, manufacturing under bond and foreign exchange liberalization schemes. These schemes are stated in the East African Community customs union protocol, 2005. Effectively, this study was to investigate the actual impact of these schemes for each country and carry out a comparison on which ones have performed better than which ones (if actually there is any performance). Using an augmented gravity model, results showed that duty drawback scheme was the most significant export promotion scheme in promoting export volumes in EAC partner states. The results showed that duty drawback scheme boosted the volumes of exports in both Uganda and Tanzania. In Kenya duty remission facility and export processing zones were the most effective export promotion schemes in promoting the volumes of exports. Export processing zones though effective for Kenya, the results showed opposite impact for Tanzania. Manufacturing under bond scheme, though being in existent in Kenya and Uganda for a very long time, was not effective in promoting volumes of exports in both countries according to the study results. Also, Value added tax remission and excise duty relief schemes are not effective in promoting the volumes of exports in Uganda and Tanzania respectively.

Key words: Manufacturing under bond, export processing zone and duty remission facility

INTRODUCTION

This study examines and compares the different approaches used by the East African community (EAC) member states to promote exports in the region. The study is motivated by the fact that the EAC countries have established various Export promotion schemes (EPS)[1], but their volumes of exports and manufacturing sector growth rates are still lagging behind. The study tries to bring out an in depth understanding of the EPS used in the EAC partner states, and how they are performing in terms of promoting exports of the manufacturing sector and economic performance.

The study covered the initial co-founders of the EAC, i.e Tanzania, Uganda and Kenya [2] for the periods 1980 to 2013. This is because their respective export schemes have been in existences

[1] The schemes are set out in part F, article 25, 26, 27,28,29 and 30 of the EAC customs union protocol
[2] Kenya, Uganda and Tanzania signed a treaty on 30th November 1999, of forming the EAC, later in July 2007 is when Burundi and Rwanda joined the EAC.

for a longer period as compared to Burundi and Rwanda, and as such providing a good base for a study of their performances[3]. The period under study captures both the periods when the schemes were not established and when they were formed, so as to study clearly the changes brought about.

Article 25, part F of the EAC customs union protocol indicates that the member countries came into an agreement of supporting export promotion schemes in order to accelerate export related investments in the region(EACCU, 1999)[1]. For the region agreeing to have EPS it means that 100% of the products manufactured under any EPS are expected to be sold outside the EAC region but in case they are sold in EAC region then only 20% of annual production will be allowed, provided that full duties, levies and other charges are paid.[4]Currently the export promotion schemes (EPS) in each member states are still different. They have not established all the schemes as stated in the protocol, but each has taken into various schemes. In Kenya, they have in place a Duty Remission facility; Manufacture under Bond; and an Export Processing Zone (EPZ) program[5]. Tanzania has a Duty Draw-Back scheme; Excise duty relief; VAT exemption on exports and an EPZ[7]. In Uganda the VAT exemption on exports; foreign exchange liberalization that entitles exporters to retain 100 percent of their foreign exchange earnings; duty draw back; and manufacturing under bond are used as the main export promotion schemes[7]

Though all these schemes were set in different circumstances of each country, their main common purpose is captured by the EAC protocol, of increasing the level of exports.
All the member states agreed to support the following as their export promotion schemes[6]:

Duty Drawback schemes
The scheme pertains refunding of the excise paid for an input that has been used in the manufacture of a good for export. The member states agreed that, upon exportation to a foreign country, drawback of import duties may be allowed in such amounts and on such conditions as may be prescribed by the competent authority[7]. The duty draw back scheme is a special type of subsidy that governments give to exporters (UNCTAD & WTO, 2012). According to WTO rules on duty draw backs the scheme can be used if the amount of duty reimbursed does not exceed the amount of duties paid, and verification has to be made that the duties have actually been paid on imports. It came into place for Uganda in 1995 and offers a duty refund to goods/inputs that have been used in the manufacture of the final goods for exports. The refunded amount is calculated as a percentage of value it has added on exports. The scheme though coming into place in 1995; it was effectively implemented from 2000 after the enactment of the finance Act in 1999. In Tanzania the scheme is managed by the Tanzania

---

[3] Burundi and Rwanda's export promotion schemes are not well documented to facilitate an analysis, but the results from can as well be proposed for the two nations, given they signed an agreement of the EAC protocol to support the same EPS in the region.
[4] The rule of goods enjoying EPS having to be of exports only; is stated in Part F, Article 25, section 2, sub-section b of the EAC customs union protocol 2005.
[5] There are more schemes in Kenya, amongst them the export promotion council, but this study only limits itself to the EPS stated in the EAC customs union protocol (the ones that all the partner states agreed to support). Tanzania and Uganda also have export promotion councils to oversee promotion of exports in their countries
[6] Special economic zones is a facility that is supported by the EAC partners to promote trade in the region, but categorically it is not in the list of export promotion schemes.
[7] Duty draw-back rule is stated in part F, section 138 sub-section 2b (i) and 3(a) of the East African community customs management ACT, 2004.

Revenue Authority (TRA)[8]. Under this scheme in Tanzania, exporters receive a relief of duties on their inputs for as long as the inputs are used in the manufacture of those particular goods for exports. The inputs can be raw materials or other components of the manufactured goods that are exported, the relief is also on materials that are used in packing of those manufactured goods.

Duty and value added tax remission

This scheme advocates for wavering of duties. Part X, sections138-140 of EAC Customs Management Act (EAC, 2004) provides for duty remission for industrial inputs imported for manufacture goods. In the EAC context it is carried out through EAC Customs Management (Duty Remission) Regulations which became effective from 1st May 2008. The Regulations provide for administration of imported industrial inputs for manufacture of goods for both export and home use. In Kenya duty remission facility was introduced in 1990 that gave incentives to manufactures of goods for exports. The program later became fully operational in 1993. The program provided for VAT exemption from those inputs that were used in the manufacturing of a good for export.

Manufacturing under bond schemes

The scheme gives manufacturers a freedom of importing raw materials of outputs, plant and machinery without paying taxes, but restrict that the goods have to be for exports only (Glenday & Ndii, July, 2000). These schemes generally require the manufacturers to carry out their activities in a bonded warehouse or factory which ought to be licensed by a customs authority of a given country (EAC, 2005)[9].One main disadvantage of an MUB is the administrative cost of administering it, though this is a challenge, an advantage of it is for businesses which assemble goods that import dutiable inputs which have high imported dutiable inputs. In Kenya It exempts from Duty and VAT for those exporters who import machinery and raw material in manufacturing goods for export. The scheme came in to place in Uganda as from 2001. The scheme allowed manufactures to import raw materials and intermediate goods at zero rates, for as long as they were used to manufacture goods for exports. A manufacturer in Uganda is required to establish security in the form of a bond for availing himself of this facility. Approved manufacturers are required to construct a bonded warehouse at their manufacturing site (subject to prior customs approval). As a requirement, the government has ensured that there is a customs officer on the ground to monitor the goods that are imported.

Export processing zones

They are usually designated areas where interested people are allowed to import machinery and resources (inputs) tax free where they are required to use to produce goods that are only for exports. The taxes can be domestic taxes such as income tax and company tax; they also have other exemptions like from labor regulations and foreign exchange regulations. Kenya's EPZs are administered by the Export Processing Zones Authority (EPZA). The zones are known to be special purpose corporations that are required to carry out business only in a designated location. The location can be an industrial EPZ park or a single factory which in both or either case are supervised by an EPZ authority, which is also mandated to license them. They were established in the EPZ Act, 1990. Among some special packages that were advocated by EPZs

---

[8] The duty drawback is conferred upon by Part III, Section 17 (1-8) of Tanzania Investment Act, 1997.

[9] The provisions governing manufacturing under bond scheme are in the EAC customs management ACT part XIII, sections 160-166, but the provisions on what MUB enjoys during exporting of goods is on part X section 115 of the same ACT.

were; corporate tax exemption for 10 years since the start of the business and a rate not exceeding 25% for the rest of the years.

VAT exemptions on exports

The scheme was proposed by the Investment Code Act in 1991 (Uganda, 1991), the scheme provided an exemption regime of tax; this tax incentive was transplanted in the laws of Uganda (CAP 349 of laws of Uganda).

The scheme allowed a reimbursement of VAT that was levied the rate of 17% on imported goods. According to the authorities; the value added tax is reimbursed to exporters within a month of lodging in the required documents.

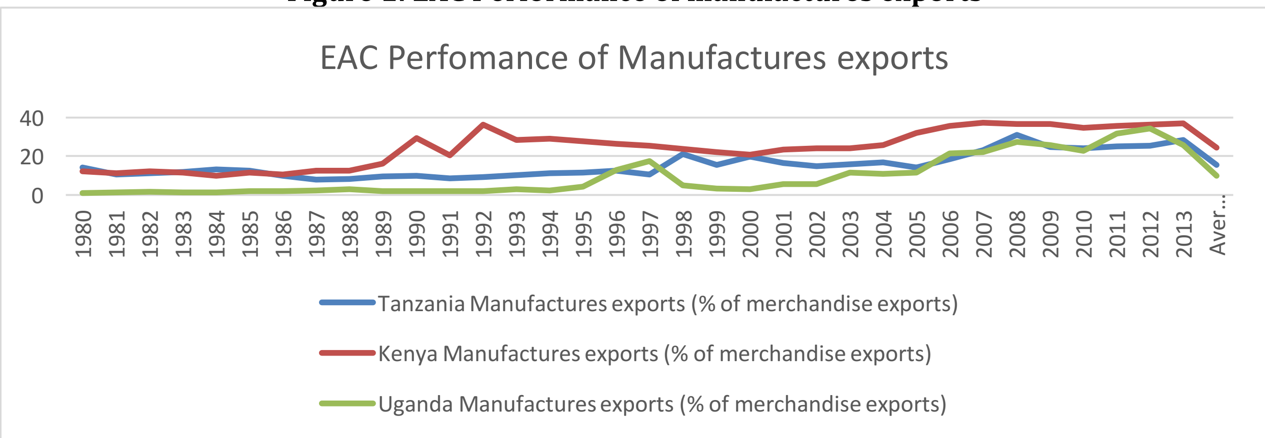
Excise duty relief in Tanzania

The scheme allows for exemption of payment of any tax for goods that are exported. It provides for non-charging of export products, but charges the raw materials that are used in the manufacture of these products. Exemptions on raw materials are managed by the duty draw back scheme.

Manufacturing export performance in the EAC partner states to African states

EAC manufactured goods have relatively remained stagnant, since the early 80s, but there was a trigger of the performance of exports in the 1990s. Particularly in Kenya, there was a sharp improvement in the performance of exports in 1990, and 1992, these conformed to the periods when most export promotion schemes were brought into place[10]. The same upward trigger was seen for Uganda and Tanzania in the years 1997 -1998, when most EPS were coming into place in these countries.

Figure 1: EAC Performance of manufactures exports



Source: Authors computation

Effectively considerable improvements are noted and especially after 2005 with the year 2006 being the year that the customs union was properly in place, and all the partner states had agreed to support the same export promotion schemes (EACCU, 1999).

These three nations have embarked on measures to promote growth within the region (EAC) amongst the measures are promoting exports within their respective nations through export

[10] The act of forming EPZ in Kenya was passed in 1990, duty remission was also passed in 1990 but came into full operation in 1993

promotion schemes (EACCU, 1999). Though theoretically, these schemes are expected to lower the cost of production for the exportable goods. They either hinge on removing or refunding the duty paid on importable inputs used in production of the exportable goods. As such hypothetically it is expected that the exports of the EAC partner states should have as well increased or been triggered amongst other factors in place, since their costs of production have well been decreased.

The success stories of these schemes is not clear on how they are contributing to exports and the manufacturing sector of the respective countries in order to achieve the targets set out on the EAC protocol. It is worth noting that statistical evidence reveals a strong positive association between export development especially for manufactures and accelerated growth in incomes (Helleiner& Gerald, 2002).

Various empirical studies have been carried out on the determinants of exports of manufactured goods in Kenya, Uganda and Tanzania many touching conventionally on the macroeconomic factors like the real exchange rate, GDPs and investments as the main determinants of exports, Such studies have evidently illustrated why the manufacturing sector in the region is either growing in a low pace or stagnant in some countries. Within this framework, the principal objective of this study was premised on making a regional comparison of performance of exports and the manufacturing sector of the EAC countries under the different export promotion schemes.

Consequently, the objective of this study was to analyze the impact of various fiscal incentives (export promotion schemes) in the East African Community on promoting exports in the region determine the relationship between the economic value and accounting value measures of company performance in Kenyan commercial banking sector. The study in achieving this objective examined the impact of three accounting measures (Return on Equity, Return on Assets and Earning per Share) on the economic value in the industry.

Organization of the Study

This study is presented in five sections with section one being the foregoing introduction with section two being the literature review. Section three deals with the methodology and data used for the study while study findings are given in section four with the subsequent conclusions out of the study findings and conclusions being provided in section five.

LITERATURE REVIEW

Theoretical review

Generally theories relating to volume of exports basically rely on the demand and supply relationships of exports and imports. For instance, an approach taken by Faini(1988)to explain the determinants of exports assumes that an individual exporter is faced by two constraints in making a decision to export, one is the constraint of the quantity demanded by the foreigners, and the other constraint is the amount the firm is willing and able to supply. As such the quantity exported will rely on these two constraints. These two constraints form the backbone of the demand and supply factors of exports[11].

Another approach taken by Goldstein &. Khan(1978), considers two separate simultaneous equations, one for export demand and the other for export supply. In both cases of supply and

[11] The two aspects of (Faini, 1988) and (Goldstein & Khan, 1978) are important in this study, because they try justifying the theoretical factors which explain behaviors of consumers and producers in the contexts of exports, from them they'll justify considering of other control variables when analyzing the impacts of EPS on exports.

demand they estimated an equilibrium and disequilibrium model, using the price of exports and the weighted domestic prices of the same goods. They suggested that the forces of demand and supply are very significant in determining the volumes of exports in Nations[24].

Comparative advantage theory states that each country should specialize in producing particular products for which it possess absolute advantage, then it can exchange those products for goods which are produced cheaper in other countries (Dornbusch, Fischer, & Samuelson, 1977). This theory provides a basis for explaining and justifying why international trade occurs and why particular, countries are most suitable for exports of particular goods and services. A nation's export is induced by its owing distinct advantages in production, such as cheap labor cost, high technology, etc. in comparison with other countries[12].

In terms of integration; EAC partner states are countries which have integrated to foster trade amongst themselves and also to the world in general. This is portrayed by their agreement on having common EPS amongst themselves. An important reason why governments integrate in trade perspective is to try to equalize prices amongst their respective countries and have a free trade area. This borrows a leaf from the Hecksher-Ohlin and Samuelson theories of factor-price equalization.

According to (Heckscher, Eli, & Ohlin, 1991) prices of factors of production between countries will always tend to equalize if the prices of the final goods tend to equalize. In autarky, those countries have different prices for the output goods. Once free trade is allowed in outputs, output prices will become equal in the involved countries[13]. Thus free trade will equalize goods prices and wage and rental rates. Since the two countries face the same wage and rental rates they will also produce each good using the same capital-labor ratio. However, because the countries continue to have different quantities of factor endowments, they will produce different quantities of the two goods.

Empirical review

Literature on exports performance in countries is mixed up, in terms of policies involved. But theory supports the aspect of making exports to be competitive in the world markets by reducing their production costs. Exports are consumable goods and services; as such many studies tend to explain their variations in countries to being caused by the supply factors of countries exporting those exports and the demand factors of those importing those goods and services (Goldstein & Khan, 1978). Studies done by (Hogan, Keesing, & Singer, 1992; deWulf, 2001; Hogan, 1991) show that EPA are not effective in developing countries, either due to poorly trained civil servants, or over protection of imports or even lack of funding.

Studies conducted by (Togan, 1993; Ianchovichina, 2005; Seringhaus & Rosson, 1990; Gencturk & Kotabe, 2001) show the effectiveness of EPA in countries. The studies have shown success of EPS in form of either increasing export values in countries, exports of manufactured goods increasing or in some instances increase in profits of exports in some countries. A study by (Gencturk & Kotabe, 2001) shows some ambiguity on the performance of EPS where they have increased profits but have not increased sales.

---

[12] The reduction of costs in countries can as well be related to how EPS are operating, because most of them tend to reduce production costs. Countries can be attributed to follow this theory in adjusting their costs of production in order to encourage production and become more competitive in trade.

[13] This is justified as well by the way EAC members have come together and removed tariffs amongst themselves and had a common external tariff.

Using gravity model studies done by (Eita & Jordaan, 2007; Lehmann & Zarzoso, 2003; Lwanow & Kirkpatrick, 2007; Taegi & Mahona, 2014; Makau, 2013) have identified other factors which are affecting exports amongst them GDP of the exporting and importing countries, prices of exports, distance between the trading countries and regional integration. Only a study done by (Lwanow & Kirkpatrick, 2007) has augmented trade facilitation in the gravity model to check its impact on trade in African countries.

Apart from empirical studies which have integrated demand and supply factors with duty draw back variable to evaluate the impact of duty drawback(an export promotion scheme), other studies have not done much on the same in trying to explain factors affecting export performance in countries. The studies as well are not clear[14] of the success or failure of the EPS in promoting exports. Studies done for the EAC countries on manufactured exports have also not touched on the integration of EPS with the supply and demand factors to explain performance of exports in these countries.

In the circumstance, this study focused on combining the supply and demand factors of export performance together with the export promotion schemes variables to explain export performance using an augmented gravity model. Effectively the study findings do illustrate the probable best EPS to be applied in the EAC partner states. Since the gravity model has proven[15] to be the best tool in analyzing exports and trade volumes, this study combines the standard variables in the gravity model taken as control variables[16] with the specific focus on the EPS in Kenya, Uganda, and Tanzania to carry out a comparison of export performance in the region.

STUDY METHODOLOGY

The study looked at the following specific theories on the subject matter;

Theoretical framework on Export promotion schemes work

The aim of EPS is to offer the inputs that are used to manufacture exports at world prices, those who export earn world or boarder prices. Thus lowering costs of trade-able inputs at least to their world or boarder price level is important. As such the main aim of EPS is to reduce any negative trade fortification on exports. Import-competing yields acceptable constructive trade protection or net subsidies from import tariff, but on the other side exports typically suffer from a disincentive from trade protection through import tariffs. Trade-able imports used as inputs of production of exports are reduced by import tariff, and as such they as well reduce the volumes of exports which is largely a theoretical argument. Essentially the net subsidy of trade-able goods through import tariff is the basis for the EPS argument as discussed by (Ianchovichina, 2005)[17] and (Glenday& Ndii, 2000).

Theory begins by assuming an existence of an hypothetical firm Y, whose Profits (Pr_0) after producing an amount X, at a price inclusive of import tariffs of $P(1+t_X)$ while incurring: labor and other non-tradable costs (wL), tradable variable input costs inclusive of imports of $mM(1+t_M)$ and capital rental costs, gross of taxes on the capital income or on the capital assets inclusive of import tariffs$(r+\delta+T_K)K(1+t_K)$ which is presented as:

[14] Other studies advocate on EPS in developing countries to promote exports, but others are against it, the ones against them are basing on the weakness of the agencies which are overseeing these schemes.

[15] Many studies have used this model to explain the performance of trade, amongst them being Eita & Jordaan, 2007; Lehmann & Zarzoso, 2003; Lwanow & Kirkpatrick, March 2007; Taegi & Mahona, 2014; Makau, 2013)

[16] They are taken as the control variables, because the objective of the study was to estimate the effects of the EPS, in the midst of these factors affecting exports.

[17] In the model, he only focused on duty draw back scheme as the main export promotion scheme, but for Glenday & Ndii, July, 2000, they focused on discussing the whole model to encompass any EPS.

$$Pr_0 = PX\,(1+t_X) - \{\, wL + mM(1+t_M) + (r+\delta+T_K)K(1+t_K)\} \quad \ldots\ldots 1$$

Where P in the model is the world price, X is the quantity imported and m, M, t_M, t_X, r, δ, T_K, K are the world price of inputs, world quantity inputs, world tariff rate of inputs, tariff rate, rental rate, depreciation rate, tax rate and capital value of capital assets respectively. The world prices are expressed in domestic currency at current market exchange rates.

At world prices, excluding import tariffs, profit Pr would be:

$$Pr_1 = PX - \{wL + mM + (r+\delta+T_K)K\} \quad \ldots\ldots 2$$

As such the subsidy ($Pr_0 - Pr_1$) from the firm is given by:

$$S = PX\, t_X - \{mMt_M + (r+\delta+T_K)Kt_K\} \quad \ldots\ldots 3$$

The net subsidy can be expressed relative to the value of the product sales at world prices as:

$$S = t_X - \{\omega_M t_M + (\omega_K + \omega_T)\, t_K\} \quad \ldots\ldots 4$$

Where ω_M, ω_K and ω_T are the shares of the costs of tradable inputs, net-of-tax, capital rental cost and capital taxes respectively.

When the good produced is exported or imported duty free; the subsidy will always be negative mathematically, and tx becomes zero as shown in equation 5 below:

$$S = -\{\omega_M t_M + (\omega_K + \omega_T)\, t_K\} \quad \ldots\ldots 5$$

To avoid this negative protection, EPS make tariff import on tradable inputs to zero, some schemes can reduce the capital equipment to be zero. The administration of the scheme also adds an extra cost in the economy[18].

Theoretical framework on determinants of exports and the gravity model

Deriving from (Goldstein & Khan, 1978) and (Mah, 2007) approaches of determinants of exports, the main factors affecting exports mainly comprise of the supply and demand factors. Theoretically demand and supply cannot be expressed explicitly without involving prices. Both (Goldstein & Khan, 1978) specifies that:

$$X_t = f\,(R_t, YF_t) \quad \ldots\ldots 6$$

Where X_t is exports, R_t is competitiveness and YF_t is foreign economic activity. Their analyses are in line with those of (Faini, 1988) and (Milner & Zgovu, 2003), who by assuming away unexpected shocks in the economy, suggested that export supply in the economy depends primarily on the export price and the economy's productive capacity to support export production.

[18] Apart from the government suffering the costs of administrations, it can as well suffer from revenue losses if it cuts down on the tariff it is collecting on the inputs, and then the producers of exports are not producing enough exports to outweigh the tariff costs.

The gravity model is a standard model which relates bilateral trade with economic mass of two countries, and the distance between them. The model derived from (Tinbergen, 1962; Linnemann, 1966) has a general multiplicative form where trade is directly related to the economic mass of countries and inversely related to distance between the trading countries, with a combination of the derivation by (UNCTAD and WTO, 2012) the multiplicative form of the model which is presented as:

$$X_{ij}=\frac{GSiMj\theta ij}{D_{ij}} \quad \text{...} 7$$

This is transformed logarithmically to interpret elasticity as:

$$\ln X_{ij}= \ln G + \ln S_i + \ln M_j + \ln \theta_{ij} - \ln D_{ij} \quad \text{...} 8$$

Where X_{ij} is the value of exports from nation i to nation j, S_j is the exporter specific factors that make up the supply factors, M_j is the importer specific factors that make up the demand for exports factors, G is a value that does not depend on country i or j for instance world liberalization, θ_{ij} is the ease of exporter i to access of market j, and D_{ij} is the distance variable, which measures the transport cost of trade. Various studies[19] have transformed this standard expression to include other variables assuming that the volume of trade between two countries is positively related to the size of these economies as measured by GDP and negatively related to the trade costs between them.

Model specification

Evidently from the two sides of the theories of exports factors; the general augmented gravity model which was used for variable estimation, utilized the gravity model as specified by (Tinbergen, 1962; Linnemann, 1966) and the augmented model by (Eita & Jordaan, 2007; Lehmann & Zarzoso, 2003; Lwanow & Kirkpatrick, 2007; Taegi & Mahona, 2014; Makau, 2013). Effectively this study derived and utilized an augmented gravity model of the form:

$$X_{ijt}=f(GDP_i^{\beta 1} GDP_j^{\beta 2} Exch_i^{\beta 3} FRI_i^{\beta 4} DIST_i^{\beta 5} To_i^{\beta 6} D_{ikt}) \quad \text{...} 9$$

Transforming it to a log linear function, it becomes:

$$\ln X_{ijt} = \beta_0 + \beta_1 \ln GDP_i + \beta_2 \ln GDP_j + \beta_3 \ln Exch_i + \beta_4 \ln FRI_i + \beta_5 \ln DIST_{ij} + \beta_6 \ln To_i + \sum Dikt + \mu_{it} \quad \text{...} 10$$

Where X_{ijt} is export volumes from country i to country j, GDP_i is the gross domestic product of the exporting country, GDP_j is the gross domestic product of the importing country, $Exch_i$ is the official exchange rate variable of exporting country, FRI_i is the foreign income variable of the exporting country, $DIST_{ij}$is the distance from country i to j, To_i is trade openness of the exporting country, $D_{ikt}$are the dummy variables capturing the effects of particular export promotion schemes in country i[20], t is the time variable(1980 -2013) and μ is the error term.

[19](Eita & Jordaan, 2007; Lehmann & Zarzoso, 2003; Lwanow & Kirkpatrick, March 2007; Taegi & Mahona, 2014; Makau, 2013) All these studies have used the augmented gravity model in their analysis of exports and trade performance.

[20] As mentioned earlier, the schemes considered in this study are the ones in the EAC protocol, but others like foreign exchange liberalization, value added tax remission and exercise duty relief have as well been included in this study because they behave in the same way as the schemes in the protocol. As such their impact are analyzed in order to find out their magnitude in promoting exports, this is important because they can be recommended to the whole regional partner states, i.e if they are actually more powerful than the ones advocated in the protocol.

Country specific models are:
Kenya:
$LnXK_{jt} = a_0 + a_1 lnGDP_K + a_2 lnGDP_j + a_3 lnExch_K + a_4 lnFRI_i + a_5 lnDIST_{Kj} + a_6 lnTo_K + D_2DRFK + D_3MUBK + D_4EPZK + \lambda_{it}$……………………………………………………………………………..............11

Uganda:
$LnXU_{jt} = b_0 + b_1 lnGDP_U + b_2 lnGDP_j + b_3 lnExch_U + b_4 lnFRI_i + b_5 lnDIST_{Uj} + b_6 lnTo_U + D_2VATXU + D_3DDSU + D_4MUBU + \eta_i$………………………………………………………………………..…….12

Tanzania:
$LnXT_{jt} = c_0 + c_1 lnGDP_T + c_2 lnGDP_j + c_3 lnExch_T + c_4 lnFRI_j + c_5 lnDIST_{Tj} + c_6 lnTo_T + D_2EPZT + D_3EDRT + D_4DDST + \delta_{Tt}$……………………………………………………………………………….13

Where XK_{jt} are the export volumes from Kenya to country j at time t, XU_{jt} are the export volumes from Uganda to country j at time t, and XT_{jt} are export volumes from Tanzania to country j at time t.

In Kenya: D_2DRFK is the duty remission facility variable (where 1=period when duty remission facility was in place, and 0= otherwise), D_3MUBK is the manufacturing under bond scheme variable (where 1=period when manufacturing under bond scheme was in place and 0=otherwise), D_4EPZK is the export processing zones variable (1=period when export processing zones were in place, 0=otherwise).

In Uganda: D_2VATXU is the value added tax remission facility variable (1=period when value added tax remission was in place, and 0= otherwise), D_3DDSU is the duty drawback scheme variable (where 1=period when duty drawback scheme was in place, 0=otherwise), D_4MUBU is the manufacturing under bond scheme variable (where 1=period when manufacturing under bond scheme was in place and 0=otherwise)

In Tanzania: D_4DDST is the duty drawback scheme variable (where 1=period when duty drawback scheme was in place, and 0= otherwise), D_3EDRT is the exercise duty relief facility variable (where 1=period when exercise duty relief was in place and 0=otherwise), D_2EPZT is the export processing zones variable(where 1=period when export processing zones were in place, 0=otherwise), and the bases a_0, b_0, c_0 for each respective country will capture the effects of all the EPS being in place such that 1 = period when all the EPS were in operation, and 0 = otherwise (either one scheme in place, or none in place).

Data and tests

Secondary panel data was used in the study for a period ranging from 1980 to 2013, for Kenya, Uganda and Tanzania. Appropriate tests were carried out to validate the use of the specified model of estimation. Effectively, Hausman specification test and the Breusch-Pagan Lagrange multiplier(LM) test for random effects were carried out to determine the choice between the Fixed Effect Model and the Random Effect Mode. The results of these tests confirmed that a Fixed Effect model was appropriate for eestimation.

DATA ANALYSIS

Summary of the results

A correlation test between the variables as carried out is a son table 4.1 below. The results suggest a strong positive correlation between volumes of exports and gross domestic products of the exporting and importing countries. This does support the notion that big countries tend to export and import more. The results also do suggest that there is significant strong positive correlations between volumes of exports and duty remission facility; manufacturing under bond scheme and export processing zones schemes. Indeed the other schemes tested have positive correlations which are not quite strong which may largely be attributed to their existence in shorter periods.

Table 4.1: Correlation Matrix

	years	countries	lnx	lngdpi	lngdpj	lnexch	lnfri	lndist	lnto	drf	mub	epz	vatx	dds	edr
years	1														
countries	0	1													
lnx	0.6784	-0.3179	1												
lngdpi	0.8513	-0.2	0.838	1											
lngdpj	0.9581	0	0.6715	0.8819	1										
lnexch	0.7185	0.3606	0.3176	0.4251	0.5904	1									
lnfri	0.3191	0	0.2887	0.49	0.5773	-0.0967	1								
lndist	0	0.4416	0.3322	0.2209	0	-0.0281	0	1							
lnto	-0.2454	0.1711	0.1214	-0.0927	-0.1797	-0.2942	0.1057	0.5048	1						
drf	0.3373	-0.6236	0.5205	0.4776	0.2857	-0.1691	-0.0149	0.0477	0.1318	1					
mub	0.4946	-0.6424	0.6201	0.4884	0.4617	0.086	0.1179	-0.2837	0.0256	0.6472	1				
epz	0.527	-0.3015	0.6353	0.6843	0.4982	0.0505	0.1471	0.3354	0.0388	0.6894	0.4321	1			
vatx	0.409	0	0.2057	0.1436	0.4305	0.452	0.2605	-0.4849	-0.1096	-0.1946	0.4858	-0.2823	1		
dds	0.5539	0.5744	0.2877	0.294	0.5107	0.7058	0.1129	0.189	-0.2317	-0.3842	-0.0481	-0.0452	0.5066	1	
edr	0.3025	0.6608	0.1751	0.234	0.2443	0.4256	-0.0538	0.6341	-0.1608	-0.2747	-0.4245	0.1906	-0.2062	0.7152	1

Source: Authors computation

Fixed effects model

The variable distance was dropped from the analysis because of showing a high degree of collinearity. From the fixed effect model estimated in table 4.3; the most statitical significant variables in explaining the volumes of manufactured exports in EAC were exchange rates, terms of trade and duty draw back scheme variables.

The results showed that duty drawback schemes increased the volumes of exports by close to 2.5%, in the years it was introduced. Notably among the variables, though statistically insignificant; a 1% increment in the foreign income (GDP per capita of sub saharan Africa countries) led to a 4.3% increment in the volumes of manufactured exports in EAC. The other export promotion schemes have a positive influence on the levels of exports of EAC but most (all of them apart from duty drawback schemes) are statistically insignificant in explaining the volumes of manufatured exports in EAC.

Exchange rates for the three countries has shown a statistically significant impact at 1% confidence level, with a 1% increment in the exchange rates of the EAC leading to 0.43% increment in the levels of exports, implying exporters increased their levels of exports as the dollar value appreciated against the local currencies of the EAC partner states.

From table 4.2 below; the constant coefficient is negative, implying all the export promotion schemes could not spur any much growth on the exports in unison.

Table 1.2 Fixed Effects estimates

```
Fixed-effects (within) regression               Number of obs      =       102
Group variable: countries                       Number of groups   =         3

R-sq:  within  = 0.9192                         Obs per group: min =        34
       between = 0.1117                                        avg =      34.0
       overall = 0.4372                                        max =        34

                                                F(11,88)           =     91.01
corr(u_i, Xb)  = -0.1788                        Prob > F           =    0.0000
```

lnx	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
lngdpi	.9191417	.4613134	1.99	0.049	.0023782	1.835905
lngdpj	-.3967917	1.642111	-0.24	0.810	-3.660142	2.866558
lnexch	.4257571	.1297017	3.28	0.001	.1680022	.683512
lnfri	4.326973	3.04403	1.42	0.159	-1.722396	10.37634
lndist	0	(omitted)				
lnto	.7580211	.2653331	2.86	0.005	.2307274	1.285315
drf	.3178416	.5066894	0.63	0.532	-.6890971	1.32478
mub	.4023513	.5691373	0.71	0.481	-.7286895	1.533392
epz	.229281	.3546866	0.65	0.520	-.475584	.9341461
vatx	.944676	1.039133	0.91	0.366	-1.120382	3.009734
dds	2.539908	.8364336	3.04	0.003	.877672	4.202144
edr	-.0059117	.9996621	-0.01	0.995	-1.99253	1.980707
_cons	-15.83904	25.49804	-0.62	0.536	-66.51105	34.83296
sigma_u	2.880698					
sigma_e	.77993798					
rho	.93170292	(fraction of variance due to u_i)				

F test that all u_i=0:   F(2, 88) =   58.26   Prob > F = 0.0000

Source: Authors computation

The random effects results in table 4.3 are generalized results of the EAC partner states, in terms of the export promotion schemes which are in place for them. To carry out a comparative analysis of country individual effects, individual analysis of the results was in order.

Individual country performance of EPS

Evidently the relatively high collinearity amongst value added tax remission (vatx), excise duty relief (edr) and average distance between EAC partner states did not allow us to use the variables. Consequently the results relating to the effect of the Export Promotion Schemes visa avis manufacturing for exports for the individual EAC countries is as follows;

Performance of manufactures for exports in Kenya under the established EPS

Duty remission facility and export processing zones have a significant impact on the volumes of manufactured exports in Kenya, from the results; exports volumes have increased by 1.37% and 0.9% in the introduction of duty remission facility and export processing zones respectively.

Though manufacturing under bond scheme was introduced in Kenya in earlier periods than duty remission facility and export processing zones, in this study it has revealed insignificant results, with export volumes increasing by only 0.17%.

On the control variables; GDP of the foreign countries (Sub-Saharan African Countries) has produced the highest results, with a 1% increment in the GDP of these countries leading to a 5.22% increment in the volumes of manufactures exports in Kenya. Whilst this is the case it is still not significant in explaining the levels of exports at 5% confidence level, all the other control variables of explaining the volumes of manufactures exports are not statistically significant.

Performance of manufactures exports in Uganda under the established EPS

In Uganda, the duty drawback scheme is very significant in explaining the volumes of manufactured exports, with export volumes increasing by 1.72% since the introduction of the duty draw back scheme in 1995.

Manufacturing under bond scheme has had a 0.78% increment in the volumes of exports in Uganda but it is statistically insignificant, value added tax remission was omitted due to collinearity.

The other variables are not statistically significant in explaining the volumes of exports at 5% significance level, but GDP of Uganda and Terms of trade are statistically significant at 10%, with a 1% increment in the levels of GDP and terms of trade of Uganda leading to a 1.13% and 0.067% increment in the levels of exports respectively.

Performance of manufactures exports in Tanzania under the established EPS

Exports volumes have increased by 2.94% with the introduction of the duty drawback scheme in Tanzania, the variable is as well statistically significant at 5% confidence level. Export processing zones has a negative impact but it is statistically insignificant in explaining the volumes of exports in Tanzania.

Excise duty relief was dropped from the model due to its collinearity. In terms of the other control variables; Terms of trade had a negative impact on the volumes of exports for Tanzania, with its worsening causing a 1.1% decrease in the volumes of exports.

The exchange rate variable was a significant variable in explaining the volumes of exports in Tanzania, with a 1% increment in the exchange rates level, resulting to a reduction of volumes of exports by 1.52%.

CONCLUSIONS AND POLICY RECOMMENDATION

The main objective of this study was to analyze the performance of manufactured exports under the existing export promotion schemes in EAC, and suggest policy recommendations. The study used an augmented gravity model to capture the effects of the EPS in the presence of other control variables which affect export volumes in countries.

The EAC partner states in their EAC customs union protocol agreed to support Export processing zones, manufacturing under bond scheme, duty drawback schemes, and duty and value added tax remission for enhanced export trade amongst the partner states.

Using the augmented gravity model, the study results illustrated that duty drawback scheme was the most significant EPS in promoting export volumes. The results further suggested that duty drawback scheme boosted the volumes of exports in both Uganda and Tanzania. In Kenya duty remission facility and export processing zones were the most effective export promotion schemes in promoting the volumes of exports.

Although the export processing zones appear effective for Kenya, the study results however showed the opposite impact for Tanzania. Further, the study results illustrated that though manufacturing under bond scheme, has been in existent for long in Kenya and Uganda for a very long time, it was not been effective in promoting volumes of exports in both countries. Also the study findings indicate that value added tax remission and excise duty relief schemes are not effective in promoting the volumes of exports in Uganda and Tanzania respectively.

Therefore in conclusion, choice of the EPS in EAC partner states has mixed results and notably manufacturing under bond scheme is not an effective EPS in promoting the volumes of exports in these EAC Countries which were the focus of the study.

The consequential policy recommendation out of the study findings include; possible application of duty drawback and duty remission as appropriate export promotion schemes for all the EAC partner states as a means of promoting increased exports volumes of manufactures amongst the countries.

Possible further area of research

It however should be noted that this study only focused on the broad performance of the EPS in promoting exports in EAC. It did not examine what happens at the micro level in terms of why the various schemes have not worked for some countries. Evidently there is need for further investigation unto the critical aspect of the performance of export promotion schemes in EAC partner states at the individual country level.

References

Balassa, B. (1978). Export incentives and export perfomance in developing countries: A comparative analysis. *Weltwirtschaftliches Archiv, 1*, 24-61.

Bauerschmist, A., Sullivan, D., & Gillespie, K. (1990). Common factors underlying barriers to export: A comparative study in the U.S paper industry. *International business studies, 16*(3), 111-123.

deWulf, L. (2001). Why have trade promotion organisation failed and how can they be revitalised? *World Bank*(WPS 24843), 57.

Dornbusch, R., Fischer, S., & Samuelson, P. (1977). Comparative Advantage, Trade and Payments in a Ricardian Model with a Continuum of Goods. *American Economic Review , 67*, 823–839.

EAC, E. A. (2004). The East African Community customs management ACT. *Revised edition 2009*. Government Printer Nairobi.

EACCU, E. A. (1999, November 30th). Protocol on the establishment of the East African customs union. EAC.

Eita, J., & Jordaan, A. (2007). South Africa Exports of Metals and Articles of Base Metal: A gravity Model Approach. *Journal for Studies in Economics and Econometrics, 31*(3), 81-95.

Faini, R. (1988). Export supply, capacity and relative prices. *Policy, planning and research working papers, WPS 123*, 3-21.

Frankel, J., & Wei, S. (1995). European Integration and the Regionalization of World Trade and. *The Economics and the Politics, Center for International and Development Economics*, Working Papers C95-053.

Gencturk, E., & Kotabe, M. (2001). The effect of export assistance program usage on export perfomance: A contigency explanation. *International Marketing, 9*(No. 2), 51-72.

Glenday, G., & Ndii, D. (July, 2000). Export platforms in Kenya. *African Economic Policy Discussion Paper* .

Goldstein, M., & Khan, M. s. (1978). The supply and demand for exports: A simultaneous approach. *The review of economics and statistics, 60*(2), 275-286.

Görg, H., Henry, M., & Strobl, E. (2008). Grant support and exporting activity. *Developing economies, 90*(No.1), 168-174.

Greene, W. (2003). *Econometric Analysis.* New York : Prentice Hall.

Gujarati, D. (2004). *Basic Econometrics* (4th ed.). McGraw-Hill Companies.

Heckscher, Eli, & Ohlin, B. (1991). Heckscher-Ohlin Trade theory. (H. Flam, & J. Flanders, Eds.)

Helleiner, & Gerald, K. (2002). Non-traditional export promotion in Africa. *Economic issues*, 12-56.

Hinkle, L. E., Aragon, A. H., & Kubota, K. (2003, June). How far did Africa's first generation trade reforms go? An intermediate methodology for comparative analysis of trade policies. *Africa region working paper series, 2*, NO. 58b.

Hogan, P. (1991). Some institution aspects of export promotion in developing countries: The role of support services in expanding manufactured exports in developing countries. (P. Hogan, D. Keesing, & A. Singer, Eds.) *Economic development institute of World Bank*, 39-56.

Hogan, P., Keesing, D. B., & Singer, A. (1992). The role of support services in expanding Manufactured exports in Developing countries. *Economic development institute of the World Bank*(No 9928), 19-38.

Ianchovichina, E. (2005). Duty drawbacks, competitiveness and growth: Should China reform its Drawback system? *World Bank policy research working papers*, No. 3498.

Janniffer, N. (October 2013). The role of export promotion in increasing export volume in . *Research paper Makerere University*.

Kedia, B., & Chhokar, J. (1986). Factors inhibiting export perfomance of firms: An empirical investigation. *Management Review, 26*(4), 33-43.

Krugman, P. (1980). Scale economies, product differentiation and the pattern of trade. *American Economic Review,*, 12-45.

Lederman, D., Olarreaga, M., & Payton, L. (2008). Export Promotion Agencies: What works and what doesn't. *Policy Research working papers*, WPS 5125.

Lehmann, N., & Zarzoso, M. (2003). Augmented gravity model: An empirical application to Mercosur-European Union. *Apllied Economics, 6*(2), 291-316.

Linnemann, H. (1966). *An Econometrics study of International Trade Flows.* Amsterdam North-Holland.

Lwanow, T., & Kirkpatrick, C. (March 2007). Trade Facilitation and Manufacturing Exports: Is Africa Different? *Economic Development in Africa* (pp. 1-32). University of oxford UK: Impact Assessment Research Centre Institute for Development Policy and Management University of Manchester.

Mah, J. (2007). Duty draback and export promotion in China. *Developing Areas, 40*(No. 2), 133-140.

Mah, J. (February 2006). Export Promotion and Economic Development of Korea. *Journal of World trade*.

Makau, F. N. (2013). *Kenya's Manufactured exports perfomance and competitiveness.* Nairobi, Kenya: School of Economics: University of Nairobi.

Marianna, B., & Michele, D. (2011). Survey of the literature on successful strategies and practices for export promotion by developing countries. *International Growth Centre London School of Economics and Political Science, 34*, 1-57.

Milner, C., & Zgovu, E. (2003, march). Export response to trade liberalisation in the presense of high trade costs: Evidence for a landlocked african economy. *CREDIT Research Papers*, NO 03/04.

Niringiye , A., Luvanda , E., & Shitundu , J. (2010). Determinants of Export Participation in East African Manufacturing Firms. *Current Research Journal of Economic Theory, 2*, 55-61.

Radelet, S., & Sachs, J. (1998). *Shipping Costs, Manufactured Exports, and Economic Growth.*

Seringhaus, F., & Botschen, G. (1991). Cross-National comparison of export promotion services: The views of Canadian and Australian companies. *International business studies, 22*(No 1), 115-133.

Seringhaus, F., & Rosson, P. J. (1990). Government export promotion: A global perspective. *International business studies, 21*(No 3), 514-516.

Shamsuddoha, A., & Ali, M. (2006). Mediated effects of export promotion program on firm export perfomance. *Asia pacific journal of Marketing and logistics, 18*(2), 93-110.

Taegi , K., & Mahona, B. (2014). Determinants of Trade Patterns and Comparative Advantage of Tanzania Trade 1981-2009. *Developing countries studies, 4*(3), 2-17.

Tinbergen. (1962). *Shaping the world economy.* Newyork: Suggestions for an International Economic Policy.

Togan, S. (1993). How to assess the significance of export incentives: An application to Turkey. *Weltwirtscharftliches Archiv*, 777-800.

Uganda. (1991). Uganda Investement Code ACT – 1991.

UNCTAD, & WTO. (2012). A practical guide to trade policy analysis. United Nations conference on trade and development and World Trade Organization.

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.3998.
Akpan, S., Nnamseh, M. P., & Mahat, F. (2017). Insurance Investment in Strategic Human Capital Development: The Pains and Gains from Panel Microdata. *Archives of Business Research, 5(12),* 261-271.

Insurance Investment in Strategic Human Capital Development: The Pains and Gains from Panel Microdata

Mr. Sunday Akpan
Putra Business School, University Putra Malaysia
43400 UPM Serdang, Selangor, Malaysia

Micheal P. Nnamseh
Department of Business Management, University of Uyo
P.M.B 1017, Uyo; Akwa Ibom State, Nigeria

Assoc. Prof. Dr. Fauziah Mahat
Department of Accounting and Finance, University Putra Malaysia
43400 UPM Serdang, Selangor, Malaysia

ABSTRACT

This study examined the effect of insurance investment in strategic human capital development (SHCD) on performance of insurance companies in Nigeria. The fact that investment in SHCD is one of the most topical issues in the Nigerian insurance management and the continuous weak performance of insurance sector made this investigation necessary. The major objective of the study therefore was to examine the effect of insurance investment in staff training & development, wages & salary, retirement benefits compensation on employee value added (EVA), gross premium written (GPW), return on asset (ROA), and return on equity (ROE) of insurance companies. The study employed a quantitative research design and collected data from 20 insurance companies listed in Nigerian stock Exchange (NSE) over 2010 to 2014. The analysis was performed using pooled OLS, fixed effect and random effect estimation techniques. Results indicated that investment in SHCD on aggregate has no significant relationship with EVA but does with GPW, ROA and ROE whereas investment in SHCD practice like retirement benefits allowance has no relationship with all dimensions of performance of insurance companies. It was concluded that insurance investment in SHCD affect its performance unevenly. We recommend that management of insurance companies should train and develop its staff, devise incentivized salary and wags packages and committed to after work life benefits. This way, its SHCD investment will yield all-round proportionate increase in its performance in Nigeria.

Key words: Insurance investment, strategic human capital development, insurance performance, insurance management, human capital theory, Nigerian insurance industry.

INTRODUCTION

Human capital today is one aspect of business that has gained prominence in the management of organizations. This is partly because many managers and scholars believe that it is human capital that organizes and coordinates other organizational resource and put them to effective use. Some authors argued that 'people are the greatest asset' in an organization, and explained further that without strong human capital, organizational resources and tasks would be difficult if not impossible to change the organization[i]. Others contended that human capital is the fabric and change agent in organization. Human capital has been identified as contributing to efficient resource utilization, value creation, and profit and wealth maximization; improve productivity and organizational competitiveness[ii]. In other opinions, human capital is about knowledge and skills obtained throughout educational activities such as training, compensations and rewards as well as healthcare and retirement benefits for employees[iii].

Human capital can thus be seen as knowledge and care embedded in individuals in organizations and nations. From organizational perspective, the resource-based theory recognized human capital as an important firm asset that can drive superior performance. This is because in all dimensions, human capital is performance-oriented; and ability to perform well relates with the quality of human asset that an organization has. It could be inferred therefore that human capital is usually accumulated through education, training, working experience on firm's specific knowledge[iv]. Investment in human capital is to achieve an optimum return in terms of a gainful employment, productivity and high standard of living[v]. This means that human capital is credited with improved firm performance in terms of increased productivity (i.e. intra-firm benefit), job creation (i.e. economic benefit), and improve standard of living (i.e. human benefits).

Empirical studies in the 1900s reported the importance of HCD to include the development and growth of corporations, economy and individual[vivii]. Similarly, many empirical studies in the twentieth century have also shown that human capital is one of the major influences and determinant of corporate capacity to innovate and perform better in terms of improved firm strategy, increased labour productivity and as a catalyst for change, providing a critical missing link for creating and sustaining competitive advantage for firms in a global economy [viii,v]. Consequently, many firms have invested resources, time and efforts in developing their human capital in anticipation of sustainable performance. As a result, HCD has become a top priority for many firms with the thrust of improving how firms employ, deploy and evaluate their workforce. Figures from Annual Statement of select insurance firms between 2000 and 2014, on average, shows about 13% yearly increment in human capital related expenses such as seminars, conferences as well as recruitment and on-the-job-training, salaries and wages, retirement benefits obligations among other. Some scholars have argued that such investment constitute cost item to the company and continuous investment at the rate currently observed above, may amount to over investment and probably, at a decreasing return to lay support for the classical economists' theory of diminishing marginal utility or returns [ix,x]. The reported increment indicates insurance firms' continuous investment and commitment to developing its human capital, perhaps as a strategy for growth, hoping for much gains and returns, yet empirical study on the effect of such commitment is scarce.

This study is thus set out to examine the effect of investing in HCD on productivity and performance of insurance companies with focus in Nigeria. The remaining part of this study present discussion on Industry profile and research imperatives, Theoretical underpinnings and empirical evidence, Methodology and design, Results and discussion, conclusions and implications and finally the limitations and ethical concerns of the study

INDUSTRY PROFILE AND RESEARCH IMPERATIVES

The Nigerian insurance industry is a suitable setting to conduct this study due to its peculiar characteristics and unique challenges with a view to address the perennial challenges for improved financial services. As a highly regulated industry, the operating environment requires careful analysis of every activity of the firms to ensure that rewards compensate commitment commensurately. Fig I present an overview of the Nigerian insurance sector and the need to offer strategic means of strengthening the sector. It shows the percentage increase in the number of life (red line) and non-life (blue line) and in average aggregate (red line) number of insurance companies in Nigeria from 2002 to 2011. From 2006, the percentage increased to its peak in 2008 and fell in 2009 and 2010 from which it has maintained relative increase upwards. Fig II shows that insurers have made significant investment in HCD related activities which is represented by management expenses.

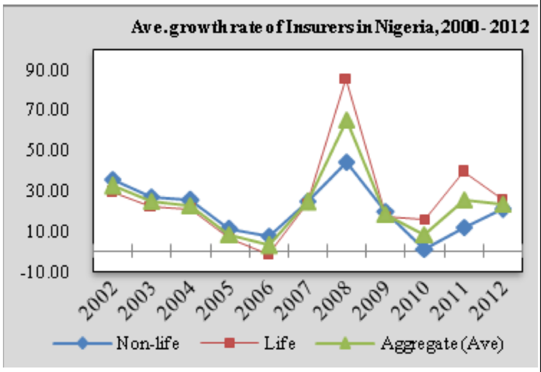


Figure I. - Ave growth rate of insurers

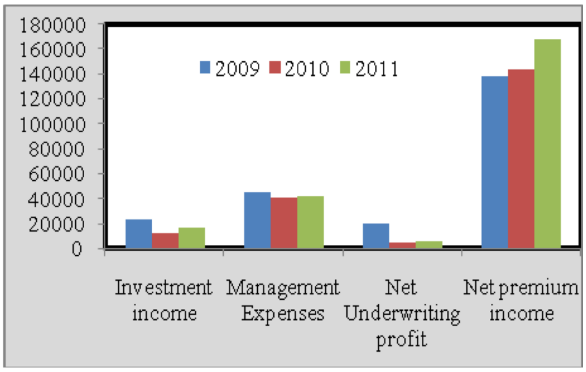


Figure II- Selected performance indicators

Source: Computed using data from NAICOM [xi]

Given the above scenario, it is uncertain if investment in HCD actually result on improve performance on aggregate because, investment income, net underwriting profit and net premium income are all human-related. Whereas net premium increase, investment income and underwriting profit decreased during the period thus making it difficult to practically conclude that investment in HCD resulted in improve performance or otherwise. Now that the industry is faced with high regulatory demands which will require firms to make tough decisions on virtually all areas and cost items to remain efficient and effective, a study of this kind is very important as hardly there is any known work in this direction. Since the insurance sector and the operating companies is undergoing fundamental shifts in the ways they conduct business, better performance and how to attain and maintain it should be of prime concern to insurance companies. Moreover, knowing that to survive in an environment where, all players provide almost the same products and services, the quality of the human element is a major factor and this makes this study more expedient.

THEORETICAL UNDERPINNINGS AND EMPIRICAL EVIDENCE

Human capital is part of the organizational strategic human resource management (SHRM) issue of contemporary research interest. Resource based theory (RBT) recognized human in organizations as important asset a firm own or have access to which also form one of the key areas of internal workings of the firm[xii]. Advocates of RBT argued that sustainable corporate performance can originate from such asset/resource[xiii]. The RBT has thus formed an integrating theoretical platform for most researches in SHRM for decades[xiv]. The theory posits that firms develop competitive advantage vis-a-vis superior performance by not only acquiring but also developing, combining, and effectively deploying its physical, human, and organizational resources in ways that add unique value and are difficult for competitors to imitate[xv]. Among all, human capital resources which are products of complex social structures built over time and are often uneasy to comprehend and imitate. It includes the training, experience, judgment, intelligence, relationships, and insight of individual managers and workers. This study is therefore dependent on the prediction of RBT to validate its findings.

Moreover, human capital theory (HCT) which buds from the field of macroeconomic development theory is also applied in this study[xvi]. Whereas the RBT cedes superior performance to corporate resources which employee are part of it[xvii], HCT specifically identify different ways of developing human capital to include schooling, training, salaries and wages, expenditure on retirement benefits obligation[xviii]. HCT considers labour as a tradable commodity and refers to human capital as knowledge, expertise, and skill one accumulates through these ways. Figure III presents the key relations in human capital theory and the assumptions underlying these relationships.

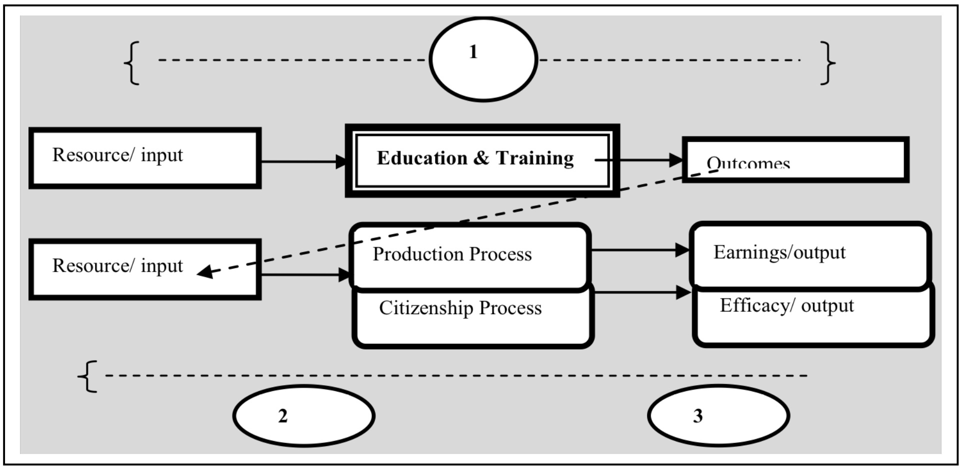


Fig. III: Model of Human Capital Theory
Source: Authors inference form cited author [xix]

As indicated in the Fig. III, the first relationship shown by dotted line 1 represents the concept of production functions as applied to education and training, compensation and healthcare. The key assumption underlying this relationship is that investment in these practices results in increased learning and healthiness. The second relationship shown by number 2 in a circle represents the human capital relationship between learning (outcome from HCD investment) and increased productivity. The key assumption underlying this relation is that increased learning does, in fact, result in increased production process. The third and final relationship shown by number 3 in a circle represents the human capital relationship between increased productivity and increased wages and business earnings. The key assumption underlying this relationship is that greater productivity does, in fact, result in higher wages for individuals and earnings for businesses. As per conclusion, human capital does contribute to the organizational advantages and profits. The HCT has adequately and explicitly identified the pathways through which investment in human capital can lead to improve organizational performance. It thus provides a good theoretical support for the propositions and variables used in this study.

Empirically, a number of earliest and medieval scholars have investigated and found a positive relationship between HCD and firm performance in different times, space and climes[xx,xxi,xxii,xxiii,xxiv]. Contemporary researchers have kept their pace with emerging issues and examined HCD effect on firm performance. In some studies, the findings on the impact of intra-firm training participation on earnings and job performance were found to be both mixed and positive; in conclusion, the author said that investment in human capital yielded a positive result by increasing earnings and job performance[xxv]. Although a weak empirical effect of human capital on growth in existing cross-country studies, the authors attributed it partly to the result of an inappropriate specification that does not account for the different channels through which human capital affects growth; they concluded that a systematic replication of earlier results from the literature shows that both initial levels and changes in human capital have positive growth effects, while in isolation each channel often appears insignificant[ix]. Their taking was that the effect of human capital is likely to be underestimated in empirical specifications that do not account for both channels. In EU regions, human capital was found to explain productivity differences[xxvi].

The conditions under which firms can capitalize on their international human capital (IHC) were investigated using the ability-motivation-opportunity (AMO) perspective[xxvii]. The authors conceptualize IHC as ability, collaborative climate as motivation, and the firm's level of internationalization as opportunity. They authors tested and found that the relationship between IHC enhancement practices and firm performance is significant and positive only when both collaborative climate and internationalization are high. The effect of strategic human capital alignment framework on subsidiary strategy and performance of multinational enterprises (MNEs) was found to be positive[xxviii]. As argued in the earlier, past studies discussed general human capital investment in terms of relevant parameters except the inclusion of knowledge and skill. Knowledge and skills are what is developed through training and education so firms cannot invest in knowledge and skill but can invest in humans to develop the needed knowledge and skill. These mixed variables surly would not be a better predictor of human capital effect on performance because of a problem referred to here as a 'mixed variable effect'. Again, the variables in each performance dimension (financial - productivity, market share and profitability and non-financial - customer satisfaction, innovation, workflow improvement and skills development) of firm also differ from the dimensions considered in this study.

METHODOLOGY AND DESIGN

Sample and data set

There are 26 listed insurance companies that are currently trading on the Nigerian Stock Exchange (NSE). This study used 17 listed insurers which data was available for period covered. The data used in this study will be collected from annual report of individual companies. Data is drawn from seventeen (17) insurance firms in Nigeria for the period of five years (2010 – 2014) yielding a total of 85 observations.

Variable and hypotheses development

Performance

Insurance performance can be measured and studied using financial and non financial indicators as fund in many insurance-specific studies[xxix, xxx]. In this study, both financial and non financial measures are used. These include employee value added (EVA), gross premium written (GPW), returns on asset (ROA), and return on equity (ROE) are used as proxies for insurance productivity and performance.

Human Capital Investment (or Development).

In this study, human capital investment is used synonymously with human capital development as well as human capital accumulation. HCD is defined as an investment that firms made at workplaces to train its workforces and such other investment that require learning and healthy living, knowledge and experiences for better performance of organizational tasks[xxxi]. In this study, the following proxies are used for investment in HCD:
Staff training and development (STD) – This encompasses all investment and enablement for participating in seminars, conferences to provide employees needed skills to perform their jobs. It has been investigated and found to influence firm performance in past studies[xxxii]. We expect it to influence insurance performance positively.

Staff salaries and wages (SSW) – This is a key component in organizational reward. Rewards are often thought of in terms of pay and other incentive packages which trigger better performance. A 10% increase in firm value was associated with an increase of 3% in CEO pay but only 0.2% in average workers' pay [xxxiii](Bell & VanReenen, 2012). Thus it is expected in this study that SSW will positively impact insurers' performance.

Compensation/Retirement benefits obligation (RBO) – The philosophical root of compensation is that organizational tasks are not necessarily a good thing and thus those who are employed or assigned to perform such task lose something in some sense and what is lost should be compensated. CRB was found to positively correlate with firm performance.

Models and estimation methods

The models used include pooled ordinary least square (Pooled-OLS), fixed effect (FE) and random effect (RE) regressions. The specification of these models is as follows:

$$\text{Baseline panel mode specification:} \quad Y_{it} = \beta X'_{it} + \alpha Z'_{it} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

$$\text{Pooled} - \text{OLS model: } Perf_{it} = \alpha_o + \alpha_{1-4}\text{STD}_{it} + \alpha_2\text{SSW}_{it} + \alpha_3\text{RBO}_{it} + \varepsilon_{1t} \ldots\ldots\ldots\ldots\ldots\ldots (2)$$

$$\text{Fixed Effect model: } Perf_{it} = (\alpha_o + \mu_i) + \alpha_1\text{STD}_{it} + \alpha_2\text{SSW}_{it} + \alpha_3\text{RBO}_{it} + \varepsilon_{1it} \ldots\ldots\ldots\ldots (3)$$

$$\text{Random Effect model: } Perf_{it} = \alpha_o + \alpha_1\text{STD}_{it} + \alpha_2\text{SSW}_{it} + \alpha_3\text{RBO}_{it} + (\mu_i + \varepsilon_{1it}) \ldots\ldots\ldots (4)$$

In above models, Y_{it} = $Perf_{it}$ = performance of insurance companies represented by EVA, ROE, GPW and MKV; X'_{it} = HCD investment measured by STD, SSW, and CRB; Z'_{it} = controlled variables which are absent in our model; α_o = constant; α_{1-4} = coefficient of explanatory variables, μ_i = latent variable, ε_{1it} = stochastic the error term, i = number of cross section subject, and t = time series data period.

RESULTS

Descriptive statistics

The descriptive statistics for both dependent and independent variables of the study are presented in Table I that follows.

Table I – Descriptive statistics of variables

Variable	Obs	Mean	Std. Dev.	Min	Max
eva	85	13.947	.939	11.818	15.470
gpw	85	15.410	.985	12.037	17.547
roa	63	-3.374	.783	-4.605	-1.514
roe	63	-2.571	.739	-4.605	-1.050
Std	85	10.925	1.230	7.971	13.663
ssw	85	13.072	.823	11.016	14.372
rbo	85	10.552	1.629	6.732	14.405

As shown above, the statistics indicate that during the period reviewed insurance companies in Nigeria performed relatively better in terms of EVA and GPW given their mean values of 13.947 and 15.410 respectively whereas ROA and ROE were negative, meaning the performance of insurers in this regard was poor. The descriptive statistics for HCD measures shows that insurance companies have also within the period invested reasonably in all measures of HCD. This is reflected in their respective mean values of 10.925, 13.072, and 10.552 for STD, SSW, and RBO respectively. It shows that insurers have made about 10.93%, 13.07%, and 10.55% investment of their resources in HCD through training, salary and retirement benefits respectively.

Correlation matrix

In Table II, correlations among variables are presented. High correlation between variables such as LROA and LROE (R=0.781) and LGPW and LEVA (R=0.641) are allowed since they all played the same role and are used separately in different models. Correlation between LSSW and LRBO is not too strong, and its effect can be tolerated, hence the used of VIF. However, the negative correlation between LSSW and LROA and ROE suggest that as LSSW increase, LROA and LROE decreases; same correlation is also observed between LRBO and ROE. Other variables exhibit positive correlations, indicating positive linear relationships.

Table II – Correlation among variables

	leva	lgpw	lroa	lroe	lstd	lssw	lrbo
leva	1.000						
lgpw	0.641	1.000					
lroa	-0.067	-0.341	1.000				
lroe	0.268	0.087	0.781	1.000			
lstd	0.335	0.240	0.176	0.208	1.000		
lssw	0.320	0.710	-0.336	-0.035	0.242	1.000	
lrbo	0.218	0.413	-0.089	0.098	0.199	0.509	1.000

Regression results and discussions

The results for the above regression are presented in Table III. Interpretations for EVA, GPW, and ROA are based on the corrected model while interpreted based for ROE is based on Pooled OLS. This follows the outcome of several tests of compliance or non violation of relevant econometric assumptions of autocorrelation (via Wooldridge f-test), heteroscedasticity (via Wald chi2 test) where applicable, and multicollinearity. BP-LM test was used to chose between Pooled OLS and RE while Hausman test was used to chose between RE and FE model.

Table III – Insurance investment measured by STD, SSW, RBO and productivity/performance measured by EVA, GPW, ROA and ROE

Responsive variables	EVA				GPW				ROA			ROE	
Explanatory variables	**Pooled OLS**	**RE**	**FE**	**FE-Corrected**	**Pooled OLS**	**RE**	**FE**	**FE-Corrected**	**Pooled OLS**	**RE**	**FE-Corrected**	**Pooled OLS**	**RE**
lstd	0.107	0.117	0.086	0.086	0.123*	0.061	0.027	0.061	0.018**	0.016**	0.017**	0.037**	0.034*
	[0.245]	[0.188]	[0.377]	[0.510]	[0.066]	[0.240]	[0.621]	[0.225]	[0.013]	[0.029]	[0.051]	[0.035]	[0.060]
lssw	0.323**	0.115	-0.487*	-0.487	0.781***	0.488***	0.302**	0.488***	0.021**	-0.024**	0.126**	-0.032	0.040
	[0.025]	[0.522]	[0.091]	[0.186]	[0.000]	[0.000]	[0.047]	[0.000]	[0.070]	[0.072]	[0.018]	[0.266]	[0.223]
lrbo	-0.031	-0.043	-0.043	-0.043	-0.011	0.035	0.045	0.035	0.000	0.001	0.001	0.003	0.006
	[0.662]	[0.575]	[0.630]	[0.632]	[0.840]	[0.467]	[0.370]	[0.306]	[0.993]	[0.930]	[0.924]	[0.826]	[0.701]
Cons	8.868***	11.588***	19.816***	19.81***	3.969***	7.996***	10.690***	7.996***	0.094	0.146	0.169	-0.001	0.108
	[0.000]	[0.000]	[0.000]	[0.000]	[0.003]	[0.000]	[0.000]	[0.000]	[0.496]	[0.383]	[0.150]	[0.997]	[0.793]
F-test	3.04**		6.61***	2.58***	26.77***		2.05	2.58***	2.75**			1.65	
R2	0.1096	0.1577	0.0301	0.0683	0.4979	0.4879	0.4643	0.4879	0.0923	0.0904	0.0760	0.0577	0.0560
BP-LM test	19.26***				65.12***				1.43			1.40	
Wald chi2 (15)		217.22***											
Hausman Chi2(9)		7. 94**				5. 35							
Wooldridge f-test			0.012			16.83***			3.512*			0.073	
Mean VIF			1.26			1.26			1.26			1.21	

***, **, * Significant at 1%, 5% and 10% value respectively

The results from the first model suggest that insurance firm have not benefited in terms of increased value added or increased employee productivity from investing in HCD as all measures of HCD are insignificant in the model. This implies that in-spit of the investment made in human capital, the productivity of the employees is not affected in a significant proportion that commensurate with such investment. In the second and third models, payment of salary and wages was found to significantly relate with gross premium written (at 1%) as well as returns on asset (at 5%). This means that a percentage increase in salary and wages is associated with about 48.8% and 12.6% increase in gross premium written and returns on asset respectively during the period reviewed. Results from the third and last model shows that expenditure on staff training and development has a marginal but significant association of about 1.6% and 3.7% increments ROA and ROE at 10% and 5% level of significance respectively.

Overall, the result indicates that payment of salary is the most HCD investment that has significantly improvement insurance performance in terms of gross premium written, and returns on asset while training and development makes a marginal contribution to return on asset and returns on equity. However, in terms of employee productivity, investment in HCD was found to be insignificant. This raises a number of concerns. First concern is on HCD policies of the firm, particularly on the type of training, salary scale and conditions associated with after work life of its staffs. Form empirical perspectives, these results are in line with studies that found positive association between investment HCD and firm performance[xxxiv, xxxv, xxxvi] as well as those that presented contrary results [ix]. But the unique contribution of this study is by identifying specific dimensions of both HCI and firm performance with significant association within firms that depends more on human capital for effecting and efficient operations. The found uncorrelated relation between HCD and EVA signifies excessive expenses on claim administration, reinsurance and other miscellaneous charges/expenses which are deductions made from actual employee value added.

This is because profit and loss statement of the individual insurance firms, these expenses is deducted from gross premium written which is shown significantly with salaries and wages. Thus while more salaries and wages led to improved GPW, expenses on claim, reinsurance, and other charges seems to reduce the value generated by employees and this measure was uncorrelated with HCI in this study. The stock of human capital caused by HCI reduces asset intangibility as reflected in positive correlation between HCI and returns on asset and repositioned the employee to take informed decision that seems to favour owners of the firms than debt investors as reflected in positive association between HCI and return on equity.

CONCLUSIONS AND IMPLICATIONS OF STUDY

Investment in human capital is a cost item to any firm but it is expected to generate commensurate or above average positive contribution to organizational bottom-line. We have examined the effect of this practice within insurance firms in a highly regulated emerging market economy – Nigeria. This is because, given the peculiarity of market and operational environment, insurers in Nigeria depend more in its employees for effective, efficient and productivity and performance. expenditure on training and development, salaries and wages, and retirement benefits obligations were examined as key areas of human capital related investment while employee value added (productivity), gross premium written, returns on asset and returns on equity were specified as measures of performance in the industry. Based on the findings made in this study, we draw the conclusions that increase in salaries and wages will positively and significantly increase gross premium written and returns on asset; increase in training and development will positively but marginally increase return on asset and return on equity. Among insurance performance measures, return on asset is most impacted by HCI via salary and wages. Together with training and development, salary and wages is empirically proven to affect insurance performance. It is also concluded that retirement benefits obligations do not contribute to insurance performance. This type of investment is not expected to directly affect performance because the employees that are being developed are no longer engaged in the organization. Therefore, investment in HCD has a positive effect on performance of insurance firms but does not affect the productivity of employees in terms of value added. Insurance firms benefits from HCI in terms of value of asset, equity and premium written but not by employee productivity. This study has a number of implications which are presented as follows:

- Firstly, it is important for insurance firms to occasionally assess the benefits over the costs of investing in HCD in order to control the level or volume of such investment and stay within a point considered to be optimally efficient, otherwise it may be dangerous to the company, especially workers productivity.
- Secondly, not carrying out such assessment which results will be useful in guiding corporate decision and policy makers, the company may sooner than expected experienced severe liquidity problem due to overinvestment in HCD, especially as expenses on claim, reinsurance etc seems to override improvement in employee value added.
- Thirdly, policies on retirement benefits outside of the compulsory pension contribution should be relating with corporate goal regarding employee productivity so that the insurance sector may not become weaker and even bankrupt because of severe illiquidity problem that may arise from excess investment in such obligations.

References

i. Hammer, M. (2010). What is business process management?. In *Handbook on Business Process Management 1* (pp. 3-16). Springer Berlin Heidelberg.

ii. Le, T. Gibson, J. & Oxley, L. (2005). Cost- and Income-based measures of Human capital. *Journal of Economic Surveys Vol. 17, No. 3*

iii. De la Fuente, A. & Ciccone, A. (2002). Le capital humain dans une e ´conomie mondiale sur la connaissance. Rapport pour la Commission Europe ´enne, Brussels.

iv. Alan, K. M. A., Altman, Y., & Roussel, J. (2008). Employee training needs and perceived value of training in the Pearl River Delta of China: A human capital development approach. *Journal of European Industrial Training*, 32(1), 19-31

v. Sakiru, A. S., & Olabisi, O. E. (2015). Impact of economic globalization on human capital: Evidence from Nigerian economy. *International Journal of Economics and Financial Issues*, 5(3) Retrieved from http://search.proquest.com/docview/1701253599?

vi. Roses, J. R (1998). Measuring the contribution of human capital to the development of the Catalan factory system (1830-61). *European Review of Economic History, 2,* 25-48.

vii. Barro, R. J., & Sala-i-Martin, X. (1992). Public finance in models of economic growth. *The Review of Economic Studies*, *59*(4), 645-661.

viii. Buendía Azorín, J. D., & Sánchez de la Vega, M. D. M. (2015). Human capital effects on labour productivity in EU regions. *Applied Economics*, *47*(45), 4814-4828.

ix. Sunde, U., and Vischer, T. (2015). Human capital and growth: Specification matters. Economica, 82 (326), 368. Retrieved from http://search.proquest.com/docview/1662447769

x. Emmanuel, A. C., Debrah, Y., & Yiheyis, Z. (2015). Human capital and FDI inflow: An assessment of the African case. World Development, 74, 1. Retrieved from http://search.proquest.com

xi. National Insurance Commission -NAICOM (2011). Insurance Sector Reform in Nigeria http://finance.mapsofworld.com/economy-reform/nigeria/insurance-sector. (accessed 29 March, 2012)

xii. Daugherty, P. J., Chen, H., Mattioda, D. D., & Grawe, S. J. (2009). Marketing/logistics relationships:

influence on capabilities and performance. *Journal of Business Logistics*, *30*(1), 1-18.

xiii. Colbert, B. A. (2004). The complex resource-based view: Implications for theory and practice in strategic human resource management. *Academy of Management Review*, *29*(3), 341-358.

xiv. Wright, P. M., Dunford, B. B., & Snell, S. A. (2001). Human resources and the resource-based view of the firm. Journal of Management, 27: 701-721

xv. Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17*, 99-120. doi:10.1177/014920639101700108.

xvi. Schultz, T.W. (1993). The economic importance of human capital in modernization. *Education Economics*, *1*(1), 13-19.

xvii. Bharadwaj, A. S. (2000). A resource-based perspective on information technology capability and firm performance: an empirical investigation. *MIS Quart., 24*, 169 – 196

xviii. Becker, G. S. (1964). *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education*. University of Chicago Press: Chicago.

xix. Swanson, R.A., 2001. Human resource development and its underlying theory. *Human Resource Development International*, *4*(3), pp.299-312.

xx. Selvarajan, T. T., Ramamoorthy, N., Flood, P. C., Guthrie, J. P., MacCurtain, S., & Liu, W. (2007). The role of human capital philosophy in promoting firm innovativeness and performance: Test of a causal model. *International Journal of Human Resource Management*, *18*(8), 1456-1470.

xxi. Hsu, I. C., Lin, C. Y. Y., Lawler, J. J., & Wu, S. H. (2007). Toward a model of organizational human capital development: Preliminary evidence from Taiwan. *Asia Pacific Business Review*, *13*(2), 251-275., DOI: 10.1080/13602380701233547

xxii. Bontis, N. & Fitz-enz, J. (2002). Intellectual capital ROI: a current map of human capital antecedents and consequents. *Journal of Intellectual Capital*, 3 (3): 223-47.

xxiii. Garavan, T. N., Morley, M., Gunnigle, P. & Collins, E. (2001). Human capital accumulation: the role of human resource development. Journal of European Industrial Training, 25 (2-4), pp. 48-68.

xxiv. McMahon, W. W. (2000). The Impact of Human Capital on Non-Market Outcomes and Feedbacks on Economic Development. OECD2000_1.doc

xxv. Kampkötter, P. (2011). *Compensation and Performance-Empirical Studies on Wages, Bonus Payments, and Intra-Firm Trainings* (Doctoral dissertation, Universität zu Köln).

xxvi. José, D. B., & María del Mar Sánchez de,la Vega. (2015). Human capital effects on labour productivity in EU regions. Applied Economics, 47(45), 4814. Retrieved from http://search.proquest.com.

xxvii. Kyoung, Y. K., Pathak, S., & Werner, S. (2015). When do international human capital enhancing practices benefit the bottom line? An ability, motivation, and opportunity perspective. Journal of International Business Studies, 46(7), 784-805. doi: http://dx.doi.org

xxviii. Chris, C. C., Hye, Y. P., Jeoung, Y. L., & Kim, K. (2015). Human capital in multinational enterprises: Does strategic alignment matter? Journal of International Business Studies, 46(7), 806-829. doi:http://dx.doi.org/10.1057/jibs.2015.15

xxix. Avcı, E. (2016). Capital Structure and firm performance: An application on manufacturing industry. *İktisadi ve İdari Bilimler Dergisi*, *38*(1), 15-30.

xxx. Davydov, D. (2016). Debt structure and corporate performance in emerging markets. *Research in International Business and Finance*, *38*, 299-311

xxxi. OECD (2001), *The Well-being of Nations: The Role of Human and Social Capital*, OECD Publishing, Paris.

xxxii. Blundell, R., Dearden, L., Meghir., C., & Sianesi, B., (1999). Human capital investment: The returns from education and training to the Individual, the Firm and the Economy. *Fiscal Studies* (1999) 20 (1): 1–23

xxxiii. Bell, B., & Van Reenen, J. (2012). *In brief: UK chief executives: paid for performance?* (No. 373). Centre for Economic Performance, LSE.

xxxiv. Marimuthu, M., Arokiasamy, L., & Ismail, M. (2009). Human Capital Development and Its Impact on Firm Performance: Evidence from Developmental Economics, *The Journal of International Social Research Volume 2* (8): 265- 272.

xxxv. Seleim, A., Ashour, A., & Bontis, N. (2007). Human capital and organizational performance: a study of Egyptian software companies. *Management Decision*, *45*(4), 789-801.

xxxvi. Bell, B., & Van Reenen, J. (2011). Firm performance and wages: evidence from across the corporate hierarchy. *CEP Discussion paper*, *1088*.

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.4016.
Mardjito, M., & Komarudin, K. (2017). Model of Academic Service Quality at School of Management and Informatics in Bandung, Indonesia. *Archives of Business Research, 5(12),* 272-281.

Model of Academic Service Quality at School of Management and Informatics in Bandung, Indonesia.

Mardjito Mardjito
School School of Management and Informatics
Mardira Indonesia, Bandung, Indonesia;

Komarudin Komarudin
School School of Management and Informatics
Mardira Indonesia, Bandung, Indonesia;

ABSTRACT

The globalization era and the rapid technological developments lead to the high demand of qualified human resources. Thus, educational institutions must produce qualified and highly competitive graduates. . Otherwise, there will be a gap between the human resources with the market needs. The excellent academic service quality for the students is important to reach the goal. The expected services are curriculum service, Teaching and Learning Process, the supporting facilities and infrastructure for Teaching and Learning Process and the supporting system of academic service support. However, the laboratories equipments have not supported the market needs. This study aims to to describe the policy of academic service quality, implementation, monitoring and model of academic service quality improvement in a School of Management and Informatics in Bandung. Moreover, this research uses qualitative naturalistic approach with descriptive method and case study. This study collects the data through interview, observation and document study. Data analysis is done through data display process, data reduction, and data verification through triangulation process. The results show that the curriculum policy has not used the concept of link and match. Theoretically, problems does not exist in the Teaching and Learning process. However, in reality the Teaching and Learning process has not met the users need yet. Furthermore, the there are no monitoring activities both in learning-teaching activities and the practice

Keywords: Academic; Service Quality.

INTRODUCTION

Both government and the private institutions agree that the quality of education is the best way to raise the dignity of the nation. To produce a high-quality education, the institutions must follow the National Education Standards, which involves the standard of facilities and infrastructure, standards of content and the excellent academic services for the students.

Generally, the services in the universities concerns on both academic services and administrative services. Academic service is a service given to the students; starts from registration to the graduation. The academic services include services provided by lecturers in the classroom or in the laboratory, in the Teaching and Learning Process, and the individual teaching methods and media supported by the adequate learning facilities and infrastructure, the Semester Learning Activities or syllabus, the study contracts, presences and the monitoring activities. The administrative services are services provided by the administrative staffs in supporting the academic services such as technical service administration, student administration, administration of the Teaching and Learning Process, cover letter for internship, and many others. Thus, the success of educational institutions is largely determined by the academic services for the students. However, they must be supported by a work-oriented curriculum (the link and match concept).

Many companies offer job opportunities but the fresh graduates cannot fulfill the qualifications. This condition leads to the high-rate of unemployment. According to Sub Commission III (2009) there are several aspects that cause the high unemployment rate: 1) Non-conformity between education outcomes with the needs of the world of work, 2) The imbalance of demand and supply and the low-quality of Human Resources, and 3) Limited employment opportunities so that the job seekers accept job offerings that are not in accordance with their educational qualifications. Furthermore, the Chairman of the Committee on Certification of Labor of the Chamber of Commerce and Industry (2014) said that the gap occurred because the supply of labor provided by educational institutions is not fully absorbed by the industries. Many workers do not have the job competence in a particular field. This condition shows that the quality of education is still low and they cannot read the market needs. The fresh graduates only rely on their diplomas. They do not have certificate of specific competency.

The academic service has not been optimally maintained. There are some problems related with the Teaching and Learning Process, infrastructure, human resources, and curriculum. Thus, the expected output does not match the market needs. This research is necessary to build the academic service paradigm embodied in the academic service model. The result is expected to create the output with competency. This research tries to describe the quality of academic services policy, the implementation of academic service quality, monitoring system, and model of service quality improvement.

RESEARCH METHODS

Qualitative research is a research procedure that produces descriptive data in written or verbal about the observed people and behavior [1]. The research was conducted in a School of Management and Informatics in Bandung. The subject of the research is a key informant who can provide depth information. In this study, the informants are the vice chairman I, II and III, the chairman of the department, the head of the study program, head of academic administration and students as the key instruments to explore information regarding academic service quality policy, implementation of academic service quality, monitoring of academic services and the obstacles in implementing the academic services and improving the quality of academic services in the future.

In qualitative research the data were obtained through interviews with the respondents, while other evidences was obtained by observation and documentation activities. Therefore, in this research, the required data are: 1) Documents as manual of Academic Regulation, form of BAP and form of Teaching; 2) interviews. In researching the Quality Management of Academic Services, the types of data and informants needed as the data sources are (a) Vice Chairman I, (b) Vice Chair II, (c) head of study program, (d) lecturers and laboratory staff, (e) head of academic administration and (f) Forum Group Discussion (FGD) for students from various departments.

Based on the instrument, there are some steps of data processing. Firstly, data from interviews and FGD changed into transcript form. Secondly, the data from the document were analyzed and tabulated based on the group and then analyzed based on the research question. The next steps of data processing consisted of four groups. First, the analysis and data processing related to the academic services quality policy of School of Management and Informatics. Second, the analysis and data processing related to the implementation of academic quality of

School of Management and Informatics Mardira Indonesia. Third, the monitoring of the academic services quality in School of Management and Informatics Mardira Indonesia. Fourth, drawing the conclusions from the analysis of interview, FGD, observation, and documents related to research questions. Data processing is grouped into 3 such as data reduction, data display, and conclusions and verification.

DISCUSSION

Academic Service Quality Policy

The curriculum quality policy in a School of Management and Informatics is the 2010 curriculum, where the core curriculum is about 60% and the institutional curriculum is around 40%. However, the curriculum changes whether it refers to APTIKOM and institutions have not been implemented until 2017. Supposedly, the changes should be done, at least once in 4 years. Based on the content, some programming-based courses have not been fully updated and followed the technological developments and market needs.

Based on the findings, there has been no changes in curriculum from 2010 until now. There has been no change on the subjects' names and contents. The overall structure of curriculum in a School of Management and Informatics refers to the Kep. Minister of Education No. 232/U/2000 in which the core curriculum is nationally accepted. According to [2] about the signs of the implementation of the personality development course in the universities, the distribution of courses are identified in several groups: MPK (personality development course), MKK (scientific and skills course), MKB (craftsmanship course), MPB (work attitude course), and MBB (social studies course).

The learning process is an interactive activity between educators and learners are supported by means of learning. Teaching and Learning Process activities in a School of Management and Informatics involve many components, from human resources, supporting facilities, as well as curriculum. Based on the results of the study of the academic regulations of one School of Management and Informatics in Bandung as follows:
Teaching and Learning Process of regular class starts from 08.00 - 12.00 on the weekdays. The evening class starts at 17.10 - 19.20. The learning activities do not use the package system but the Credit Units Semester (SKS). The number of meetings for theoretical and practicum within a semester is 14 meetings, besides the mid-term exam and final exam. An academic year consists of two semesters, the odd and even semesters.

The Diploma III students must complete 120 credits SKS while Strata I student must have 144 SKS. This policy is according to the Policy of Minister of Education and Culture RI No. 49 of 2014 about the National Standard that students must take at least 108 credits for Diploma III and 144 credits for Diploma IV and undergraduate programs.

In each semester there are evaluations to measure the students' ability in absorbing the materials. The evaluations are: 1) Formative assessments as quiz, task, report, and mid-term exam; 2) Summative assessment as final exam and practicum. Some regulations to follow mid-term exam or final exam, students must follow Teaching and Learning Process and practicum, at least 75%. The weight of the assessment for Teaching and Learning Process theory, mid-term exam 40%, final exam 40%, and task/quiz 20%. However, the percentage of assessments submitted by lecturers varies are different with the academic guidebooks. As suggested by the FGD that for the final assessment the lecturer gives 20% for taks, 10% attendance, 30% mid-term exam, and 40% last term exam. Furthermore, FGD adds that there are lecturers who give the assessment percentage for mid-term exam 30%, last term exam 40% and the rests are tasks and attendance. This condition shows that several lecturers have different perspectives in giving the final score. They do not refer to the book of academic rules.

The successful in Teaching and Learning Activities cannot be separated from the human resources, curriculum, facilities and infrastructure. For educational institutions, in particular the school of informatics, the supporting facilities are fundamental for teaching and learning process. In reality, the supporting facilities for Teaching and Learning Activities are 4 classes of computer lab - each class has the capacity for 30 students. In terms of quantity, the labs can fulfill the students' needs. Furthermore, the Teaching and Learning Activities can follow the industry development and the users demands. However, the the practicum materials are not in-line with the needs in the field. Some lecturers lab managers, and students have realized the conditions mentioned above. However, Vice chairman 1 made all these policies.

The administration services as registration, payment, checking the score at the School of Management and Informatics are still done offline. Even though it can be done online, it has not implemented optimally. The online administration services are only given to certain lecturers or students. Therefore, the students have to come to the campus.

The Quality of the Implementation of Academic Service

According to [3] academic services that are also known as curricular services are academic regulations, lectures, curriculum, academic guidance/counseling, practicum, final assignment, evaluation, including lecture tools such as libraries, OHPs, laboratories, and the others. The better the academic services provided to the students, the better the output. It means the fresh graduates are easier to get the job based on their educational background [4]. Therefore, it is important to provide qualified academic services [5,6].

There are no improvement on Curriculum policy since the educational institutions still use 2010 curriculum. As a consequence, the students competence cannot meet the concept of link and match. The curriculum implemented in Teaching and Learning Process is not in accordance with the vision and mission that has been declared.

In regard to the implementation of the curriculum, the theory and practice are appropriate. This finding is in accordance with the statement of the head of the study program.

> *With regard to curriculum implementation, the data involves the implementation of theory and practice within the Teaching and Learning Process. Implementation of theory and practic are in accordance with the curriculum. Moreover, the facilities and infrastructure are adequate enough because the classrooms are supported by air conditioning and infocus. (Head of the Study Program, September 2017).*

Here are the description of Teaching and Learning Process. At the first meeting, the lecturers provide syllabus and materials that will be learned on the semester. The lecturers also give handout, module and compulsory textbook that will be used for lectures. The lecturers also make agreements with the students about the systems of mid-term exam, last term exam, and the tasks. There are particular ways of calculating the final scores, for example 20% tasks, 10% attendance, 30% mid-term exam, and 40% final exam.

From the students, it is found that there is no understanding about the assessment component of mid-term exam, final exam, task, and attendance. They just assume about the component of assesment. This situation happen because the students do not have the academic manual which describes the assessment system. Furthermore, the lecturers have various perception about the perpercentage of the assessment.

From the situation, it can be concluded that academic guidance has not been fully used as a reference by a large number of lecturers, especially the adjunct lecturers. Consequently, the information about the assessment percentage are different. Furthermore, the students do not own the academic manual. In addition, the academic manual does not exist within the website. The students or lecturers cannot download the academic manual.

Furthermore, it is found that all students (unanimous) agree that the lecturers are accurate enough in teaching. They follow the schedule efficiently. When the lecturers cannot come in time, they will give additional time as the substitute. This condition is supported by a theory from [7]. They point out that one of the main dimensions of Service quality is Reliability. It is the ability to deliver the promised service. In this field it is related with the educational process. The reliability in the polytechnics is reflected by the commitment of lecturers at the beginning of the course on the rate of attendance and in giving the material.

Moreover, the next data is about the lecturers' way in delivering and using the material and media for the Teaching and Learning Process. The FGD stated various opinions. There are lecturers who present the material in the easy way. The others are hard to understand. If the lecturer deliver the material well, the student will get the idea properly and vice versa. Besides, there are many lecturers who give the opportunities for presentation. However, sometimes the lecturers do not give feedbacks for the students at the end of the presentation. This is a problem since the students do not fully understand the theme of the presentation. They take the sources from the internet and most of the materials are new to them. The media used in the class is the infocus, although some lecturers still use the OHP. In addition, some lecturers cannot explain the lessons interestingly. The media in the class is also less interesting so that the students are sleepy (FGD IF, September 2017)

The data above illustrates how the lecturer convey the materials and use the media. Most lecturers use the technology to assist them in transferring the knowledge to students. The whiteboard is used to clarify the material in the slides. Furthermore, the data says that there are some lecturers who order the students to do the presentation by searching the materials from the internet. However, by the time the presentation is finished, the lecturers do not give comments or feedbacks to the speakers. The students realize that they are lack of understanding about the materials. They do not know and understand what are being presented in front of the class. In addition, they are a little bit dissatisfied since the lecturers do not give any comments about their performance.

It can be concluded that the overall teaching methods and media used can be understood by students. But it takes extra hours for lecturers to review the materials of presentation by the students. Since the materials are mostly downloaded from the internet, those materials are up to date enough. This is in line with the FGD statement that the lecturers in presenting the material take the source from the internet. However, the materials are not compiled with the opinion of the lecturers themselves even though they also mention the sources. At the same time, the students explore the internet and get the same materials as presented by the lecturers. They find that the lecturers does not edit and add anything. This fact makes the students have lacks of good motivation.

Furthermore, the teaching media used by lecturers greatly influences the students' motivation in absorbing the materials. The visual teaching material will grab students' attention and also enhance their motivation in following the lesson. This is in harmony with the FGD that states that there are lecturers whose teaching way is not interesting and the media is less attentiongrabbing. It makes the students sleepy. Thus the teaching method and the visual teaching media can increase students' motivation in following Teaching and Learning Process.

Associated with the suitability of the syllabus with the material given by the lecturers, the data found that some of the materials are not in accordance with the syllabus. As the FGD stated:

> *MK - Some of the lecture materials are appropriate and some are not. Sometimes the students do not know what material that will be studied (FGD IF, September 2017)*

It can be said that half of the materials submitted in one semester are appropriate enough. It would be easier for the students to attend the lectures. Moreover, if the lecturers have given the syllabus and the material at the beginning of the meeting, the students will know the subject on each meeting. Furthermore, MK mentions lecturers rarely provide opportunities for consultation time outside of college hours.

The findings related with the facilities of Teaching and Learning Process are sufficient because the classroom condition is quite good and equipped with AC and infocus. The supporting facilities for practicum are in accordance with the student ratio. Therefore, there is no queue for using the computers. MK mentions that the computer laboratory can accomodate the students, with a capacity of 30 computers.

With regard to the academic administration services, it is found that the students are not satisfied because of the completing the registration and payment and checking the scores are done offline. They must come directly to the campus and cannot online. This condition will disrupt the students' convenience during vacations.

Monitoring the Quality of Academic Service

The implementation of a program is successful if it is in accordance with the plan. Monitoring is important in order to know the suitability of the program. Monitoring aims to obtain facts, data, and information about the implementation of the program, whether the process of implementation is suitable with the planned. Furthermore, the findings from the monitoring are used for the evaluation process. Thus, monitoring emphasizes on the process of implementation than the results.

In relation with the monitoring of academic services, the data that will be discussed are monitoring the Teaching and Learning Process in theory and practicum. Furthermore, the monitoring is related to the lecturers' activities and the supporting facilities for Teaching and Learning Process.

Monitoring the implementation of the curriculum is rarely done. In fact, it almost has never been done for the last 10 years, either by the head of the study program or the vice chairman for the academic affairs. Evaluation should be done at the end of each semester. Some questions from the monitoring are: Is it necessary to add content? Is the curriculum still in accordance with the development of the world of work? Monitoring activities should be conducted by the head of each department and the results will be discussed with the other lecturers, especially lecturers in the special expertise course.

The monitoring activities in both theory and practicum are not conducted specifically. There are no officers that come to the class to know how the Teaching and Learning Process is done by the lecturer. So far, monitoring the Teaching and Learning Process is conducted by signing a list of teaching attendance. This is closely related to the payment. It does not have any connections with monitoring the Teaching and Learning Process. The monitoring only gets some information about the frequency of lecturers' attendance in a month. After that, the frequency of lecturers' attendance is calculated for the honorarium. Although CCTV exists in the computer lab, it is not functioned for monitoring the practicum. It is for security only.

The Perspective of the Development of Academic Service

The good academic service leads to students' satisfaction. In addition, it will create the worldwide graduates. To make it happen, the involvement of various components is fundamental. The important components are policy, human resources and infrastructure.

Learning is the development of knowledge, skills or attitudes in which a person interacts with information and the environment. The environment is the learning place, i.e physical facilities, psychological aspect, learning methods, media and technology [8]. Thus, it is necessary to provide the adequate supporting facilities for Teaching and Learning Process. Previous research proved the important of service quality in education [9,10,11,12,13,14,15].

The Model of Academic Service Quality Development

Increasing the national's level of education is the government's goal. Every citizen deserves to obtain a high-quality education in accordance with his talents and interests. Therefore, improving the quality of education is one of the main issues in the development of national education, in addition to the relevance of education with the world of work, as well as the accountability.

The efforts in improving the quality of human resources cannot be separated from the role of educational development. Therefore, the development of education must be able to respond to all occuring situation and can anticipate the future. Furthermore, the educational development should be able to take advantage of various opportunities. To some extent, the education sector has a fundamental role in creating the strong and remarkable human resources. In order to create qualified human resources, the high-quality education must exist. Morover, the education sector must involve various components, starts from the human resources, facilities, the Teaching and Learning Process and curriculum.

The quality of educational institutions is strongly influenced by various inputs of educational systems such as students, lecturers, and facilities. These three factors are interdependent and influence each other in creating a successful teaching and learning process, so as to produce qualified educational institutions [16]. Thus, the institution must provide high-quality education services to the students, whether it is the Teaching and Learning Process conducted by the lecturer and the facilities; and the up to date curriculum to follow the development of industry.

Generally, the main goal of the Implementation Model of Academic Service Quality in Increasing Students' Competence is to improve the quality of service. The findings in the Academic Service Quality research are used as references to develop the Model of Academic Service Quality. This model is adopted from the research framework. It ranges from input, process, output, and outcome.

In the 'input' stage, the is a Competency Analysis required by the Industry / User, Academic Service Quality Objective, and Management Policies in Actualizing the Academic Service Quality. The entire aspects becomes an input formulation for the 'process' stage. The 'process' stage begins with the academic service related with the curriculum, theory and practicum, supporting facilities for Teaching and Learning Process, and administrative. To actualize a good academic Service, it is necessary to consider the required competencies on the Industry or stakeholders.

The 'process' stage explains the process of academic service quality of the academic service quality policy, the implementation of academic service quality, academic service quality monitoring and the obstacles in implementing the academic services. All components must refer to the quality of academic services. Hence, the outcomes will produce a qualified and competitive institutions and graduates.

The Model of Academic Service Quality requires systematic steps of planning, implementation, and evaluation. The first step is making plan to actualize the excellent academic services quality. Planning the academic service quality starts from the objective conditions of the current academic services quality. Furthermore, it is also important to analyze the competencies required by the industry or users. This step will build a relationship (link and match) with the industry or users of graduates. In addition, this step should be supported by the leadership policy that must be support the improvement of the academic services quality. At this stage, the expected academic services quality will be found, in terms of facilities and infrastructure, the Teaching and Learning Process to be implemented, and human resources. In addition, the future condition must be analyzed by using SWOT analysis.

The next stage is implementing the plan by involving several components that match the job desk. This stage carries out three management functions such as organizing, actuating and controlling. The leaders must be able to organize the existing resources: 1) lecturers, and laboratory staffs; 2) supporting facilities and infrastructure of theory and practice within the Teaching and Learning Process; 3) administrative staff; and 4) curriculum. The organizing stage will maintain the quality of academic services. Therefore, it is necessary to establish a cooperation with the Industrial World and the World of Work or the users.

Furthermore, there is actuating stage. This stage is related with the implementation of the activities such as: 1) building the communication between the financial field, BAAK, leaders and with the other related fields – thus, it will be easy to make the decisions for the students; 2) establishing a trustful academic service by motivating the human resources; and 3) implementing a quality assurance system for academic service activities.

The last step is controlling the every undertaken activity. In this case controlling activities related to the quality of academic services, starts from academic service quality policy, the implementation of academic service quality, the obstacles and the solution, and the monitoring and evaluation.

If the planning steps and implementation are completed properly, the high-quality academic services will happen. Moreover, it produces highly competent and globally competitive graduates.

CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS

1. The Quality of Academic Service Policy

The existing curriculum quality policy has not fully referred to the link and match concept. Moreover, the institution has not made any curriculum changes for 10 years. The implementation of theory and practice in the Teaching and Learning Process is in accordance with academic regulations.

2. Implementation of Academic Service Quality

All the lecturers have performed their teaching duties well both on the theory as well as practicum. Although there are some lecturers who have not fully utilized the technology to assist their Teaching and Learning Activities. The computer facilities for the practicum are in accordance with the standards. However, the information systems that supports the academic services are still done manually.

3. Monitoring of Academic Services Quality

There is no classroom monitoring activity undertaken by an officer in theory and practicum within the Teaching and Learning Activities. The monitoring on the lecturers' attendance list is done by the administration staff.

4. Development of Academic Service Quality Improvement Ahead

The development of academic service quality in the future refers to [17] on the National Education Standards. The curriculum refers to Indonesian National Work Competence Standards and the academic service quality standards. Implementation of the monitoring is carried out continuously and followed up from the monitoring results. It ranges from enhancing and reaffirming the academic regulation and building good communication between the sectors that supports academic activities, and making the partnership with industry or users to actualize the link and match concept.

There are some actions that should be taken according to the implications of findings related to the theory and practicum within the Learning and Teaching Process, supporting facilities for practicum, and supporting information systems for administrative services. The actions are: 1) The institution should provide some trainings to the lecturers in utilizing technology for the Teaching and Learning Process; 2) The institution should increase the number of computers; 3) The institution should hire an officer to monitor and evaluate the activities of Teaching and Learning Process; 4) The institution must cooperate with the industry, especially the upper middle industry; 5) The institution must develop the academic information system comprehensively; and 6) The institution must reaffirm the relevant Standard Operating Procedure of the academic services.

Based on the findings and discussions regarding the quality of academic services, some aspects needs to be followed up so that there will be some improvements in the future. The parts that need to be followed up are:

1. The curriculum policy should be reviewed at least once a semester with regard to the needs of the user whether the content is relevant or not for the next two or three years. Therefore, it is necessary to have a special unit that handles the curriculum. It starts from the analysis of users' needs to conclude the required competencies. Finally, it should be implemented in the theory and practicum within Teaching and Learning Process.
2. Regarding the implementation of theory and practicum within Teaching and Learning Process, the lecturers should combine the materials with images and visulas. Moreover, the tasks assigned to students are discussed together in class. When the lecturer take the source of teaching materials from the internet, they should have a compilation with the other sources and combine it with their personal opinions.
3. There is a need to establish a monitoring team for supervising the implementation of the curriculum within the Teaching and Learning Process. The main goal is improving the students' soft skill ability for responding the global competition.
4. Enhance the cooperation with industry or users.

5. For the future research, it is advisable to explore the student competencies needed in the world of work.

References

Bogdan, R., & Taylor, S. J. (1990). Looking at the bright side: A positive approach to qualitative policy and evaluation research. Qualitative Sociology, 13(2), p. 183-192.

Undang-Undang Sistem Pendidikan Nasional No. 20 Tahun 2003.

Tampubolon. (2001). Manajemen Pendidikan. Jakarta: Gramedia Pustaka Utama.

Machmud, S., & Sidharta, I. (2016). Entrepreneurial Motivation and Business Performance of SMEs in the SUCI Clothing Center, Bandung, Indonesia. DLSU Business & Economics Review, 25(2), p. 63-78.

Mulyawan, A., & Sidharta, I. (2014). Determinan Kualitas Layanan Akademik Di STMIK Mardira Indonesia Bandung. Jurnal Computech & Bisnis, 8(1), p. 13-24.

Juhana, D., & Mulyawan, A. (2015). Pengaruh Kualitas Layanan Jasa Pendidikan Terhadap Kepuasan Mahasiswa Di STMIK Mardira Indonesia Bandung. Jurnal Ekonomi, Bisnis & Entrepreneurship, 9(1), p. 1-15.

Parasuraman, A., Berry, L. L., & Zeithaml, V. A. (1991). Refinement and reassessment of the SERVQUAL scale. Journal of retailing, 67(4), p. 420-450.

Mulyawan, A., & Sidharta, I. (2013). Analisis Deskriptif Pemasaran Jasa Di STMIK Mardira Indonesia Bandung. Jurnal Computech & Bisnis, 7(1), p. 42-55.

Çerri, S. (2012). Assessing the quality of higher education services using a modified SERVQUAL scale. Annales Universitatis Apulensis: Series Oeconomica, 14(2), p. 664-679.

Dado, J., Taborecka-Petrovicova, J., Riznic, D., & Rajic, T. (2011). An empirical investigation into the construct of higher education service quality. International Review of Management and Marketing, 1(3), p. 30-42.

Doherty, G. D. (2008). On quality in education. Quality Assurance in Education, 16(3), p. 255-265.

Gruber, T., Fuß, S., Voss, R., & Gläser-Zikuda, M. (2010). Examining student satisfaction with higher education services: Using a new measurement tool. International Journal of Public Sector Management, 23(2), p. 105-123.

Manik, E., & Sidharta, I. (2017). The impact of academic service quality on student satisfaction. MPRA Paper 80878.

Shekarchizadeh, A., Rasli, A., & Hon-Tat, H. (2011). SERVQUAL in Malaysian universities: perspectives of international students. Business Process Management Journal, 17(1), p. 67-81.

Tondeur, J., van Braak, J., Sang, G., Voogt, J., Fisser, P., & Ottenbreit-Leftwich, A. (2012). Preparing pre-service teachers to integrate technology in education: A synthesis of qualitative evidence. Computers & Education, 59(1), p. 134-144.

Direktorat Jenderal Pendidikan Tinggi. 2004.Strategi Jangka Panjang Pendidikan Tinggi 2003-2010 (HELTS): Menuju Sinergi Kebijakan Nasional. Jakarta: Direktorat Jenderal Pendidikan Tinggi. Depdiknas.

Peraturan Menteri No 49.(2014).Tentang Standar Nasional Pendidikan Tinggi.

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.4025.
Paidipati, K. K., & Padi, T. R. (2017). Optimal Programming Problems for Crop Planning and Agricultural Resource Management. *Archives of Business Research, 5(12),* 282-293.

Optimal Programming Problems for Crop Planning and Agricultural Resource Management

Kiran Kumar Paidipati
Dept. Statistics, Pondicherry University, Puducherry-605014, India

Tirupathi Rao Padi
Dept. Statistics, Pondicherry University, Puducherry-605014, India

ABSTRACT
In this paper the researchers have developed two linear programming problems for optimal allocation of agricultural land with the objectives of minimizing farming costs and maximizing the revenue. The formulation of constraints are based on cost constraint of type of cultivation expenditure, allowable budget constraint for type of cultivation method, cost constraint with type of crop, allowable budget on the type of crop, total availability of land, competitive price of market on the price of each crop, minimum supporting price on each unit of crop, total investment and total revenue, break even yield of the crop, etc. The data on various categories are obtained through secondary data sources. Optimal sizes of agricultural land for each crop are obtained after solving all the combinations of programming problems. The decision making policies are suggested after analyzing the outputs on the parameters for management of agricultural resources.

Key words: Optimal Programming Problem, Crop Planning, Agricultural Resource Management

INTRODUCTION

Agriculture is the prime sector of Indian Economy with occupancy around 60% of employment to the rural folk. The changing dynamics of living styles have great influence on switching from this conventional profession. Due to increased levels of literacy, employment opportunities in industrial and service sectors, the global changing perceptions of employment, etc made the agricultural sector has a least priority profession. These factors have created another dimension of the problem that scarcity in the sources of agricultural farming. The investments on different types of expenditure, for different types of crops in different types of lands (say Wet and Dry) are increased enormously. All these issues are the influencing factors on increased costs, limited resources land, seeds, fertilizers, etc. On the other hand the production/ yields of different crops, the selling price on different agricultural products and hence the revenue on the outputs is drastically decreased. The constraints of manpower, availability of agriculture land are the other specific problems under which the farmers are facing very vulnerable situations. The technological assistance of machinery and other management methods makes the significant gap between the generated revenue and spent investments. Widening gap between investment and revenue is alarming in the context of the farming. Mismatching in the proportions of owing the agriculture land and the families working on the agriculture leads to select other options for their livelihood. Emotional attachment to the farming, non accessibility of employment opportunities, lack of planning and information processing, non managerial attitudes of the farmer, etc are some of the significant issues on which the agricultural manager (the farmer) has to think for better agricultural outputs. Optimal crop planning is the need of the hour for which the farmer has to set the goals and to achieve the proposed objectives with the constraints.

LITERATURE REVIEW

K.S. Raju and D.N. Kumar (1999) proposed multicriterion decision-making methods in selecting the best compromised irrigation plan for the objectives such as the net benefits, agricultural production and labour employment at Sri Ram Sagar Project, Andhra Pradesh, India. D.K.Singh et al. (2001) developed a linear programming model for an optimal cropping pattern in a canal command area of Shahi distributory to get the more profits at different water levels availability. F. S. Royce et al. (2001) developed an optimized model of crop management for climate forecasting applications to explore the potential benefits on small and predetermined subsets of possible combinations of variables. Laxmi Narayan Sethi et al. (2002, 2011) developed linear programming models on groundwater balance, optimum cropping and groundwater management; applied to Coastal river basin of Orissa state in India. Further they proposed decision support systems through forecasting models to get crop planning during seasons in different soils, and it is maximized the agricultural profits. JE Annetts and E Audsley (2002) developed a multiple objective linear programming problems for optimization of profit and environmental outcomes to identify the best cropping and machinery options with profitable and improvement in results to the environment for farming. Takeshi Itoha et al. (2003) developed a linear programming problem for crop planning for agricultural management for getting the profit coefficients with uncertainty due to influence of future conditions for agricultural farms. Bhabagrahi Sahoo et al. (2005) have developed linear programming and fuzzy optimization models for planning and development of available land-water-crop system of Mahanadi-Kathajodi delta in eastern India, to optimize in the economic return, production and labour utilization, and the related cropping patterns. Millie Pant et al. (2010) proposed linear programming models for optimal allocation of water, optimal cropping pattern for a given land area and water availabilities to maximize the economic returns through a multi-reservoir model in the command area of Pamba- Anchankovil- vaippar (PAV) link project in Kerala of India for optimal releases from the reservoir and optimal crop plans are developed under adequate, normal and limited irrigation water. Baljinder Kaura et al. (2010) formulated a linear programming model for optimal crop planning to maximize the net returns and the saving of ground water applied to some parts of Punjab in India. K. Varalakhmi et al. (2011) developed a linear programming technique for optimal cropping plans for small and large farmers in Panyam mandal, Kurnool district, Andhra Pradesh and focused on studying the income and employment of the labours through allocation of resources and technologies. Y.Raghava Rani and P. Tirupathi Rao (2012) have developed three Linear Programming problems for the multi-crop model which consists of maximizing the net benefits, minimizing the costs and water resources for the two seasons; did a case study of Rajoli Banda Diversion scheme (RDS) area, Mahaboob Nagar, AP, India. Wankhade M.O. and Lunge H.S. (2012) developed a linear programming (LP) technique for optimum resource allocation and the efficiency in the agricultural production with the data on 10 major crops in the area of rain fed zone of Murtizapur Tahsil of Akola District in Maharashtra, India. Srinivasa Rao Mutnuru et al. (2013) studied a sustainable agricultural and water resource planning through formulating an optimization model for water utilization, land resources with maximum benefits applied to the region of Mewat district, Haryana, India. Reddy Harshavardhan and T Rao Padi (2017) have developed some stochastic models for Optimal Crop Planning for Agricultural Resource Management.

In this study, the researchers have developed two optimal crop planning problems, and then have formulated the programming problems using LPP techniques for exploring two types of decision variables namely, (1) the optimal area of extent for i^{th} crop in j^{th} type of expenditure, (2) the optimal yield of i^{th} crop in l^{th} type of land. The study has focused with the objectives of cost minimization, yield maximization of the crop subject to the constraints of balancing the resources like cost inputs, land availability, budget allocations, break even productions, etc.

OPTIMAL CROP PLANNING PROBLEMS

Around 25 to 30 crops are considered to be prominent and having the large impact on the farmers in the Indian context. The data is obtained from the sources of Ministry of Statistics and Program Implementation (MOSPI), New Delhi, Directorate of Economics and Statistics (DES), Hyderabad and also from some research projects organized by S.V. Agricultural University, Tirupati. All these data is summarized and considered only the valid data. The study confined to 10 major crops due to several data gaps, they are Cotton, Mirchi, Groundnut, Jute, Bengal gram, Corn, Black gram, Green gram, Red gram and Paddy. With the similar reasons, the study also confined to 9 types of expenditures namely ploughing, seeds, plantation labour, fertilizers, water facilities, miscellaneous, agricultural collection/harvesting, storage, etc.

In this study, two linear programming problems were proposed

1. Finding the optimal area of cultivation for i^{th} crop and j^{th} type of expenditure with an objective of minimizing the agricultural input cost **(Cost Minimization)**
2. Finding the optimal yield of i^{th} crop and l^{th} type of land with an objective of maximizing the profits (**Revenue Maximization)**.

Formulation of objective function (cost minimization):

Let C_{ij} be the cost per unit (say 1 acre of land) on i^{th} type of crop with j^{th} type of expenditure; for i=1,2,…m(number of crop types); j=1,2….n(number of expenditure types); In this study m=10; n=9; The total cost on A_{ij} units of land for i^{th} type of crop with j^{th} type of expenditure is $C_{ij}A_{ij}$; The total cost on A_{ij} units of land for all types of expenditures of i^{th} type of crop $\sum_{j=1}^{n} C_{ij}A_{ij}, for\, i = 1,2,\ldots,n$; Hence, The total investment on production for all types of crops and for all types of expenditures for A_{ij} units of land is $Z_c = \sum_{i=1}^{m}\sum_{j=1}^{n} C_{ij}A_{ij}$; Since Z_c is the investment function, the objective is to minimize Z_c

Formulation of Constraints on Cost Minimization

1. Let B_j be the minimum essential overall cost to be spent for all types of crops (i=1,2,....m) and for A_{ij} units of land on j^{th} type of expenditure. Since the total cost on all types of crops (i=1,2,....m) and for A_{ij} units of land on j^{th} type of expenditure is $\sum_{i=1}^{m} C_{ij}A_{ij}\,; j = 1,2,\ldots,n$; the cost constraint with j^{th} type of expenditure is $\sum_{i=1}^{m} C_{ij}A_{ij} \quad B_j\,; j = 1,2,\ldots,n$
2. Let D_j be the maximum allowable budget to a farmer for all types of crops (i=1,2,....m) and for A_{ij} units of land on j^{th} variety of expenditure. Which implies the constraint with maximum allowable budget is $\sum_{i=1}^{m} C_{ij}A_{ij} \quad D_j\,; j = 1,2,\ldots,n$

3. Let L_i be the minimum required investment cost on i^{th} type of crop for all type of expenditures (j=1,2,....n) on all A_{ij} units of land. Then the cost constraint on i^{th} type of crop is $\sum_{j=1}^{n} C_{ij}A_{ij} \geq L_i; i=1,2,\ldots,m$
4. Let H_i be the maximum possible investment cost on i^{th} type of crop for all type of expenditures (j=1,2,....n) on all A_{ij} units of land. It implies that the budget constraint on i^{th} type of crop is $\sum_{j=1}^{n} C_{ij}A_{ij} \leq H_i; i=1,2,\ldots,m$
5. Let A_{ij} be the available agricultural land for i^{th} crop and j^{th} type of expenditure. The total extent area of the i^{th} crop for all types of expenditures is $A_i = \sum_{j=1}^{n} A_{ij}$ Since the total available land is fixed, the constraint on land availability for all crops is $\sum_{i=1}^{m}\sum_{j=1}^{n} A_{ij} \leq \sum_{i=1}^{m} A_i, for\, i=1,2,\ldots,m$

Nature of Decision Variables

Let A_{ij} be the number of agricultural units to be decided for i^{th} type of crop with j^{th} type of expenditure. $A_{ij} \geq 0$ is considered to be a decision variable is the First step. However, the specific decision variable is $A_i = \sum_{j=1}^{n} A_{ij} \geq 0, for\, i=1,2,\ldots m$

Objective function for Revenue Maximization

Formulation of objective function

1. Let A_{ijk} be the number of units of land occupied with i^{th} crop which was cultivated with j^{th} type of expenditure in k^{th} type of season say Rabi, Kharif, Dalva etc (k =1, 2, ... l), such that $A_{ij} = \sum_{k=1}^{l} A_{ijk}$
2. Let R_{ijk} be the Revenue per unit of output (per bag) due to the i^{th} crop which was cultivated with j^{th} type of expenditure in k^{th} type of season, such that $R_{ij} = \sum_{k=1}^{l} R_{ijk}$
3. Let Y_{ijk} be the number of units of yield per one unit of land due to the i^{th} crop which was cultivated with j^{th} type of expenditure in k^{th} type of season, such that $Y_{ij} = \sum_{k=1}^{l} Y_{ijk}$

Revenue on i^{th} crop which was cultivated on all types of expenditure is $\sum_{j=1}^{n} R_{ij}A_{ij}Y_{ij}$; Hence, the total revenue on all types of crops in all the seasons which were grown all types of expenditures is $Z_R = \sum_{i=1}^{m}\sum_{j=1}^{k} R_{ij}A_{ij}Y_{ij}$. Since Z_R is the profit function. The objective is to maximize Z_R.

Constraint with Market Competitive Price:

1. Let M_{ijk} be the market competitive price (farmers are confined to sell the product

within the cost limit) per unit of the i^{th} crop which was grown on j^{th} type of expenditure in the k^{th} season. Which implies the marketing competitive price per unit of i^{th} crop grown on j^{th} type of expenditure is $M_{ij} = \sum_{k=1}^{l} M_{ijk}$ and the marketing competitive price per unit of i^{th} crop irrespective of type of expenditure and season is $M_i = \sum_{j=1}^{n} M_{ij}$ Since the total cost on A_{ij} units of land for all types of expenditures of i^{th} type of crop = $\sum_{j=1}^{n} C_{ij} A_{ij}, for\, i = 1, 2, \ldots, m;$ This cost has to be less than the minimum marketing competitive price. Hence the constraint with Marketing competitive price is $\sum_{j=1}^{n} C_{ij} A_{ij} \le M_i, for\, i = 1, 2, \ldots, m;$

2. Let S_{ijk} be the minimum supportive price (farmers has to sell the product with a minimum of this price) per unit of the i^{th} crop which was grown on j^{th} type of expenditure in the k^{th} season. Which implies the minimum supportive price per unit of i^{th} crop grown on j^{th} type of expenditure is $S_{ij} = \sum_{k=1}^{l} S_{ijk}$ and the minimum supportive price per unit of i^{th} crop irrespective of type of expenditure and season is $S_i = \sum_{j=1}^{n} S_{ij}$. Since the total revenue on all types of crops in all the seasons which were grown on all types of expenditures is $Z_R = \sum_{i=1}^{m} \sum_{j=1}^{k} R_{ij} A_{ij} Y_{ij}$ and it has to be more than the minimum supporting price per unit of each crop; the constraint with minimum supporting price and the generated revenue is $\sum_{j=1}^{k} R_{ij} A_{ij} Y_{ij} \ge S_i, for\, i = 1, 2, \ldots, m$
3. As R_{ijk} be the revenue per unit of the i^{th} crop which was grown on j^{th} type of expenditure in the k^{th} season. Which implies the revenue per unit of i^{th} crop grown on j^{th} type of expenditure is $R_{ij} = \sum_{k=1}^{l} R_{ijk}$ and the revenue per unit of i^{th} crop irrespective of type of expenditure and season is $R_i = \sum_{j=1}^{n} R_{ij}$ Since the total Revenue on A_{ij} units of land for all types of expenditures of i^{th} type of crop = $\sum_{j=1}^{n} R_{ij} F_{ij} A_{ij}, for\, i = 1, 2, \ldots, m;$ This total revenue has to be more than the total cost on A_{ij} units of land for all types of expenditures of i^{th} type of crop = $\sum_{j=1}^{n} C_{ij} A_{ij}, for\, i = 1, 2, \ldots, m;$ Hence the constraint with total revenue and total cost is $\sum_{j=1}^{n} R_{ij} F_{ij} A_{ij} \ge \sum_{j=1}^{n} C_{ij} A_{ij}, for\, i = 1, 2, \ldots, m;$

4. Let L_i be the minimum required investment cost on i^{th} type of crop for all type of expenditures (j=1,2,....n) on all A_{ij} units of land. Then the cost constraint on i^{th} type of crop is $\sum_{j=1}^{n} C_{ij} A_{ij} \quad L_i ; i = 1, 2, \ldots, m$
5. Let H_i be the maximum possible investment cost on i^{th} type of crop for all type of expenditures (j=1,2,....n) on all A_{ij} units of land. It implies that the budget constraint on i^{th} type of crop is $\sum_{j=1}^{n} C_{ij} A_{ij} \quad H_i ; i = 1, 2, \ldots, m$
6. Let Y_{ijk} be the yield of crop per unit land of the i^{th} crop which was grown on j^{th} type of expenditure in the k^{th} season. Which implies the yield per unit land of i^{th} crop grown on j^{th} type of expenditure is $Y_{ij} = \sum_{k=1}^{l} Y_{ijk}$. The total yield of i^{th} crop for A_{ij} units of land is $\sum_{j=1}^{n} Y_{ij} A_{ij}$. Let B_i be the break even yield of i^{th} crop, which implies the constraint with break even yield is $\sum_{j=1}^{n} Y_{ij} A_{ij} \quad B_i , for\, i = 1, 2, \ldots m$

Nature of Decision Variables

Let A_{ij} be the number of agricultural units to be decided for i^{th} type of crop with j^th type of expenditure. $A_{ij} \geq 0$ is considered to be a decision variable is the First step. However, the specific decision variable is $A_i = \sum_{j=1}^{n} A_{ij} \quad 0, for\, i = 1, 2, \ldots . m$

Programming Problems:

1. **Linear Programming Problem for minimizing the cost** is

$$Min\, Z_c = \sum_{i=1}^{m} \sum_{j=1}^{n} C_{ij} A_{ij}$$

Subject to constraints

$$\sum_{i=1}^{m} C_{ij} A_{ij} \quad B_j ; j = 1, 2, \ldots, n$$

$$\sum_{i=1}^{m} C_{ij} A_{ij} \quad D_j ; for\; j = 1, 2, \ldots, n;$$

$$\sum_{j=1}^{n} C_{ij} A_{ij} \quad L_i ; i = 1, 2, \ldots, m$$

$$\sum_{j=1}^{n} C_{ij} A_{ij} \quad H_i ; i = 1, 2, \ldots, m$$

$$\sum_{i=1}^{m} \sum_{j=1}^{n} A_{ij} \quad \sum_{i=1}^{m} A_i , for\, i = 1, 2, \ldots, m$$

And

$$A_i = \sum_{j=1}^{n} A_{ij} \quad 0, for\, i = 1, 2, \ldots . m$$

2. **Programming Problem for revenue maximization** problem will be

$$Maximize\, Z_R = \sum_{i=1}^{m}\sum_{j=1}^{k} R_{ij} A_{ij} Y_{ij}$$

Subject to constraints

$$\sum_{j=1}^{n} C_{ij} A_{ij} \quad M_i, for\, i = 1,2,...,m;$$

$$\sum_{j=1}^{k} R_{ij} A_{ij} Y_{ij} \quad S_i, for\, i = 1,2,...,m$$

$$\sum_{j=1}^{n} R_{ij} F_{ij} A_{ij} \quad \sum_{j=1}^{n} C_{ij} A_{ij}, for\, i = 1,2,...,m;$$

$$\sum_{j=1}^{n} C_{ij} A_{ij} \quad L_i; i = 1,2,...,m$$

$$\sum_{j=1}^{n} C_{ij} A_{ij} \quad H_i; i = 1,2,...,m$$

$$\sum_{j=1}^{n} Y_{ij} A_{ij} \quad B_i, for\, i = 1,2,...m$$

and $A_i = \sum_{j=1}^{n} A_{ij} \quad 0, for\, i = 1,2,....m$

3. **Solution of Linear Programming Problems:**

The Proposed Programming Problem was solved with Longo 13.0 Version and the decision variables of the both the problems were extracted. The following are the programming code and the out puts obtained from the software.

Solution of Programming Problem-1									
crop/area	Plough. & machinery	seeds(kg)	plantation	Labour	fertilizers	water	Rent	picking charges	Storage (1quinta)
Cotton	112	39	83	733	0	133	3	25	903
Mirchi	914	163	500	350	83	200	400	11	2705
Groundnut	114	111	700	30	18	50	400	50	2492
Jute	57	8	83	67	3	0	1	25	93
Bengal	53	39	117	133	0	2876	2	50	97
Corn	150	13	100	170	233	100	400	0	586
black grams	53	39	83	133	0	631	2	50	97
green grams	19	5	25	100	0	11	400	0	711
Red grams	144	39	1167	100	0	2264	3	33	97
Paddy	257	111	100	100	67	0	567	0	4358

Solution of Programming Problem-2		
Crop yield	dry land	Wet land
cotton	1583	15
mirchi	1027	14
groundnut	953	15
Jute	5	78
Bengal grams	4	186
Corn	0	33
black grams	4	413
green grams	1	3
Red grams	22	1183
paddy	2	10

SUMMARY AND CONCLUSIONS

In the first problem, the programming problem has given the decision variables namely: the optimal land allocation for the expenditure wise. For Ploughing and Machinery, the number of Agricultural units for Cotton, Mirchi, Groundnut, Jute, Bengal grams, Corn, Black grams, Green grams, Red grams, and Paddy are 112, 914, 114,57,53,150, 53, 19,144 and 257 respectively. The optimal land allocation in view of the expenditure on Seeds for the above mentioned crops Cotton, Mirchi, Groundnut, Jute, Bengal grams, Corn, Black grams, Green grams, Red grams, and Paddy respectively is 39, 163, 111, 8, 39, 13, 39, 5, 39 and 111. The optimal land allocation in view of the expenditure on Plantation for the above mentioned crops Cotton, Mirchi, Groundnut, Jute, Bengal grams, Corn, Black grams, Green grams, Red grams, and Paddy respectively are 83, 500, 700, 83, 117, 100, 83, 25, 1167 and 100. The optimal land allocation in view of the expenditure on Labour for the above mentioned crops respectively Cotton, Mirchi, Groundnut, Jute, Bengal grams, Corn, Black grams, Green grams, Red grams, and Paddy are 733, 350, 30, 67, 133, 170, 133, 100, 100 and 100. The optimal land allocation in view of the expenditure on Fertilizers for the above mentioned crops Cotton, Mirchi, Groundnut, Jute, Bengal grams, Corn, Black grams, Green grams, Red grams, and Paddy respectively are 0, 83, 18**,** 3, 0, 233, 0, 0, 0 and 67. The optimal land allocation in view of the expenditure on Water for the above mentioned crops Cotton, Mirchi, Groundnut, Jute, Bengal grams, Corn, Black grams, Green grams, Red grams, and Paddy respectively are 133, 200, 50, 0, 2876, 100, 631, 11, 2264 and 0.

In the second problem, the optimal yields per acre in Dry land for the crops Cotton, Mirchi, Groundnut, Jute, Bengal grams, Corn, Black grams, Green grams, Red grams, and Paddy are 1583, 1027, 953, 5, 4, 0, 0, 1, 22 and 2. The optimal yields per acre in Wet land for the crops Cotton, Mirchi, Groundnut, Jute, Bengal grams, Corn, Black grams, Green grams, Red grams, and Paddy are 15, 14, 15, 78, 186, 33 ,413 ,3 ,1183, 10. The formulating problems have suggested the optimal decision variables for cost minimization in the 1st problem and revenue maximization in the 2nd problem might be the suitable alternatives to the farmers to come out of the problem of non-economical forming. These results may be considered as the guide spots for arriving to the decision which is more scientific. Our problem will help the formers as well as the policy makers to decide the optimal land allocations for different crops and optimal prices for decision makers.

References

K.S Raju and D.N. Kumar(1999), "Multicriterion Decision Making in Irrigation Planning", Agricultural Systems 62, pp- 117-129.

D.K.Singh, C.S. Jaiswal, K.S. Reddy, R.M.Singh, D.M.Bhandarkar (2001), "Optimal Cropping Pattern in a Canal Command Area", Agricultural Water Management 50, pp: 1-8.

F. S. Royce, J. W. Jones, J. W. Hansen (2001), Model–Based Optimization of Crop Management for Climate Forecast Applications, American Society of Agricultural Engineers, Vol. 44, pp-1319-1327.

Laxmi Narayan Sethi, D. Nagesh Kumar, Sudhindra Nath Panda and Bimal Chandra Mal (2002), "Optimal Crop Planning and Conjunctive Use of Water Resources in a Coastal River Basin", Water Resources Management 16: pp-145-169.

JE Annetts and E Audsley (2002), "Multiple objective linear programming for environmental farm planning", Journal of the Operational Research Society, vol.53, pp:933-943.

Takeshi Itoha, Hiroaki Ishii, Teruaki Nanseki (2003), A model of crop planning under uncertainty in agricultural management, International journal of Production Economics, 81-82, pp-555-558.

Bhabagrahi Sahoo, Anil K. Lohani And Rohit K. Sahu (2006), "Fuzzy Multiobjective and Linear Programming Based Management Models for Optimal Land-Water-Crop System Planning", Water Resource Management 20: 931-948.

Millie Pant, Radha Thangaraj, Deepti Rani, Ajith Abraham, Dinesh Kumar Srivastava (2010), "Estimation of optimal crop plan using nature inspired metaheuristics", World Journal of Modelling and Simulation, Vol. 6, No.2, pp.97-109.

Baljinder Kaur, R.S. Sidhu and Kamal Vatta (2010), "Optimal Crop Plans for Sustainable Water Use in Punjab"; Agricultural Economics Research Review, Vol.23, pp-273-284.

Laxmi Narayan Sethi and Sudhindra Nath Panda (2011), "Development of Decision Support System for Optimum cropping and water Resources Management of a Costal River Basin"; Assam university journal of Science and Technology, Vol. 7, Number II.

K. Varalakshmi, Jayashree Handigol and R. A. Yeledhalli (2011), "Optimum crop enterprise mix for the farmers in Kurnool district of Andhra Pradesh", Karnataka Journal OF Agricultural Sciences, Vol. 24, No.5, pp-661-667.

Y.Raghava Rani, Dr P. Tirupathi Rao (2012); "Multi Objective Crop Planning For Optimal Benefits"; International journal of Engineering Research and Applications (IJERA), Vol.2, Issue 5.

Wankhade M.O. and Lunge H.S. (2012): "Allocation of Agricultural Land to the Major Crops of Saline Track by Linear Programming Approach: A Case Study"; International Journal of Scientific & Technology Research, Volume 1, Issue 9.

Srinivasa Rao Mutnuru, Naved Ahsan & Quamrul Hassan (2013), "Application of Optimization Modeling in Sustainable Agricultural and Water Resources Planning: A Case Study"; IJCSEIERD, Vol. 3 and Issue. 4.

Reddy H.V.D & Tirupathi Rao Padi (2017), "Stochastic Models for Optimal Crop Planning and Management of Agricultural Resources", ICBBD 2017, ISSN 2521-3806, Vol.1, 2-4 August 2017, Bangkok, Thailand

APPENDIX

Table-1: Area of Extent (in Lakh acres) the Crop is cultivated (A_i)

Year	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	Mean
Cotton	9.34	8.71	8.53	9.13	7.67	7.6	8.79	8.68	9.14	9.41	9.41	10.28	11.14	9.06
Mirchi	27.52	27.49	25.73	26.34	25.2	26.6	26.38	26.48	27.99	28.04	27.75	28.34	29.25	27.16
Groundnut	26.23	24.28	22.77	22.64	21.49	23.66	27.52	27.86	26.51	26.69	27.56	26.22	26.82	25.40
Jute	1.03	1.04	1.02	1.05	1.04	1	0.92	0.9	0.94	0.96	0.9	0.91	0.86	0.97
Bengalgrams	29.34	29.34	30.26	29.52	26.99	30.8	29.03	29.04	28.71	28.48	27.45	27.52	27.64	28.78
Corn	6.51	6.03	4.48	5.07	4.54	5.43	7.32	7.28	6.79	5.83	6.3	5.77	6.51	5.99
Black Grams	7.4	6.87	6.56	6.24	5.94	5.99	6.64	6.74	5.62	6.29	6.64	5.42	5.95	6.33
GreenGrams	6.49	6.22	6.42	6.34	6.11	6.56	7.57	7.71	8.33	8.88	9.51	9.79	9.55	7.65
Red Grams	23.5	21.12	20.35	22.01	20.5	23.46	22.76	22.39	23.19	23.63	22.09	23.39	26.28	22.67
Rice	44.8	45.16	44.71	44.9	41.18	42.59	41.91	43.66	43.81	43.91	45.54	41.87	42.56	43.58

Table-2: Market sales Price (Ri) per quintal

Year	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	**Mean (wet land)**	**Mean (dry land**
Cotton	1650	1775	1825	1875	1875	1925	1960	1980	1990	2030	3000	3000	3000	2145	2045
Mirchi	1000	1100	1200	1300	1330	1600	1700	1715	1715	1800	1830	1830	1850	1536	1436
Groundnut	1040	1155	1220	1340	1355	1400	1500	1520	1520	1550	2100	2100	2300	1546	1446
Jute	650	750	785	810	850	860	890	910	1000	1055	1250	1375	1575	982	882
BengalGrams	895	1015	1100	1200	1220	1400	1425	1435	1445	1600	1730	1760	2100	1410	1310
Corn	960	1105	1200	1320	1330	1370	1410	1520	1520	1700	2520	2520	2900	1644	1544
Black Grams	390	415	445	485	485	505	515	525	540	600	840	840	880	574	474
Green Grams	960	1105	1200	1320	1330	1370	1410	1520	1520	1700	2520	2760	3170	1683	1583
Red Grams	960	1105	1200	1320	1320	1360	1390	1400	1410	1550	2000	2300	3000	1563	1463
Paddy	440	490	510	530	530	550	560	570	580	645	850	950	1000	631	531
Total	8945	10015	10685	11500	11625	12340	12760	13095	13240	14230	18640	19435	21775		

Table-3: Minimum Break Even Crop Size (Bi) Per Acre (On Wet Land)

YEAR	Cotton	Mirchi	Groundnut	Jute	Bengal grams	Corn	Black grams	Green grams	Red grams	Paddy
2004-05	6.5	5.0	6.0	4.0	4.0	10.0	4.0	3.0	3.0	20.0
2005-06	5.0	5.0	5.0	4.5	4.0	11.0	3.0	4.0	4.0	22.0
2006-07	6.0	5.0	5.0	4.5	4.5	10.5	3.5	4.0	4.0	23.0
2007-08	5.5	6.0	6.0	4.0	4.0	10.0	4.0	3.5	4.5	23.0
2008-09	5.0	5.0	7.0	5.0	4.5	10.0	4.0	3.0	3.0	23.0
2009-10	6.0	6.0	6.5	5.0	4.5	11.0	4.5	3.0	3.5	24.0
2010-11	6.5	5.0	5.5	5.5	4.0	12.0	4.0	3.5	4.0	20.0
2011-12	6.0	5.0	6.0	4.5	4.0	11.5	4.0	3.5	4.5	24.0
2012-13	5.5	6.0	6.0	4.0	4.5	11.0	4.5	4.0	4.0	21.0
2013-14	5.0	6.0	5.0	5.0	4.5	10.0	3.5	4.0	3.5	22.0
2014-15	5.5	6.0	6.0	5.5	4.0	10.0	3.5	3.0	3.0	24.0
2015-16	6.0	5.0	6.5	5.5	4.5	12.0	4.0	3.0	3.5	23.0
2016-17	6.5	6.0	7.0	5.0	4.5	12.5	4.5	3.5	3.5	25.0
Average	6	5	6	5	4	11	4	3	4	23

Table-4: Minimum Break Even Crop Size (Bi) Per Acre (On Dry Land)

YEAR	Cotton	Mirchi	Ground nut	Jute	Bengal grams	Corn	Black grams	Green grams	Red grams	Paddy
2004-05	15	15	15	10	6	25	9	5	5	40
2005-06	14	15	14	9	6	30	9	6	6	35
2006-07	13	15	15	9	5	27	8	7	6	40
2007-08	14	14	15	10	6	39	6	6	7	38
2008-09	15	14	15	7	7	28	8	6	5	38
2009-10	14	10	14	8	8	28	7	7	6	39
2010-11	13	11	14	9	7	30	9	5	7	37
2011-12	13	12	12	10	9	32	8	5	5	38
2012-13	15	12	15	9	8	35	7	6	7	40
2013-14	14	13	14	9	8	29	8	6	6	38
2014-15	14	13	13	8	9	38	8	5	5	39
2015-16	15	11	12	7	8	39	8	6	6	39
2016-17	15	10	12	9	10	40	7	7	7	40
Average	14	13	14	9	7	32	8	6	6	39

Table-5: Types Of Expenditure Per Acre (Approx) On Wet Land (C_{ijk})										
Crops	Plough, &machin	Seeds (kg)	Plant-ation	Labour	Fertil izers	water	Rent	picking charges	Storage (1quintal)	Total (H_{i1})
Cotton	2950	2000	500	11000	8000	2000	15000	1500	0	42950
Mirchi	3000	5000	3000	4500	5500	3000	15000	2000	100	41100
groundnut	3000	4000	4000	1000	3000	1500	15000	3000	100	34600
Jute	1500	400	500	1000	1000	0	15000	1500	0	20900
Bengal	1400	2000	700	2000	2900	0	15000	3000	100	27100
Corn	3500	1900	1000	2700	10000	2000	15000	2000	100	38200
black	1400	2000	500	2000	2900	0	15000	3000	100	26900
green	1400	2000	500	2000	3000	1000	15000	2000	100	27000
Red	3000	2000	700	1500	15500	0	15000	2000	100	39800
Paddy	5000	4000	1000	2000	5000	1000	20000	2000	100	40100
Total	26150	25300	12400	29700	56800	10500	155000	22000	800	338650

Table-6: Types Of Expenditure Per Acre (Approx) On Dry Land(C_{ijk})									
Crops	ploughing & machinery	seeds(kg)	plantation	Labour	fertilizers	Rent	picking charges	Storage (1quintal)	Total(H_{i2})
Cotton	2950	2000	500	11000	8000	15000	1500	0	40950
Mirchi	3000	5000	3000	4500	5500	15000	2000	100	38100
groundnut	3000	4000	4000	1000	3000	15000	3000	100	33100
Jute	1500	400	500	1000	1000	15000	1500	0	20900
Bengal	1400	2000	700	2000	2900	15000	3000	100	27100
Corn	3500	1900	1000	2700	10000	15000	2000	100	36200
black	1400	2000	500	2000	2900	15000	3000	100	26900
green	1400	2000	500	2000	3000	15000	2000	100	26000
red grams	3000	2000	700	1500	15500	15000	2000	100	39800
Paddy	5000	4000	1000	2000	5000	20000	2000	100	39100
Total	26150	25300	12400	29700	56800	2E+05	22000	800	3E+05

Table-7: Minimum Support Prices (minimum Break Over Price)(S_i)													
Crop Name	2004 -05	2005 -06	2006 -07	2007 -08	2008 -09	2009 -10	2010 -11	2011 -12	2012 -13	2013 -14	2014 -15	2015 -16	**Total**	**Mci**
Cotton	1440	1575	1625	1675	1675	1690	1710	1730	1770	1820	1910	1950	2057	400
Mirchi	1650	1775	1825	1875	1875	1895	1920	1960	1970	1970	1990	2010	2271	600
Groundnu	1040	1155	1220	1340	1355	1370	1375	1410	1440	1475	1520	1545	1624	250
Jute	650	750	785	810	850	855	870	890	910	930	975	1015	1029	400
Bengal	705	755	775	795	795	825	825	840	875	910	925	1010	1003	600
Corn	795	845	865	885	885	925	935	935	955	960	990	1030	1100	120
Black	850	915	1025	1100	1120	1170	1200	1225	1240	1275	1315	1335	1377	300
Green	960	1105	1200	1320	1330	1340	1365	1380	1395	1425	1440	1475	1573	350
Red	960	1105	1200	1320	1320	1325	1340	1365	1390	1415	1435	1450	1562	350
Paddy	440	490	510	530	530	545	570	595	625	650	675	725	6885	900

Table-8: Types Of Expenditure Per Acre(Approx) On Dry Land(C_{ijk})											
Crops	plough& machine	Seeds (kg)	Plant ation	labour	Fertil izers	water	Rent	Picking charges	Storage (1quin)	Total (hj)	cost per bag(C_{i1})
Cotton	2950	2000	500	11000	8000	2000	15000	1500	0	42950	7158.33
Mirchi	3000	5000	3000	4500	5500	3000	15000	2000	100	41100	8220.00
GroundNut	3000	4000	4000	1000	3000	1500	15000	3000	100	34600	5766.67
Jute	1500	400	500	1000	1000	0	15000	1500	0	20900	4180.00
BengalGrams	1400	2000	700	2000	2900	0	15000	3000	100	27100	6775.00
Corn	3500	1900	1000	2700	10000	2000	15000	2000	100	38200	3472.73
black grams	1400	2000	500	2000	2900	0	15000	3000	100	26900	6725.00
green grams	1400	2000	500	2000	3000	1000	15000	2000	100	27000	9000.00
Red grams	3000	2000	700	1500	15500	0	15000	2000	100	39800	9950.00
Paddy	5000	4000	1000	2000	5000	1000	20000	2000	100	40100	1743.48

Table-9: Types Of Expenditure Per Acre(Approx) On Wet Land(C_{ijk})

Crops	Plough & machine	seeds	plantation	labour	fertilizers	Rent	picking charges	Storage	Total	cost per bag (C_{i2})
Cotton	2950	2000	500	11000	8000	15000	1500	0	40950	2925.00
Mirchi	3000	5000	3000	4500	5500	15000	2000	100	38100	2930.77
Ground Nut	3000	4000	4000	1000	3000	15000	3000	100	33100	2364.29
Jute	1500	400	500	1000	1000	15000	1500	0	20900	2322.22
BengalGrams	1400	2000	700	2000	2900	15000	3000	100	27100	3871.43
Corn	3500	1900	1000	2700	10000	15000	2000	100	36200	1131.25
black grams	1400	2000	500	2000	2900	15000	3000	100	26900	3362.50
green grams	1400	2000	500	2000	3000	15000	2000	100	26000	4333.33
red grams	3000	2000	700	1500	15500	15000	2000	100	39800	6633.33
Paddy	5000	4000	1000	2000	5000	20000	2000	100	39100	1002.56

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.4018.
Akinbola, O. A., Zekeri, A., & Idowu, H. A. O. (2017). The Power Sector and its Impacts on Industrialization of Businesses in Nigeria. *Archives of Business Research, 5(12),* 294-305.

SOCIETY FOR SCIENCE AND EDUCATION

The Power Sector and its Impacts on Industrialization of Businesses in Nigeria

Olufemi Amos Akinbola
Department of Business Administration, College of Management Sciences.
Federal University of Agriculture, Abeokuta

Abu Zekeri (Ph.D.)
Department of Business and Entrepreneurship, School of Business and Governance.
Kwara State University, Malete.

H. A. O Idowu
Centre for Energy Research and Development
Obafemi Awolowo University, Nigeria

ABSTRACT

The study investigates the link between power supply and business industrial development by examining the influence of government policies on power supply and industrial development in Nigeria. The Johansen Co-Integration technique was adopted to determine the long run relationship among some macroeconomic variables that includes the industrial component of Real Gross Domestic Product, explicitly chosen using explanatory variables. The independent variables includes electricity consumption, electricity production (Kwh), growth rate of labour force, real gross fixed capital formation and telephone lines per hundred population and their impact on industrial component of real GDP. Annual time series data on these variables from 1981 to 2010 were collected from the Central Bank of Nigeria Statistical Bulletin, the World Bank and United Nations Statistics. Augmented Dickey Fuller (ADF) and Phillip-Perron (PP) tests are employed to test the order of integration of the variables. The study also performed a Vector Error Correction Model-VECM to correct possible disequilibrium caused in the short-run relationships. The study concluded that electricity condition which is a result of existing government policies exerts a negative impact on industrial output in the long run affects the business viability.

Key Words: Power Supply, Industrial Development, SME Growth, Electricity Consumption.

INTRODUCTION

Industrialization has been seen as a veritable channel of attaining the lofty and desirable conception and goals of improved quality of life for the populace (Adeoye, 2004). This is because; industrial development involves extensive technology-based development of the productive or manufacturing sector of the economy. In other words, it includes a sustained application and combination of suitable technology, management techniques and other resources to improve the economy from the traditional low level of production to a more automated and efficient system of mass production of goods and services (Ayodele and Falokun, 2003).

Based on this background, industrialization is proven to be central to a nation's economic growth and development. This therefore explains the reason why successive governments in developing countries such as Nigeria emphasize industrialization as a way of transforming their economies. In the past five decades, Nigeria has pursued industrialization with the hope of transforming the economy from a monolithic, inefficient and import-dependent economy to a more dynamic and export-oriented economy, especially exports of industrial goods. These aspirations as contained in the successive development plans (particularly, first and second development plans) of the Federal Government were further reinforced by the windfall gains from crude oil boom of the 1972/73 and 1979/80. However, despite series of deregulation policies by successive governments to facilitate industrialization process in an economically conducive manufacturing environment, the performance of the industrial sector remains undesirable. In the last two decades, Nigeria recorded an unremarkable or abysmal performance especially in manufacturing industry in the areas of production and international trade. Although, its poor macroeconomic management might have largely contributed to such unfavourable performance of the industrial (manufacturing) sector.

The role of constant power supply in the development of society or an economy cannot be overemphasized. Power is a physical infrastructure necessary for economic growth and development. However, statistics have shown that Nigeria continued to perform poorly in its national electricity supply. For instance, comparative investigation reveals that electricity production in Nigeria was 19.78 billion KWh while South Africa was 246.8 billion KWh, Singapore was 41.8 billion KWh and in the advanced countries, USA was 4,165.4 billion KWh and the UK was 372 billion KWh. In the same period, Nigeria was supplied at 15.85 billion KWh indicating a 3.93 billion KWh loss in transmission and distribution (CIA World Factbook, 2012).

The issue of power supply has been a major setback to industrial development in Nigeria. Electricity in Nigeria is yet to improve significantly despite the government involvement in reinstating the sector. With an increased population coupled with government efforts to diversify economic activities in the country, energy demand is rising but electricity supply has remained relatively stagnant. It is therefore obvious that electricity demand far exceeds its supply. The inefficiency as well as inadequacy of facilities to boost electricity supply has been a major cause of the increasing gap between demand and supply of electricity. The inefficiency of the power sector can be attributed to low investment in the sector and lack of preventive and routine maintenance of national power generation facilities which results in huge energy losses, frequent major breakdowns arising from the use of outdated and heavily overloaded equipment, inadequate generation due to operational/technical problems arising from machine breakdown. There is also the incidence of disruption of gas supply pipelines, fluctuation in gas pressure and water levels powering the hydro plants, poor funding, inadequate budgetary provision and undue delay in release of funds, inefficient billing and collection system, vandalism and pilfering of power generation equipment, among others as concluded by Odularu (2009), Okonkwo (2009), Nwulu (2011) and Agboola (2011). There are general assumptions that many of these inefficiencies persisted because selfish interest of government officials who have vested interests in the importation of domestic power generators. The existence of these bottlenecks in the power sector has greatly impaired the rapid development of the industrial sector Okafor (2008).

Consequently, it is of paramount interest for the purpose of economic and social policies to investigate the long-run linkage between power supply and industrial development in the Nigerian economy. This is with a view to establish the magnitude of response of the industrial sector to the power sector.

INDUSTRIALIZATION AND POWER SECTOR ISSUES IN NIGERIA

The prevailing issue of the power sector in Nigeria, as highlighted above, has been attributed to a number of factors such as lack of preventive and routine maintenance of national power generation facilities, the use of outdated and heavily overloaded equipment, operational or technical problems arising from machine breakdown. These have resulted in frequent major breakdowns, huge energy losses, inadequate power generation amongst others which act as the major setback to the pace of industrial development in Nigeria. Industrial development involve a change of system of production from the traditional low level of production to a more automated and efficient system, of mass production of goods and services, therefore, availability constant power supply is therefore indispensable.

World economies are heavily reliant on energy and Nigeria is not an exception. As Alam (2006) puts it, energy is the indispensable force driving all economic activities. In other words, the greater the energy production and consumption, the more the economic activity in the nation and as a result a greater economy emerges.

Small and Medium Scale Enterprises (SMEs) are believed to be the engine room for the development of any economy because they form the bulk of business activities in a growing economy like that of Nigeria and they contribute to GDP and employment generation capacity. A major problem of SMEs in Nigeria is inadequate and inefficient utilities such as power supply which tend to escalate costs of operation as SMEs are forced to resort to private provisioning of such utilities. Studies have shown that Nigeria's abysmally poor supply of electricity adds 40 percent to the costs of goods produced in the country (Adenikinju, 2005). These high costs of production have compelled many industries for example Dunlop tyres and other industrial corporations to either shut down or relocate to neighboring countries thereby deterring domestic and international investment. Also, apart from its direct fiscal effects, the power sector is strategic for increasing the competitiveness of the Nigerian economy by reducing overall energy costs and to facilitate the modernization of the technology used by economic agents and businesses. It is therefore important to investigate how efficient power supply has been in ensuring effective industrial development in Nigeria.

REVIEW OF LITERATURE

Many studies have established the existence of links between power as a form of energy and economic outcomes such as productivity, industrial development, the growth of SMEs, unemployment, economic growth and development amongst others (see, e.g., Agil and Butt, 2001; Alam, 2006; Breshin, 2004). Some scholars have argued that power supply for industrial development is a common challenge confronting most economies. Okafor (2008) argued that poor power generation represents a major setback for the Nigeria's industrial development. George and Oseni (2012) observed that the less and non-productive residential sector of Nigeria's economy attracts about four times of electricity supply than the industrial and commercial sector in an economy which they considered inappropriate for the growth of the industrial sector. According to Emovon, *et al* (2010) a sustained power supply system is effective and indispensable machinery for the rapid industrial and economic growth of any nation. Ayodele and Falokun (2003) examined the structure of the Nigerian industrial sector with emphasis on the manufacturing subsector. In their analysis, it was observed that, industrialization is central to economic growth and development. This is because the excess labour resources in the country can be absorbed by the desired positive developments in the process of industrialization.

Infrastructure in general has been seen to contribute tremendously to economic development. Asaolu and Oladele (2006) argue that infrastructural decay is the major problem confronting Nigeria and that poor electricity generation is one of the instances of the infrastructural decay in Nigeria. For three decades, inadequate quantity, quality and access to electricity service remain a big challenge to the Nigerian economy and the resolution of the challenge would boost the economy, reduce unemployment and the resultant social vices (Rabiu, 2009).

Power supply as an infrastructure is necessary for the effective operation of SMEs. Statistics have shown that small and medium-sized enterprises (SMEs) including macro-businesses are the highest employers of labour in Nigeria (Barros, *et al,* 2011). Adenikinju (2005) analyzed the economic cost of power outages in Nigeria. Using the revealed preference approach on business survey data (Bental and Ravid 1982; Caves, Herriges, and Windle 1992; Beenstock, Goldin, and Haitovsky 1997), Adenikinju estimated the marginal cost of power outages to be in the range of $0.94 to $3.13 per kWh of lost electricity. Given the poor state of electricity supply in Nigeria, Adenikinju (2005) concluded that power outages imposed significant costs on business. Small-scale operators were found to be most heavily affected by the infrastructure failures.

The high cost of electricity generation from private electricity power generators is one of the major challenges of SMEs in Nigeria (Onugu, 2005, Aremu and Adeyemi, 2011) as a result of the inadequate and erratic supply from the national grid. Most micro-businesses (barbing and hair salons, electronic repairs, business centres, welding, vulcanizing, etc) are unable to run profitably on power generating sets in a highly competitive and open economy like Nigeria because of the high costs of fuel and maintenance. Ordinarily, the power generating sets which have now become the primary source of electricity supply to industries and homes in Nigeria ought to serve as backups in the event of disruption from government sources (Okereke, 2010) but because of government inefficiency the backups are serving as the primary source. The aforementioned cost does not include costs associated with the use of private gasoline powered generators like noise and environmental pollution, risk of fire outbreak among others.

Furthermore, the relationship between energy consumption and productivity has been established. For example, Adenikinju and Alaba (2000) conducted an empirical study which evaluated the Nigerian manufacturing sector's performance with regards to the relationship between productivity, performance, and energy consumption within the manufacturing organizations. Utilizing an aggregate model, the study measured the changes in the total factor productivity of the sector relative to the change in energy consumption. The research concluded that efficiency and productivity of the Nigerian manufacturing organizations are indeed related to the energy supply and energy price. However, while the energy resources were found to play a critical role in the manufacturing sector, it was also discovered that the energy source alone cannot effectively improve the performance of the manufacturing sector in Nigeria. An important point identified in the research was that the manufacturing sector is too wedded to using old technology, and as such there is a great need for the adoption of more advanced energy-efficient technological devices and techniques. For this reason, reforms concerning the prices of energy options alone do not significantly affect the performance of the sector because it is hindered by the need for improved technology and energy supplies. Thus, the reforms in the energy sector need to happen alongside technological reforms, otherwise the manufacturing organizations cannot entirely enjoy the advantages of the energy resources.
Some studies have shown that the demand for energy leads to economic growth. Since consumption is derived from demand, whatever is consumed must have been demanded. Birol (2007) argues that demand for energy has surged and in that respect, the unrelenting increase has helped fuelled global economic growth. Yu and Choi (1985) carried out a research in the Philippines and found that there is a positive relationship between energy consumption and economic growth. They went further to define that relationship as a unidirectional one where economic growth served as the dependent variable and energy consumption was the

independent variable. Asafu-Adjaye (2000) carried out a similar research on Singapore and Indonesia respectively and found out the same unidirectional causality effect of Energy consumption and Economic growth. Ukpong (1976) also established the existence of a positive relationship between electricity consumption and economic development. In addition, he submitted that the expansion of the energy sector on the demand side is an important factor in accelerating the growth of the industrial sector.

There are however other economic findings which are contrary to the Energy - GDP causality relationship. Yu and Choi (1985) carried out a verification study on the causality relationship between energy consumption and economic growth and found out that the causality ran in an opposite direction, from economic growth to energy consumption. The positive relationship between electricity and economic growth has been justified by some authors as being consistent. Many economists agree that there is a strong correlation between electricity use and economic development. Morimoto and Hope (2001) have discovered, using Pearson correlation coefficient that economic growth and energy consumption in Sri Lanka are highly correlated. Ndebbio (2006) submitted that one important indicator whether a country is industrialized or not is the megawatt of electricity consumed. He further argued that a country's consumption per capita in Kilowatt hours (KWh) is proportional to the state of industrialization of that country.

Breshin (2004) concluded that electricity is vital for driving growth in the energy, manufacturing and social sector. He observed that a parallel (positive) growth trend existed between electricity demand and gross domestic product (GDP). According to Simpson (1969), "it is electricity rather than steam engine, which is driving the developing industries in modern Africa". By implication, he re-emphasizes the fact that electricity drives economic growth.

Ageel and Mohammad (2001) ran a co-integration model on energy and its relationship with economic growth in Pakistan, a developing nation like Nigeria and found that increase in electricity consumption leads to economic growth. Sanchis (2007) stated that "electricity as an industry is responsible for a great deal of output". She went on to say that electricity had effects not only on factors of production but also on the impact it had on capital accumulation. Alam (2006) agrees that there is a departure from neoclassical economics which include only capital, labour and technology as factors of production to one which now includes energy as a factor of production. He went further to say that energy drives the work that converts raw materials into finished products in the manufacturing process.

Sanchis (2007) added that increase in the electricity production will avoid the paralysis of the industrial production and increased industrial production will eventually lead to increase output. Thus, this implies that electricity production should become an economic policy high-priority objective which should be urgently responded to. Energy efficiency which is also called 'efficient energy use' is not just about reducing utility bills of energy. It also involves boosting revenue through greater productivity. Energy efficiency is an indispensable component of any effort to improve electricity productivity. Ultimately, energy efficiency contributes to enhanced resource productivity and wealth creation.

According to Oviemuno (2006), energy efficiency provides another option for meeting air quality goals in that combustion volumes are reduced proportionately with fossil fuel consumption. Energy Efficiency refers to the improvement of products and practices that result in a reduction in the amount of energy necessary to provide energy services such as lighting, cooking, heating, cooling, transportation and manufacturing (Amaewhule, 2000).

Although Classical economists did not recognize energy as a factor of production in the production process and neither did the neo-classicals, today, economists like Alam (2006) found out in his work on 'Economic Growth with Energy' that not only does energy serve as a factor of production on its own it also acts as a booster to growth of a nation.

METHODOLOGY

In order to examine the relationship between the power sector development and industrialization, we considered the usage of secondary data by specification of the relationship between the dependent variable and independent variables. The study employed annual time series data for Nigeria from 1981 to 2010 as deduced from the Central Bank of Nigeria Statistical Bulletin of various editions and considering the world development indicators (WDI) and annual reports from the United Nations Statistics Division.

Model Specification

The model adopted for the research is stated as:

$$ICGDP_t = \beta_0 + \beta_1 ELC_t + \beta_2 ELP_t + \beta_3 LFGRW_t + \beta_4 RGFCF_t + \beta_5 TLPH_t + \varrho_t \ldots\ldots\ldots (1)$$

Where ICGDP denotes Industrial Component of real GDP; ELC denotes electricity consumption; ELP represents electricity production; LFGRW represents growth rate of labour Force (proxy for labour); RGFCF represents real gross fixed capital formation (proxy for capital); TLPH denotes telephone fixed lines per one hundred Populations. β_0 indicates the intercept parameter while β_1 to β_5 are the slope coefficients and ϱ_t the Stochastic error term.

A priori expectation is that a positive relationship exists between the explanatory variables and the dependent variable. In mathematical terms, we expect β_1, β 2, β 3, β 4 and $\beta_5 > 0$. That is, the respective coefficient should have a positive sign which means that as these variables increase, industrial output should increase as well.

Estimation Technique

The estimation technique used for this study is the Johansen Co-Integration technique which is employed to establish the long run relationships existing among the variables. The estimation was conducted in three stages:

The first stage is the Unit root test which follow the assumptions from empirical research that most macroeconomic variables are non – stationary and that regression analysis using the levels of these variables is spurious that may result in high error value terms hence the need to test for stationarity of the variables. The Augmented Dickey Fuller (ADF) and Phillips Perron (PP) unit root test is used to test for stationarity.

The second stage is the Johansen Co-integration test that is required when all variables are ascertained to be stationary or of the unit root. Co-integration is a means for correctly testing hypothesis concerning the relationship between two variables having unit roots (integrated of at least order one). Johansen co-integration test determines whether the long-term relationship occurs in variables or not.

The final stage is error correction test which serve as the dynamic system that reconciles the static long – run equilibrium relationship of co-integrated time series with its short - run dynamics. The E-views 5 software is used to carry out the tests.

Hypotheses of the study

Two of the research hypotheses are presented in their null forms as follows:

Hypothesis One

H_{01}: there is no significant relationship between electricity consumption and industrial development in Nigeria

Hypothesis Two

H_{02}: there is no significant relationship between electricity production and industrial development in Nigeria

DATA ANALYSIS AND FINDINGS

We present the econometric estimations which include the unit root test, Johansen co-integration and Vector Error Correction Mechanism. These were performed in order to ensure that the estimated results are reliable for meaningful inferences.

Unit root test

Table 1 reveals the result of the stationary test. The Augmented Dickey Fuller (ADF) and Phillip-Perron (PP) tests are employed in order to test the order of integration of the variables. This is necessary as it helps in determining the properties of the process that generate the time series variables used in this study. Results of this test suggest that all variables employed in this study are stationary at first difference (at 5% significance level). Therefore, evidence suggests that first differencing is sufficient for modelling the time series considered in this study and it can be inferred that the variables are integrated of order I(1) and by this, non-spurious estimations can be expected which can be predictable and relied upon for forecast.

Table 1. Unit Root Test

	Augmented Dickey Fuller		Phillip Perron	
	Intercept	Intercept and Trend	Intercept	Intercept and Trend
ICRGDP	0.2579	-1.5365	0.9660	-1.3482
ΔICRGDP	-6.5937	-6.9980	-6.6604	-15.4200
LELC	-1.8901	-3.5019	-1.8943	-3.6498
ΔLELC	-7.5366	-7.3116	-7.9260	-7.6885
LELP	-1.7285	-3.6811	-1.7918	-2.3886
ΔLELP	-3.6892	-6.3077	-6.1322	-6.3007
LFGRW	-1.7326	-1.0641	-1.6903	-0.5837
ΔLFGRW	-3.9814	-4.1175	-3.7761	-3.3469
LRGFCF	-1.6608	-3.2082	-2.7797	-3.5978
ΔLRGFCF	-4.4191	-5.2763	-4.5949	-5.2927
TLPH	-4.4675	-5.4524	-1.1779	-2.1110
ΔTLPH	-2.9299	-3.1188	-4.2836	-4.1121
Critical Value_Level	*-3.5806*	*-3.5806*	*-2.9678*	*-3.5742*
Critical Value 1st_Diff	*-2.9763*	*-3.5875*	*-2.9719*	*-3.5806*

Note: first row are variables at levels while second row are the first differences,
The critical values were at 5 percent level of significance.

Source: Authors' Computation

Johansen Co-Integration

This study performed the Johansen co-integration test to establish the long run relationships existing among the variables. The result from the Johansen co-integration test was presented in Table 2. The Trace Statistics and the Maximum Eigen value as well as their Critical Values were displayed in the Table. From the Table, it can be observed that there exist at least one cointegrating relationships among the variables. This implies that long-run relationships exist among the variables. This result was evidenced with the values of the Trace statistics and Maximum Eigen value being greater than the critical values.

Table 2. Johansen Co-integration Test Results

Hypothesized No. of CE(s)	Eigen Value	Trace Statistic	Critical Value	Prob. value	Max-Eigen Statistic	Critical Value	Prob. Value
None *	0.9932	198.8270	103.8473	0.0000	124.7087	40.9568	0.0000
At most 1	0.7387	74.1183	76.9728	0.0809	33.5487	34.8059	0.0701
At most 2	0.5570	40.5697	54.0790	0.4421	20.3569	28.5881	0.3853
At most 3	0.2852	20.2128	35.1928	0.7133	8.3943	22.2996	0.9359
At most 4	0.2472	11.8185	20.2618	0.4652	7.0997	15.8921	0.6574
At most 5	0.1720	4.7188	9.1645	0.3157	4.7188	9.1645	0.3157

Log Likelihood = 397.8236

DICRGDP = 0.6726DLELC – 0.7968DLELP + 3.8494DLFGRW + 0.0506DLRGFCF – 0.6189DTL01 + 0.0090C

(0.0232) (0.0276) (1.3969) (0.0081) (0.0341) (0.0014)

Note: * Reject H_0 at 5 percent significant level as tabulated in Eviews 5.0.
The Values in Parenthesis are the standard errors.

Source: Authors' Computation

Further investigation of the normalized co-integrating equation reveals that in the long-run, electricity consumption *(ELC)*, the growth rate of labour force *(FGRW)* and real gross fixed capital formation *(RGFCF)* have a positive impact on industrial component of real GDP. From Table 2, a percentage change in electricity consumption will lead to a 0.0067 unit change in industrial component of real Gross Domestic Product and a percentage change in electricity production will lead to a 0.0079 unit change in the industrial component of real Gross Domestic Product. Also, a unit change in the growth rate of labour force will lead to a 3.85 unit change in the industrial component of real Gross Domestic Product; a percentage change in real gross fixed capital formation will lead to a 0.0001 unit change in industrial component of real Gross Domestic Product. Finally, a unit change in technology- telephone lines per hundred of the population will lead to a 0.62 unit change in the industrial component of real Gross Domestic Product. This implies that labour force growth and electricity consumption are higher influencers of industrial output in the long-run.

The study also found out that electricity production (ELP) and technology-telephone lines per 100 persons (TL01) exerts a negative impact on industrial output in the long-run. A caveat to this result is that technology was measured using telephone usage and it cannot conclusively be asserted based on the findings of this study that technology impedes industrial output in the long-run. There exists the possibility that the usage of these telephone lines for more of unproductive i.e. non- work related calls than productive activities in the long run may lead to a negative impact of telephone usage on industrial composition of Gross Domestic Product. Also, where the costs of installation and maintenance of these telephone lines become greater than the benefits obtained from their usage, this could constitute an overall negative contribution to output.

Despite the observation from the table above that electricity consumption positively influences industrial output significantly; electricity production is seen to exert a negative impact on industrial output in the long run. Electricity production is highly influenced by government policies. The result of the study therefore goes to say that existing government policies are inefficient and thus exert a negative influence on industrial output in the long run. This is also very obtainable in Nigeria because a large quantity of electricity produced is still being lost in transmission and as such does not necessarily translate into electricity consumed and thus industrial output. George and Oseni (2012) also observed that the less and non-productive residential sector of Nigeria's economy attracts about four times of electricity supply than the industrial and commercial sectors in Nigeria, thus, the increase in electricity production can be expected to exert greater impact on these non-productive sectors rather than the productive sectors.

Vector Error Correction Model-VECM

After establishing the existence of the long-run relationship among the variables, this study performed a VECM to correct the disequilibrium caused in the short-run. By this method, the intent is to find out the speed of adjustment of the disequilibrium in the long-run relationship in the short-run. The VECM is reported in Table 3. From the Table, it is evident that the disequilibrium in the long-run can be corrected with speed in the short-run therefore adjusting the value of industrial output to equilibrium. The Table reveals that about 156 percent of the disequilibrium in the long-run is corrected in the short-run. From the Table, it can be emphasized that in the short-run only electricity consumption is able to generate positive impact on the extent of industrial output. This impact was significant at 1 percent and it implies that a one percent change in *ELC* will result to 0.0012 unit change in industrial output. The other variables did not exert any significant impact on industrial output in the short-run.

Table 3: Vector Error Correction Model

Error Correction	*ICRGDP*	*LELC*	*LELP*	*LFGRW*	*LRGFCF*	*TL01*
ECM(-1)	-1.5569	3.2737	2.4735	0.1913	-5.9114	-0.2067
	[-4.4049]	[1.4676]	[1.5297]	[4.2659]	[-1.0963]	[-0.1010]
ICRGDP(-1)	0.3676	0.2165	-0.4435	-0.1239	2.4234	-1.3069
	[1.4007]	[0.1308]	[-0.3694]	[-3.7218]	[0.6053]	[-0.8602]
LELC(-1)	0.1237	-0.7542	-0.1532	-0.0159	0.2350	-0.2423
	[3.0259]	[-2.9241]	[-0.8192]	[-3.0636]	[0.3770]	[-1.0242]
LELP(-1)	-0.0681	0.8367	-0.3427	0.0072	0.2596	-0.1808
	[-1.2451]	[2.4240]	[-1.3695]	[1.0409]	[0.3111]	[-0.5709]
LFGRW(-1)	-0.7188	-17.7962	-8.1338	-0.4510	3.4747	7.6817
	[-0.5477]	[-2.1485]	[-1.3546]	[-2.7084]	[0.1735]	[1.0109]
LRGFCF(-1)	0.0122	-0.0124	-0.1476	0.0045	-0.3415	0.0006
	[0.7147]	[-0.1147]	[-1.8909]	[2.0652]	[-1.3117]	[0.0064]
TL01(-1)	0.0407	0.1828	0.3688	-0.0310	0.2033	-0.6350
	[0.7900]	[0.5617]	[1.5638]	[-4.7351]	[0.2586]	[-2.1275]
C	-0.0022	0.0112	0.0034	-0.0003	0.0217	-0.0101
	[-0.49867]	[0.41070]	[0.17452]	[-0.58360]	[0.32925]	[- 0.40347]
R-squared	0.6874	0.6577	0.6228	0.7254	0.2605	0.3682
Adj. R-squared	0.5658	0.5246	0.4762	0.6186	-0.0271	0.1225
F-Statistics	5.6536	4.9405	4.2462	6.7918	0.9056	1.4985

Note: The VECM was performed using Lag 1.

Source: Authors' Computation

4.4 Wald/Block Granger Causality Test

This study examines the causality test among the variables; with a focus on the variables that granger causes industrial output. From the Table, it is evident that there is a unidirectional flow between electricity consumption and industrial output. This implies that electricity consumption granger causes industrial output. The other variables did not reveal granger causality on the value of industrial output. However, taking the variables as a block, it is evident that the variables as a group significantly cause a change in the value of industrial output.

Table 4 Granger Causality Test

Dependent variable: (ICRGDP)			
Excluded	*Chi-sq*	*df*	*Prob.*
LELC	9.1562	1	0.0025
LELP	1.5503	1	0.2131
LFGRW	0.2999	1	0.5839
LRGFCF	0.5108	1	0.4748
TL01	0.6241	1	0.4295
All	11.4182	5	0.0437

Source: Authors' Computation

CONCLUSION AND RECOMMENDATIONS

Conclusion

This study investigates the links between power supply and industrial development and examines the influence of government policies on power supply on industrial development in Nigeria. The dependent variable employed for the model specified in this study is Industrial Component of Real Gross Domestic Product (ICGDP) while this study uses the following explanatory variables; Electricity Consumption (ELC), Electricity Production (ELP), Growth rate of Labour Force (LFGRW), Real Gross Fixed Capital Formation (RGFCF) and Telephone Lines per hundred population (TLPH). The Johansen Co-integration technique is used to determine the long run relationship among the variables. Some robustness and sensitivity tests were carried out as well where the robustness of the empirical results was ascertained. Econometric estimations from this study suggests a positive link between power supply and industrial development in accord with theoretical expectation; an increase in electricity consumption during a given period was shown to lead to an increase in industrial output and thus the industry contribution to real Gross Domestic Product in the long run. However, contrary to theoretical expectation, electricity production which is a result of existing government policies exerts a negative impact on industrial output in the long run. The existing government policies in Nigeria which affect electricity production have been found to have a negative impact on industrial output and thus its contribution to Gross Domestic Product. This can be attributed to inefficiency of the government policies. George and Oseni (2012) also observed that the less and non-productive residential sector of Nigeria's economy attracts about four times of electricity supply than the industrial and commercial sectors in Nigeria, thus, the increase in electricity production can be expected to exert greater impact on these non- productive sectors rather than the productive sectors.

In terms of labour contribution to the Industrial Composition of Gross Domestic Product, consistent with theory, a growth in labour force was found to have a positive impact on the industrial component of real Gross Domestic Product in Nigeria. This implies that an increase in the absorption of labour into the industrial sector will record about a four times increase in its contribution to Gross Domestic Product.

With respect to Real Gross Fixed capital formation which was used as a proxy for capital, in line with the apriori, the study showed that there exists a positive link between the stock of capital and the industrial component of Real Gross Domestic Product. This entails that an increase in the stock and quality of capital through investment in human capital will go a long way to increase the output of the industrial sector and thus its contribution to the Real Gross Domestic Product. This is consistent with economic theory.

The study also showed against apriori expectation, that there exists a negative relationship between technology - no of telephone lines per hundred of the population and industrial output. This was not consistent with apriori expectation. This finding however indicates in general that the present level of technology is inefficient.

Although the coefficients of Electricity Consumption (ELC), Growth rate of Labour force and Real Gross Fixed Capital Formation (RGFCF) revealed the expected positive signs, that is, conform to apriori specification; only Growth rate of Labour Force is individually statistically significant. However, the F-statistic shows that the overall model is statistically significant and a strong basis for reliable predictive purposes. This study found out that Electricity Consumption (ELC) and Real Gross Fixed Capital Formation (RGFCF) cannot on their own effect a significant change in the industrial growth process of an economy.

Recommendations

Investment in the Nigerian power sector is recommended and an improved budget allocation backed by effective monitoring of funding of the sector is advised. Furthermore, government policies on power presently implemented in Nigeria have been found to exert a negative impact on industry output and thus its contribution to Gross Domestic Product. It is therefore essential that more power sector-friendly policies be implemented so as to encourage industrial output. Electricity distribution should give greater priority to the more productive industrial and commercial sectors than the less productive residential sector. Finally, the government should give preference to job creation within the industrial sector so as to boost industrial and therefore economic growth. The government should establish industrial parks in respective states and regions across the country where constant supply of electricity is provided as priority to safeguard and monitor industrial progress and productivity.

References

Adenikinju, A. F. (2005). Analysis of the cost of infrastructure failures in a developing economy: The case of the electricity sector in Nigeria (Vol. 148). African Economic Research Consortium.

Adenikinju, A. (2008). Efficiency of the Energy Sector and its Impact on the Competitiveness of the Nigerian Economy. *International Association for Energy Economics*, *27*(32), 131-9.

Ageel. A and Butt M. S (2001), "The relationship between energy consumption and economic growth in Pakistan" Asia-Pac. Dev. J.8(2): 101-109

Agboola, O. P. (2011). Independent Power Producer (IPP) Participation: Solution to Nigeria Power Generation Problem. In *Proceedings of the World Congress on Engineering* (Vol. 3).

Aremu, M.A. and Adeyemi, S.L. (2011). Small and Medium Scale Enterprises as A Survival Strategy for Employment Generation in Nigeria. Journal of Sustainable Development, 4(1), 200 – 206

Asaolu, T. O. and Oladele, P.O. (2006). Public Enterprises and Privatisation Policy: The Nigerian Experience in Nigerian economy: Essays on Economic Development ed. (Feridun and Akindele), Munich Personal RePEc Archive, MPRA: 293 – 394.

Asafu-Adjaye, J (2000) 'The relationship between energy consumption, energy prices and economic growth: time series evidence from Asian developing countries'. Energy Economics 22, 615-625

Alam, M. S (2006). Economic growth with energy. Retrieved on the 20th November 2008

Amaewhule, W. (2000). An Introduction to Vocational Education and Administration. Owerri: Springfield Publishers.

Ayodele, A. S. (2004). Improving and sustaining power (electricity) supply for socio-economic development in Nigeria.

Ayodele, A. I., and Falokun, G. (2003). The Nigerian Economy: Structure and Pattern of Development, JODAD Publishers.

Barros, C. P., Ibiwoye, A. and Managi, S. (2011). Nigeria' Power Sector: Analysis of productivity. Working Paper No. WP 10/2011/DE/UECE, School of Economics and Management, Technical University of Lisbon. http://www.repository.utl.pt/bitstream/10400.5/3052/1/WP_DE_CESA2011.pdf

Beenstock, Michael. "Generators and the cost of electricity outages." *Energy Economics* 13.4 (1991): 283-289.

Beenstock, M., Goldin, E., & Haitovsky, Y. (1997). The Cost of Power Outages in the Business and Public Sectors in Israel : Revealed Preference vs . Subjective Valuation. Energy Journal, 18(2), 39–61.

Bental, B. and S. Ravid. 1982. "A simple method for evaluating the marginal costs of unsupplied electricity". Bell Journal of Economics, 8(4).

Birol, F (2007). World energy prospects and challenges. Melbourne: Blackwell publishing.

Breshin S. (2004) Energy, Growth and Industrialization: Evidence from Nigeria, Journal of Management and Social science, vol 22, pg 34-42, Minet Publication limited.

Caves, D. W., Herriges, J. A., & Windle, R. J. (1992). The Cost of Electric Power Interruptions in Industrial Sector : Estimates Derived from Interruptible Service Programs. Land Economics, 68(1), 49–61.

CIA World Factbook, (2012) *https://www.cia.gov/library/publications/download/download-2012*

Emovon, I., Kareem, B., & Adeyeri, M. K. (2011). Power generation in Nigeria; problems and solution. In *International conference of Nigerian association for energy economics. NAEE, Abuja*.

George, E. O., & Oseni, J. E. (2012). The Relationship between Electricity Power and Unemployment Rates in Nigeria. *Australian Journal of Business and Management Research*, *2*(2), 10-19.

Morimoto, R and Hope, C (2001). The impact of electricity supply on economic growth in Sri Lanka. Judge Institute of Management Research Paper.

Ndebbio, J.E.U (2006).' The structural Economic Dimensions of Underdevelopment, Associated Vicissitudes and Imperatives: Agenda for Positive Change', 33rd Inaugural Lecture, University of calabar-Nigeria,saesprint publishers-Nigeria.

Nwulu (2011) Utilizing Renewable Energy Resources to Solve Nigeria's Electricity Generation Problem Int. J. of Thermal & Environmental Engineering.Volume 3, No. 1 (2011) 15-20

Odularu, O. G., and Okonkwo, C. (2009). Does Energy Consumption contribute to Economic performance? Empirical Evidence from Nigeria. Journal of Economics and International Finance. Vol. 1(2) Pp 044-058,

Okafor, E.O. (2008). Development Crisis of the power Supply and implications for Industrial Sector in Nigeria.Kanla_Raj Journal.. vol. 6, Pp83-92.

Okereke, O.C. An Analysis of the Failure of the National Power Project for the Supply of 6000MW in December 2009, Report on Projects & Project Management in Nigeria, PM World Today – January 2010 (Vol. XII, Issue I), http://www.pmforum.org/library/RegionalReports/2010/PDFs/jan/RR-NIGERIA.pdf

Onogu, B,A,N (2005). Small and medium entreprises (smes) in nigeria: problems and prospects, being a dissertation submitted to the st. Clements university in partial fulfilment of the requirements for the award of the degree of doctor of philosophy in management, http://www.stclements.edu/grad/gradonug.pdf

Oviemuno, A. O. (2006). Impact of Energy on the Manufacturing Sector in Nigeria. [Online] Available: http://searchwarp.com/swa70577.htm (February 3, 2008).

Rabiu, A. (2009). The Cost of Electricity in Nigeria. International Association for Energy Economics, First Quarter: 15 -17.

Sanchis, M.T (2007).Quantifying the contribution of electricity to Spanish economic growth during the twentieth Century. Paper presented at the III Iberometrics Valencia, March 23-24, 2007.

Simpson, E. S. (1969). Electricity production in Nigeria. Economic Geography, 45(3), 239-257.

Ukpong, I. I. (1973). The economic consequences of electric power failures. The Nigerian Journal of Economic and Social Studies. Vol. 2, Pp 90-120.

Yu, E., and Choi, J. (1985). The causal relationship between energy and GNP, an international comparison. Journal of Energy and Development, 10(2), 249 - 272.

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.3972.
Kubaev, K. E., & Baisholanova, K. S. (2017). Designing Rhythmic Industrial Production. *Archives of Business Research, 5(12),* 306-315.

Designing Rhythmic Industrial Production

Kazila Erikenovich Kubaev
Doctor of Economic Science, Professor
Member of the International Informatization Academy
Corresponding Member of the Russian Academy of Natural Sciences
Al-Farabi Kazakh National University,71 al-Farabi Ave., Almaty, Republic of Kazakhstan, 050040.

Karlygash Sovetovna Baisholanova
Doctor of Economic Science,
Professor Al-Farabi Kazakh National University,
71 al-Farabi Ave., Almaty, Republic of Kazakhstan, 050040.

ABSTRACT
Rhythmic production is provided through a combination of operational planning, company's organizational structure and production management. We consider and use the rational operational planning based on performance estimates as a major instrument, a fundamental principle of rhythmic operation of industrial production. Operational planning and the management mechanism are linked and agreed with the planned decision to ensure continuity of rhythmic industrial production.

Key words: management mechanism, industrial production, rhythmicity of operational plans and production.

JEL Classifications: A12, C516, D24, D33.

INTRODUCTION

Transition of economy to the industrial and innovative development places a priority on the issues of justification of rates and proportions of reproduction, requires searching for optimal options of balance of material, labour and financial flows.

Due to dynamic, scale and multifactorial features of the current production, optimization of the production operation becomes an essential condition and further improvement of economy performance has got **a current importance**. The planning function plays an important role in economy management. Scientists prioritize the trends of continuous improvement of forms and methods of strategic economy planning.

Therefore this work has the following **purpose:** developing a mechanism of combination of operational planning and production management ensuring continuous and rhythmic industrial production. In accordance with the purpose, the following **objectives** were determined:

1) studying the issue of continuous production;
2) using a value of rhythmicity of planned tasks and decisions in calculations;
3) introducing a parameter of production rhythmicity in order to ensure continuity;
4) making the production rhythmicity the major organizational parameter and link all business processes of such production therewith;
5) considering coordination of planned decisions and tasks and production management with the organizational management structure in the management mechanism;

6) making calculations using the method developed based on the automotive manufacturing and checking the capacities of the method.

PREVIOUS STUDIES RELATED TO THE ISSUE

Planning is one of the leading management functions. Since the Republic of Kazakhstan became independent, much attention has been paid to planning, in particular, *strategic planning* (Order, 1999). The state conducts planning based on the global practices, state of the global economy and peculiarities of Kazakhstan. The evidence of the fact that the state paid adequate attention to planning and forecasting at the initial stage of development was the National Council for Sustainable Development of the Republic of Kazakhstan established by the Order of and reporting directly to the President of the country (Order, 2006).

Current planning is equally important. In this regard, based on the estimates and scientific forecasting the Government submits a three-year indicative plan of social and economic development of Kazakhstan to the Parliament **on an annual basis** (Governmental Rules, 2002). This approach approved by the global practices ensures a cyclical pattern of planning where three-year estimates and forecasts are specified and adjusted annually. Strategy and long-term priorities serve as a basis for the state indicative planning.

Top political departments try combining all types of planning, such as strategic, economic and budget, in a single state authority, as it is a single process having a common goal, which is to provide the national welfare.

However, planning is considered mostly from the point of improvement of methods and means of keeping and developing plans and to a lesser extend – as linking planning and economic management mechanism. In spite of the fact that the author has been working on this issue for a long time, works of other researchers in the area (e.g. Anopchenko et al., 2016; Bussygin, 2008; Demchenko, 2006; Drucker, 2012; Coulman, 1993; Novikov, 2011; 2004; Savinykh, 2016; Shikin, 2004; Walter Nicholson and Christopher Snyder, 2010) were previously reviewed and studied.

RESEARCH PROBLEMS

On one hand, planning is a management function; on the other hand, planning is a management method. It serves as an instrument to implement *economic policy*(Kubaev, 2013). As an integrating basis, planning links all administrative and directive, economic, social and psychological management methods.

Just as management, planning has a hierarchical structure – from a strategic plan to operational and production planning. In total, it is the economy planning system that should operate as a unit and provide a system of stable planned tasks with balanced labour, material, financial and time resources.

Planning should be continuous and flexible in the period of industrial and innovative state policy reflecting a dynamic nature of production processes. One of the major tasks of planning is continuous and uninterrupted “feeding” of the management mechanism with planned decisions and tasks. If planning is performed with breaks, it results in the management mechanism operating “in the dark” within the intervals between plan revisions. Therefore, planning improvement is an essential condition, basis for rhythmic operation of the management mechanism. It is the essence of rhythmic operation of the management mechanism, major direct link in the system.

In this regard, the challenges of efficient operation consist in a dynamic nature of production and financial processes. Under these circumstances we suggest introducing a parameter of rhythmicity of provision with planned tasks and decisions in-house P_n *).* First of all, it will be determined by pace and nature of production processes, production rhythmicity (t). We believe, rhythmicity of planned decisions should be so that to ensure rhythmicity of production process. A condition to ensure continuity of operation is as follows

$$\sum_{i=t}^{n} \Delta t_i = 0 \quad (1)$$

where Δt_i is a period of organizational breaks on i area of work; n is a number of areas. Condition (1) will be provided, if

$$t_{max} = P_n, (2)$$

where t_{max} is a maximum rate of production rhythmicity.

In such a case, a value of error is $R = 0$. The system will operate in the mode of automatic control. Control is performed by operating speed $e)$. It will ensure rhythmic output or rhythmic completion of work phases (Figure 1).

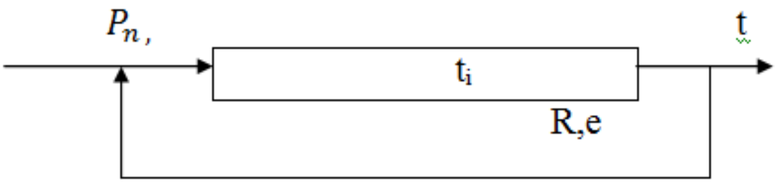


Figure 1. Operation Model of the System Operational Planning – Production Management

For the purpose of ensuring of suggested mode of operation of the production management mechanism, operational planning improvement and enhancement should be an obvious prerequisite. First of all, it is coordination of operational planning and production management mechanism, coordination of rhythmicity of new decisions (P_n) with production rhythmicity (t_i).

Now the initial idea that planning improvement is an essential part, a fundamental principle of operation of dynamic mechanism of production management is getting more and more convincing.

A plan is communicated to executing employees through all hierarchical levels (strategic, current, operation and production). With lower level, the plan is provided with details. Operation and production planning is the finishing stage. It acts as an adjacent line between the planning process and production process. Being in a direct contact with material flows, operational planning serves as a kind of a directing instrument and source of motion impacts. In dynamics, operation and production planning consists of flows of planning and economic information. Direct relation, flows of operational planning and production information serve as a source of power for “an engine” of material production.

This production management mechanism should be considered in forming **an organizational structure of the company's management.** The organizational management structure is a synthesis of arrangement thereof and the company's organization. The structure determines positions in the system; organization determines a way of connections between them in the course of production of ultimate products. As the latest practical experience shows, the new phase of the development of the organizational structure of management resulted in certain positive outcome. However, the management system keeps being reformed in Kazakhstan (Kubaev, 2013).

Production management is improved based on the principle of the fullest reflection $(\rightarrow)$ of the system of production relations and correspondence to the reproduction process (set $|X|$) by its organizational structure (set $|Y|$):

$$|Y| \rightarrow \{X\}. \quad (3)$$

Deepening differentiation of labour in manufacture of industrial products due to scientific and technological advance determines the need in consistent improvement of the management organizational structure. Improvement of management organizational structures is a prerequisite and condition for a new phase of improvement of the management system. Management organizational structure is formed in line with the production structure according to model (4) based on the determination of central phases $\{y_1, y_2, \dots y_n\}$, $\{x_1, x_2, \dots x_n\}$ in the course of spatial-temporal transformation of natural potential and flow of resources into final product F_0. The fullest provision of production is a target function of F_0.
A combination of elements of the structure of social production $\{x_1, x_2, \dots x_n\}$ is determined by management functions $\{y_1, y_2, \dots y_n\}$,:

$$\{x_1, x_2, \dots x_n\} \rightarrow \{y_1, y_2, \dots y_n\}, \text{ or } \quad X \rightarrow Y; \quad Y = f(X). \quad (4)$$

The management organizational structure is built based on the relations (R) between set X and Y- XRY, determining direct and reverse relations between the elements of the production structure and management functions. Figure 2 demonstrates a dynamic model of formation of organizational structure of production management.

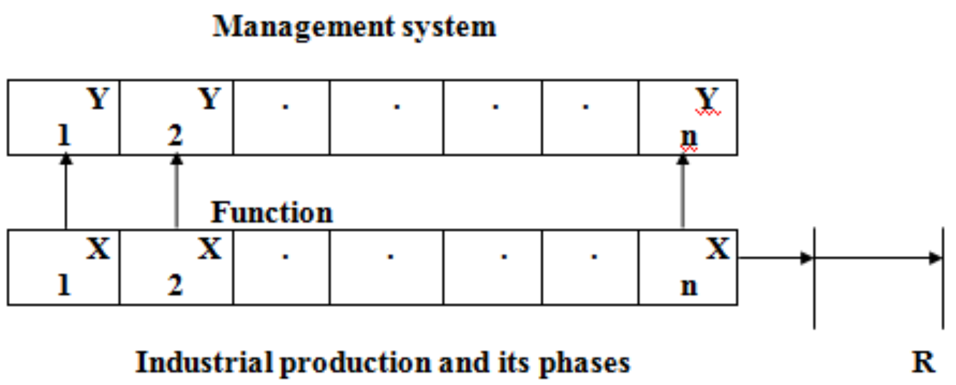


Figure. 2. Model of Formation of Organizational Structure of Industrial Production Management.

We will show coordination and rhythmicity of operation of business processes using **an automotive manufacture** as a basic example. A company produces a big number of finished cars; there are a lot of business processes. They take different time and number of operational units.

Firstly, we will show an economic essence of such business based on the famous diagram of monetary movement M) and commodity p) production Pr).

$$\mathrm{M} - \mathrm{p} - \mathrm{Pr} - \mathrm{p}^{\mathrm{I}} - \mathrm{M}^{\mathrm{I}} \qquad (5)$$

where

$$\mathrm{M}^{\mathrm{I}} > M;\ \mathrm{M}^{\mathrm{I}} = \mathrm{M} + \Delta.$$

Secondly, component parts (p – commodities) are purchased at the beginning of the production process, then a car p^{I}) is manufactured using such component parts and sold for a price higher than amount of costs of component parts and receive profit Δ).

We should include the basic organizational criteria – t – production rhythm in time in order to ensure production rhythmicity. Other business processes should be connected to this parameter. Then based on the market signals and company's potential capacities we should include economic parameters, such as P - market price for the product (in this particular case, a car); r– expected profitability, %; F_e

– annual reserve of labour time of assembly workshop, time; Q – annual production program, units.

Then the production rhythm can be calculated according to the formula:

$$t = \frac{F_e}{Q}; \qquad (6)$$

Now we should perform all business processes according to t – production rhythm so that production operated rhythmically (like clockwork). It can be demonstrated with the help of the following model (Figure 3).

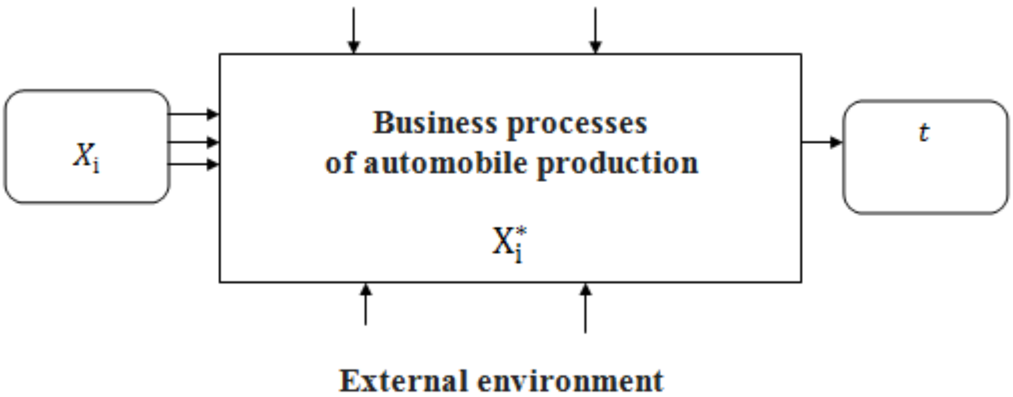


Figure 3. Automotive Manufacture Model

Then we should designate major business processes of the car assembly:

- X_1, x_1^* – body purchase and installation;
- X_2^*, x_2^* – engine production and installation;
- X_3, x_3^* – gearbox purchase and installation;
- X_4, x_4^* – rear axle purchase and installation;
- X_5, x_5^* – front axle purchase and installation;
- X_6, x_6^* – facing purchase and installation;
- X_7, x_7^* – steering gear purchase and installation;
- X_8, x_8^* – wheel purchase and installation;
- X_9, x_9^* – brake system purchase and installation; and
- X_{10} x_{10}^* – paint purchase and painting.

Now we will demonstrate it as a structural model of organization of modern automotive manufacturing (Figure 4).

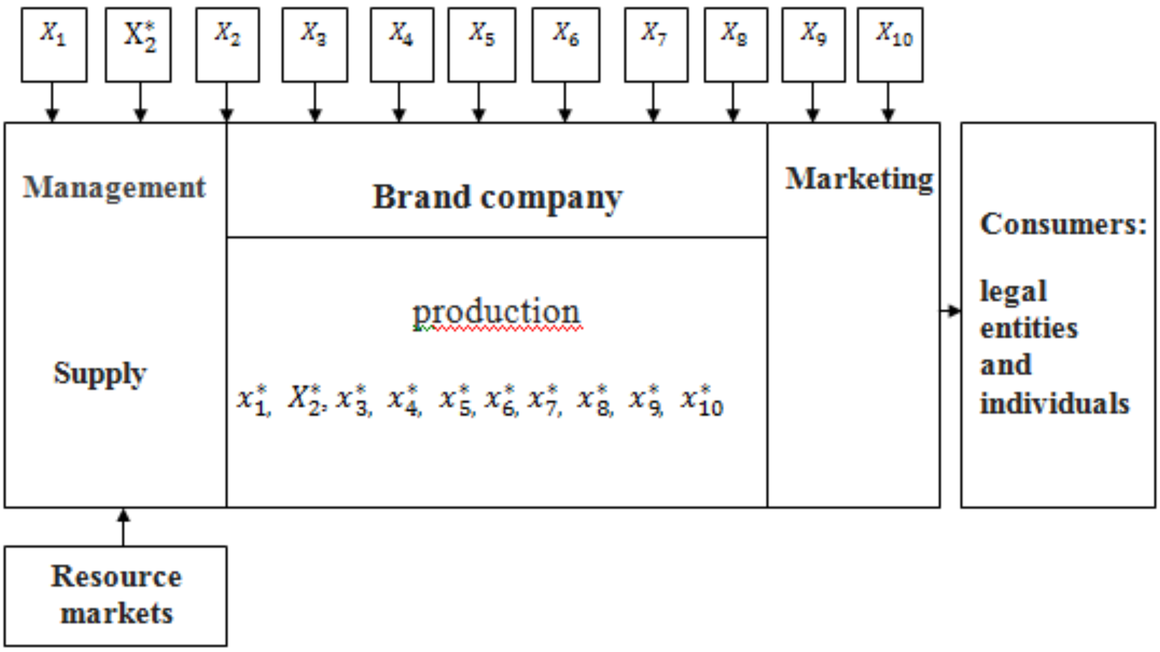


Figure 4. Structural Model of Organization of Modern Automotive Manufacturing using Information Technologies

Let us determine key economic parameters of the company's operation:

- income from sale of products with indirect taxes - Ix;
- total annual income – TAI = Ix-(VAT- excisetaxes);
- taxable income – TI = (TAI – all deductions);
- balance-sheet profit – P (reserve fund + insurance fund + dividend fund).

Then specific calculations were made based on the research results and development using automotive manufacture with a production of 520 units per year as an example.

All calculations were made in a table form known to financiers (appendix).

The company's goal. The company has a potential that enable the top management to believe that the company can operate within the following profitability limits:
The managerial objective of the company's CEO and CEO's team:
between $r = 33.3\%$ and $r > 33.3\%$.
Profitability r in this objective depends on 20 factors:

$$r = f(x_2, x_3, \ldots;\ x_1^*, x_2^*, \ldots x_{10}^*).$$

$$r = \frac{P - C}{C} \cdot 100\%;$$

$$r = \frac{P - (\sum_{i=1}^{n} x_i)}{\sum_{i=1}^{n} x_i} \cdot 100\%.$$

The abovementioned big number of factors affects the company's profitability:

$$r = \frac{P - (\sum_{i=1}^{10} x_i)}{\sum_{i=1}^{10} x_i} \cdot 100\%.$$

Now let us calculate the company's profitability:

$$r = \frac{50\,000 - 30\,000}{30\,000} \cdot 100\% = 33{,}3\%.$$

ANALYSIS OF THE RESEARCH RESULTS

Now we should determine earlier values of business processes $(x_1, x_2^+, x_3, \ldots x_{10})$ car manufacture and assembly:

Table 1
Values of Business Processes (X1....X10)

Manufacture (cost) or purchase (market price) of a business item	Costs of performance (assembly) of business processes
X_1 = \$2000 X_6 = \$1000 X_2^* = \$3000 X_7 = \$1000 X_3 = \$2000 X_8 = \$1000 X_4 = \$1500 X_9 = \$1000 X_5 = \$1500 X_{10} = \$1000 $\sum_{i=1}^{10} X_i =$ \$150000	x_1^* = \$2000 x_6^* = \$1000 x_2^* = \$3000 x_7^* = \$1000 x_3^* = \$2000 x_8^* = \$1000 x_4^* = \$1500 x_9^* = \$1000 x_5^* =\$1500 x_{10}^* = \$1000 $\sum_{i=1}^{10} x_i^* =$ \$15000

Let us confirm the annual production program – 520 units per year. The classical formula of car (C) production cost is as follows:

$$C = M + 3P + A + H; \qquad (7)$$

where M – cost of purchase $X_i(M_1)$ and installation (M_2) - X^*_I; $M = M_1 + M_2$); of machines;

S– cost of base (B) and additional (As) salary;

A– costs of depreciation expenses for fixed assets of automotive manufacture;

O– overhead expenses.

Thus, as a result of calculations we obtained the following company's parameters:

- income from sale of cars (Ix) – US$26,000K;
- total annual income (TAI) – US$234,000K;
- cost of car production (C) – US$15,600K;
- income (TI) – US$7,800K;
- profit from sale of one car – US$10K;
- balance-sheet profit (Pr) - US$16,720K;
- market price for a car – US$50K;
- company's profitability – 33.3 %.

CONCLUSION

Operational planning, management organizational structure and production management are connected through a single economic management mechanism.

1. Rational operational planning is considered and used herein as a major instrument, a fundamental principle of rhythmic operation of industrial production.
2. Operational planning is linked to the production management herein to ensure production rhythmicity.
3. Continuity of processes of operational planning and production management is ensued in operation.

References

Anopchenko T. Y., Boyeva K. Y., Volodin R. S. Modern Management Methods. Teaching Aid for Bachelors. M.: Knorus, 2016. – 316 p.

Bussygin A. V. Economic Mechanism of an Enterprise and Profitability Management – M.: Econom-Inform, 2008. – 160 p.

Demchenko O. F. Economic and Mathematical Simulation of Organizational Structure of Russian Aviation Industry Enterprise//Newsletter of M.F. Reshetnev Siberian State Aerospace University No. 6, 2006, p. 231-237.

Drucker P. Management Challenges for the 21st Century. / Translated from English by Natalya Makarova.-M.: Mann, Ivanov and Ferber, 2012. – 256 p.

Kubayev K.Y. Efficient Public Management. / Monograph. – Almaty, Sagaudinova Publishing House, 2013. – 234 p.

Coulman A. Economic Mechanisms: Translated from French; under the general editorship of N.I. Khrustaleva. M.: Progress; Universe, 1993. – 92 p.

Management Mechanisms: / Under the editorship of D. A. Novikov – M.: Editorial URSS, 2011. (Smart Management). – 216 p.

The Governmental Rules dated June 14, 2002 No. 647 The Rules for Development of Indicative Plans of Social and Economic Development of the Republic of Kazakhstan.

Savinykh V.N. Mathematical Simulation in Production and Financial Management. Teaching Aid. Knorus, 2016, – 192 p.

Order of the President of the Republic of Kazakhstan dated November 28, 1999 No. 271. The Issues of the Agency for the Strategic Planning of the Republic of Kazakhstan.

Order of the President of the Republic of Kazakhstan On the Concept of Transition of the Republic of Kazakhstan to Sustainable Development for Years 2007 – 2024.

Shikin Y.V., Chkhartishvili A.G. Mathematical Methods and Models in Management. – M.:Delo, 2004 – 440 p.

Walter Nicholson and Christopher Snyder. Intermediate Microeconomics and Its Application. South-Western Cengage Learning. 2010, – 653 p.

Description of income and expenses	*Formula*	*Value, K USD*
1. Income from sale of products with indirect taxes (Ix)	*Ix = N*P*	*26 000*
2. a) VAT	*10% of Line 1*	*2 600*
c) Excise taxes		*0*
3. Income from sale of products without indirect taxes		*23 400*
4. Other income		*0*
5. Total annual income (TAI)	*Line 3 +Line 4*	*23400*
6. Deductions:		
7. Cost of cars sold including:	*Line 8 + Line 9 +Line 10 + Line 11+ Line 12*	*15 600*
8.Salary fund		*13000*
9.Deductions for public social insurance		*2 690*
9a) pension fund	*10% of MCI (24,459)*	*2446*
9b) Social Insurance Fund	*Line 9*5%*	
9c) Compulsory Health Insurance Fund	*Line 9* 5 %*	*122*
10.Deductions to the employment fund	*Line 8*2*	*122*
11. Deductions to the road fund	*Line 1*0.1%*	
12. Other expenses (material costs, depreciation expenses, repair expenses, etc.):		*2600*
12a) Buildings and facilities	*10% of cost*	
12б) Machines and equipment	*25% of cost*	*10% of 500 млн.*
12в) Computers and software	*40% of cost*	*= 50 000.*
13. Percentage to cost		*25% of 250 000 = 62 500* *10 000*
14. Local taxes and charges, including 14a) vehicle tax *14b) land tax*	*Lines 14a+14b+14c*	*7 800*

14c) property tax *15. Total deductions* *16. Taxable income (TI)* *17. Income tax from legal entities (%)* *18. Other taxes and charges, total including:* *- tax for securities transactions;* *- bonuses;* *- water charge;* *- royalty;* *- import customs duties;* *- export customs duties;* *- customs control and procedures;* *- stamp duties;* *- nature conservation fund*	*Line 7+Line 14* *Line 5- Line 15* *20% of TI*	*23 400* *23 400* *4 680* *2 000*
19. Total tax withholdings *20. Percentage of tax withholdings in total amount of TAI with indirect taxes, %* *21. Percentage of tax withholdings in TAI without indirect taxes, %*	*Line 2+Line 9+ Line10 +Line 11+Line 14+* *Line 19/ (Line 1+ Line 4)*100%*	*22 300* *85,8%* *92,3%*
22. Percentage of tax withholdings in total volume of net product (TAI with indirect taxes less other expenses) *23. Profit left in the company's Possession* *24. Percentage of profit left in the company's possession in income from sale of cars with indirect taxes*	*Line 19/ Line 5*100%* *Line 16- Line 17- Line.18* *Line 23/ (Line 1+ Line 4)*100%*	*92,3%* *16 720* *64,3%*

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.4009.
McCarthy, M., McCarthy, R. V., & Bell, T. J. (2017). A Case Study to Address the AACSB Curricula Management Review. *Archives of Business Research, 5(12),* 316-331.

SOCIETY FOR SCIENCE AND EDUCATION

A Case Study to Address the AACSB Curricula Management Review

Mary McCarthy
Central Connecticut State University
1615 Stanley Street – RVAC 444. New Britain, CT USA 06050

Richard V. McCarthy
Quinnipiac University
275 Mount Carmel Avenue, SB-DNF. Hamden, CT, USA 06518

Timothy J. Bell
1615 Stanley Street
New Britain, CT USA 06050

ABSTRACT
This paper examines a curricula management improvement process model to apply to the review of a business school core curriculum consistent with AACSB (Association to Advance Collegiate Schools of Business International) Standard 8. AACSB accredited schools are required to perform periodic curricula management review. A flexible business process model extensible to other curriculum programs is proposed. The results of the model implementation from an action-research study at a medium-size public university in the northeastern United States are discussed. AACSB requires that a continuous improvement review process for curricula management be in place (AACSB, 2017a). However, there is a lack of formal business processes to address how business schools can systematically manage their curriculum. This paper bridges that gap by presenting a formal approach. Lessons learned from the process and recommendations are also presented.

Keywords: Association to Advance Collegiate Schools of Business; AACSB Standard 8, business curriculum; curricula improvement model; business process model; curricula management.

INTRODUCTION

Most business school programs consist of a combination of university core curriculum requirements, a business core curriculum, and courses that are specialized to a major or area of focus. The business core curriculum provides a foundational skill set of several business disciplines and enables all business students to understand how each discipline interacts and is functionally dependent upon the others. Although this concept has been around since the earliest business programs began, the core curriculum itself must undergo regular review to ensure that it remains current and effective. Accrediting organizations now look for processes to measure learning outcomes and periodic review to regularly assess that curriculum supports the key stakeholders' requirements and the mission of the school. In spite of this need, formal business processes have been lacking in this area. The focus of this paper is to propose a business process model for curriculum management review and discuss an action-research example of its implementation. The purpose of the process is to improve the quality of the business curriculum and to ensure stakeholder engagement in the process. Gunderson et al. [8] point out that although there is significant literature on the development of curriculum, no step-by-step process that fulfills the requirements of the AACSB standards has been developed. This paper seeks to help bridge that gap.

The remainder of the paper is organized as follows: First, a discussion on the Association to Advance Collegiate Schools of Business (AACSB) curriculum management standards. Second, a formal business process model of the business core curriculum management is presented with implementation recommendations from past literature and the authors' experiences as well as proposed time frames for each stage in the process. Next, an action-based example of the implementation of the proposed core curriculum management process model is presented along with findings and lessons learned for future continuous improvement reviews of the business core curriculum. Lastly, concluding remarks summarizing the process, implementation, and "lessons learned" are discussed.

AACSB ACCREDITATION CURRICULA MANAGEMENT

AACSB

The AACSB is a non-profit organization founded in 1916. AACSB is the world's largest business education accrediting organization. The AACSB Accreditation Standards were initially implemented in 1919 with major revisions to ensure business education quality and ongoing improvement occurring in 1991, 2003, and more recently in 2017. The accreditation standards are separated into two sections. Section 1 outlines the criteria to be eligible for AACSB International Accreditation and Section 2 provides the standards for business accreditation. Section 2 is then further separated into four areas of focus:

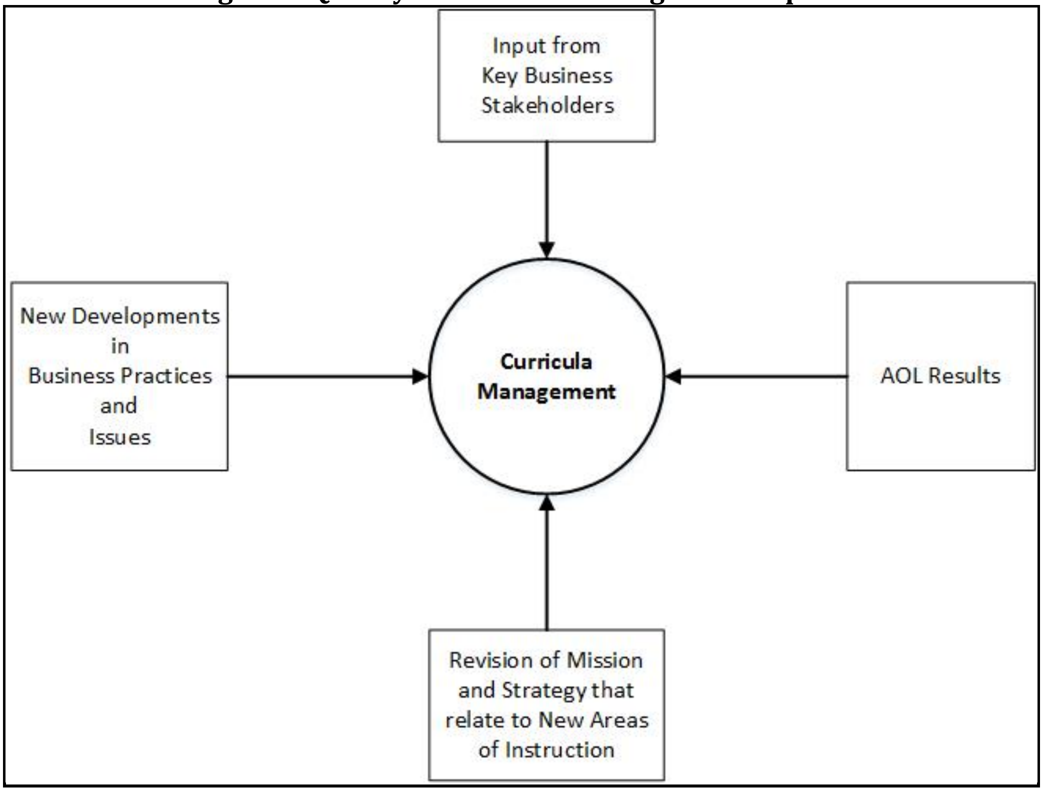
- Strategic Management and Innovation (includes standards 1 through 3)
- Participants – Students, Faculty, and Professional Staff (includes standards 4-7)
- Learning and Teaching (includes standards 8-12)
- Academic and Professional Engagement (includes standards 13-15) [4].

Upon achievement of AACSB accreditation, business schools are required to enter the Continuous Improvement Review process managed on a five-year cycle beginning in the year accreditation was awarded. The school's continuous improvement review processes should focus on educational improvement, strategic management, and fulfillment of their mission [3] and should demonstrate high quality and alignment with the spirit and intent of the accreditation standards.

Standard 8 Curricula Management and Assurance of Learning

Standard 8 requires schools to establish and document systematic processes for designing, delivering, and improving degree program curricula to achieve their learning goals and to demonstrate that such goals are met. A quality curriculum management process should include input from key stakeholders and consider results from assurance of learning results, new developments in business practices and issues, and any revision of mission and strategy that relate to new areas of instruction. See Figure 1. [4, p.1].

Figure 1 Quality Curriculum Management Inputs.



AACSB states:
The Continuous Improvement Review process minimizes the reporting burden on accredited institutions. The process creates an ongoing 'Continuous Improvement' focus signaling that once an institution has achieved AACSB accreditation, a process of documented continuous improvements in support of the stated mission and strategic management plan will sustain AACSB accreditation status [3].

Standard 9 Curriculum Content
An effective business school curriculum, as revised by a quality curriculum management process, tends to have many common learning experiences across institutions, which prepare graduates for business careers. The curriculum management process frequently tends to concentrate on many of the "broadly-defined skill and knowledge content areas listed below.

General Skills Area

- Written and oral communication
- Ethical understanding and reasoning
- Analytical thinking
- Information technology / Software applications
- Interpersonal relations and teamwork
- Diverse and multicultural environments
- Reflective thinking
- Application of knowledge

General Business and Management Knowledge Areas

- Economic, political, regulatory, legal, technological, and social contexts of organizations in a global society

- Social responsibility, including sustainability, and ethical behavior and approaches to management
- Financial theories, analysis, reporting, and markets
- Systems and processes in organizations, including planning and design, production/operations, supply chains, marketing and distribution
- Group and individual behavior in organizations
- Information technology and quantitative methods
- Other specified areas of study related to concentrations, majors, or emphasis areas

[4, p. 31-32].”

BUSINESS PROCESS FOR CORE CURRICULUM MANAGEMENT

The Importance of a Business Process Approach

A business process is a set of activities that support a specific organizational goal. The business process creates a method or roadmap to reach an end goal. A common component of successful business processes are interim deliverables or benchmarks as early indicators of success or failure of steps in the process. These early indicators allow for adjustment or revisions to efficiently manage the overall process. To be able to measure the success of a business process the output must be clearly defined. Business processes are generally described via flowcharts or business process models, which provide a diagrammatic representation of the sequence of activities that support the overall processes. Smith and Finger (2006) add to the definition by including that in addition to coordinating collaborative and transactional activities, a business process must deliver value to its customers. Business process models have been used in many different contexts to provide clear description to the participants in the process for how results are achieved. There are few formal business process models that document how improvements to business school core curriculum can be managed on an on-going basis.

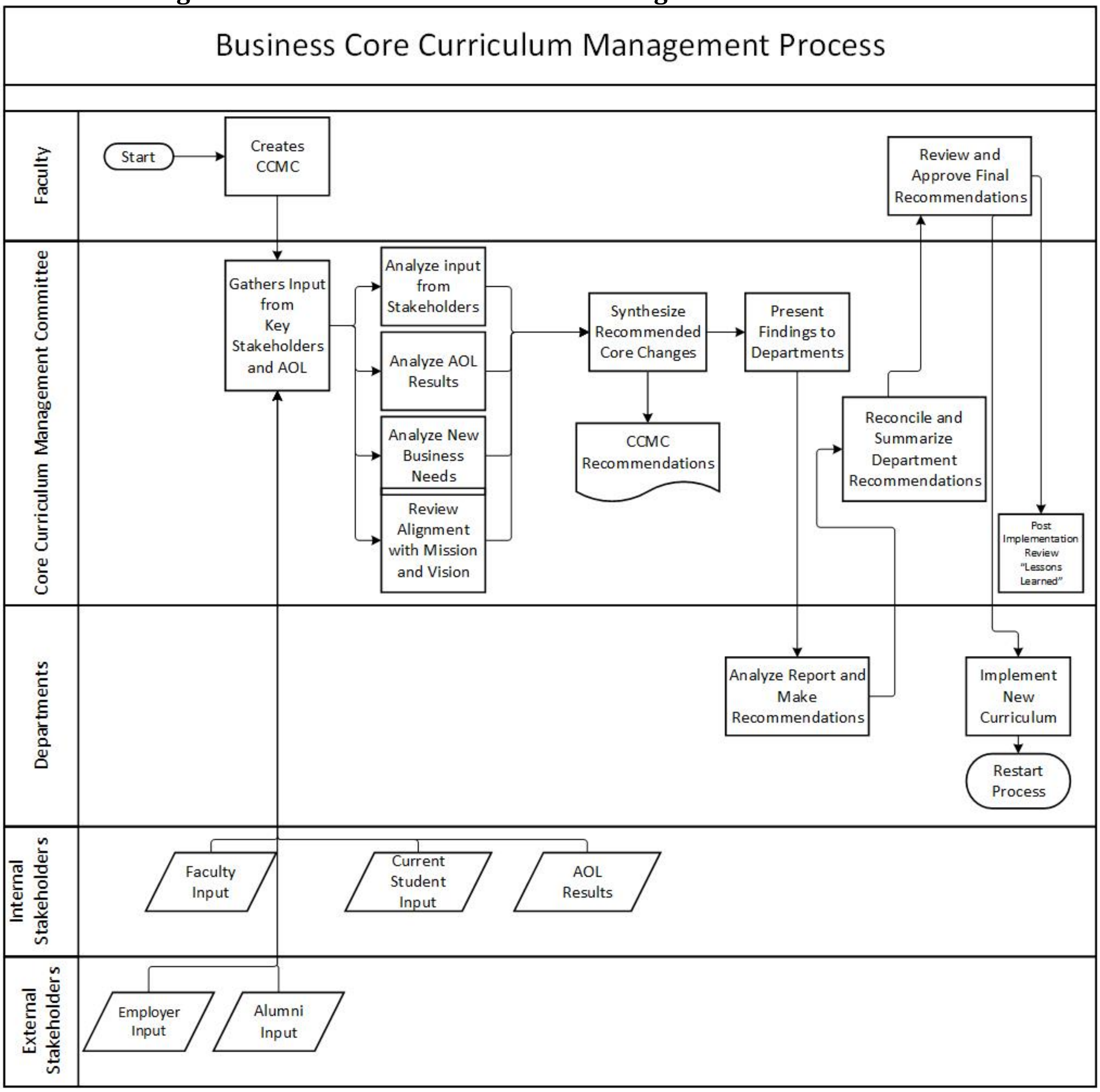
Kundu and Bairi [11 defined a business process model framework for the management of the AACSB accreditation process. They purport that using a business process model provides a knowledge-richer methodology to communicate requirements and develops a deeper understanding of those requirements by the participants. Since judgments in the accreditation process are based upon formal documentation, a process approach provides a verifiable source for describing continuous improvement processes [9]. Cooper, Parkes and Blewitt [7] conclude that to achieve and maintain accreditation, organizations must adopt more formal processes for the purpose of engaging stakeholders.

AACSB standard 8 requires that “the school uses well-documented, systematic processes for determining and revising degree program learning goals; designing, delivering, and improving degree program curricula to achieve goals; and demonstrating that degree program learning goals have been met [3, p. 32].” They further state that “a curricula maps out how the school facilitates achievement of program learning goals [3, p. 32].

Business Process Approach to Curriculum Management

When a business program is part of a larger university, the curriculum typically consists of the university’s general education requirements, a business core curriculum, and the courses that pertain to the major. This paper addresses a flexible and robust process for managing the business core curriculum that can easily be adapted for either general education curriculum or the curriculum in the major. Figure 2 provides a business process model for schools going through initial accreditation or a continuous improvement review. This process model aligns with the guidance provided in AACSB’s Standard 8 and was developed in response to the need for continuous improvement review at an AACSB accredited public university in the northeast United States. The proposed process provides tremendous flexibility in the identification of key stakeholders and which tools to use to solicit feedback from the key stakeholders.

Figure 2 Business Core Curriculum Management Process.



Core Curriculum Management Committee

The process starts with the creation of a core curriculum management committee (CCMC). The committee should be comprised of members from all business disciplines including both senior and junior faculty. Faculty can be selected by the Dean or volunteer to serve on the committee. Representatives from each department should serve on the committee. Gundersen et al. [8] recommend committee members possess significant diversity in educational backgrounds and faculty experiences. They also recommend that senior faculty be represented on the committee as they would tend to have vast knowledge of the curriculum in their disciplines. We recommend, based on our experience, both senior and junior faculty representation as well as faculty representation with industry work experience because, like Gundersen et al. [8] their different educational and personal backgrounds add tremendous value. Additionally, the involvement of junior faculty can be a rewarding, positive professional development experience for junior faculty. Faculty diversity of discipline offers advantages in sharing experiences, understanding topics covered in other core courses outside each faculty's area of expertise, reducing the "silo" mentality, and building a sense of community. It is also desirable to have faculty who have experience teaching in different modalities, particularly when these are a requirement of, or a desired goal for, the curriculum under consideration. All faculty should be willing to serve, recognizing the significant time commitment for the endeavor to be successful. In fact, course release time and/or grant money should be considered to faculty serving on the committee [2,5,6]. Once the committee is established a chair should be identified. This process can be "kicked-off" at the beginning of an academic year and the creation of the committee could be done easily in the first month.

Input from Key Stakeholders

The next major step is for the committee to gather input from the business school's key stakeholders. The committee in conjunction with the school's administration should identify their school's key stakeholders. At a minimum, the key stakeholders should include faculty, students, alumni, and employers (including advisory councils which normally are comprised of employers and/or alumni). Other key stakeholders to be considered based on the school characteristics are parents and benefactors. If the committee is large, it is advisable to create sub-committees by key stakeholder. Each key stakeholder sub-committee should be responsible for gathering input and analyzing the results from their identified key stakeholder responsibility. Input can be collected several ways, for example surveys, interviews, brainstorm sessions, focus groups, total quality management techniques.

In addition to input from key stakeholders, the other key inputs to the curriculum review process are the results from the Assurance of Learning (AOL) process. AOL measures must already be regularly gathered and analyzed to evaluate the effectiveness of the existing curriculum towards meeting program learning objectives. While not a key stakeholder the committee could consider a comparison of geographic competitor schools, peer schools, and aspirant school's core business curriculum which they may find helpful in gaining insights into how other school's address curriculum content [8].

The recommended timeframe for gathering input from key stakeholders can be lengthy. First the committee needs to decide what tools will be used to gather the information. If the committee decides to gather feedback from a survey instrument, time needs to be allotted to develop and disseminate the survey. If interviews, brainstorming sessions, or focus groups are used, preparation time as well as time with the stakeholders needs to be considered. If the committee is large enough to permit sub-committees gathering input from the different key stakeholders, then the process can occur concurrently thus reducing the time length. Overall, this step in the process could take one to nine months. Once the tools are created they can be updated and re-used in the next continuous improvement review cycle.

Analysis of Key Stakeholder Feedback, AOL Results, and Business Needs

Once feedback from the key stakeholders is received, the results should be summarized within the sub-committees and then analyzed by the entire committee. Committee members should share the results with their department colleagues as well. Additionally, analyzed AOL results should be considered along with the key stakeholders' results. Any new business practices or issues that have come to the faculty's or administration's attention outside of the input from key stakeholders' results should also be taken into consideration. Lastly, any revision of the mission and strategy that relate to the curriculum management processed should be incorporated into the results and recommendations. Once all the feedback is analyzed, the results should be presented to the faculty and the Dean. This could be done by committee members reporting to their departments in department meetings, reporting the results in a faculty assembly meeting, or other special meeting. Depending on how the input from key stakeholders was obtained and the statistical rigor in the analysis of the results, this step in the process could take some time. The recommended timeframe for this phase is one to six months. As input is sought from multiple key stakeholder groups, portions of the analysis phase could overlap gathering feedback from other key stakeholders.

Final Recommendations and Implementation

Once all feedback is received from the key stakeholders with consideration of new business practices and issues, AOL results, and any revisions to the school's mission and strategy, the results should be synthesized into a list of recommendations to be applied to the business core curriculum. These recommendations could include modifications to existing courses, addition of new courses, and/or removal of one or more business core courses. The recommendations may also result in recommendation(s) that apply to discipline courses outside the core courses. The final recommendations by the committee should be presented to faculty and the dean in a faculty assembly meeting. Faculty should review the final recommendations and approve. Once recommendations are approved, the proposed changes and implementation would become the responsibility of the department who has ownership of the course(s) that are being modified, added, or removed. Each department or discipline area can also apply the same core curriculum management process to the courses in their discipline or major. In fact, feedback solicited from the key stakeholders should include gathering information as it relates to both core and major courses.

Depending on the recommendations, obtaining approval from faculty and administration should be done within one to two months. Implementation of the recommendations could take much longer depending on the university's policies and procedures. Obstacles may include obtaining university approval, funding to staff the recommendations, course development, faculty expertise, and use of other resources. This implementation timeframe is unique to each school.

On-going Improvement

Once the recommendations are presented and faculty approval obtained, the committee should meet one more time to review "lessons learned" to improve the process for the next cycle. This is consistent with the optimized level of maturity modeling for management control based upon the method developed by the Software Engineering Institute [10] that requires that a post-implementation review be a part of any implementation. The improvements should be reflected in an updated business process, any modifications to the tools used to gather and analyze key stakeholder feedback should be noted. The time commitment for this last step could be one meeting and time to document the improvements recommended. The core curriculum management process is ready to begin again.

Overall, the proposed timeframe to allocate to the review of the core curriculum should be between five months (just over two semesters) to 19 months (approximately two and half academic years). See Table 1. The proposed timeframe is a guideline and dependent on the time commitment available from faculty and the tools used to gather, analyze, and synthesize the feedback from key stakeholders.

Table 1 Timeline for each phase.

Timeline for each phase	
Phase	**Approximate Time to Complete Phase**
Create Committee	One month
Gather Input from Key Stakeholders	One to nine months
Analyze Input from Key Stakeholders Analyze AOL Results Analyze New Business Needs Review Alignment with Mission and Vision	One to six months
Present to Findings to Faculty/Dean	One month (one meeting). Could be done at the end of the Analyze process.
Synthesize Findings into Recommended Changes	One month to six months
Present recommended changes to faculty and Dean. Receive feedback, modify recommendations, and obtain faculty approval.	One month to two months
De-brief to review "lessons learned" from the current process and recommend changes for improvement	One month. Could be done immediately after presenting recommendations and faculty approval.
Implement new curriculum	Determined by individual school

PROCESS IMPLEMENTATION AND RESULTS

The process was implemented by the School of Business at a regional, public comprehensive university. The university has approximately 11,800 students with approximately 2,100 students in the School of Business. The School of Business has 52 full-time faculty. The school is AACSB accredited offering majors in Accounting, Finance, Management & Organization, Management Information Systems (M.I.S.), and Marketing.

Committee Formation

The School of Business recently hired a new Dean and during his initial semester he addressed the school's vision, mission, and strategic initiatives. Curriculum Management Review was identified as a Strategic Initiative by the Dean and the Strategic Committee. School strategic initiatives were identified and sub-committees were formed to address implementation of these initiatives. Members from the Dean's Strategic Committee were assigned as chairs for each sub-committee. Faculty volunteered to serve on the sub-committees. The Core Curriculum Management Review sub-committee, hereafter referred to as the Core Curriculum Management Committee (CCMC), comprised approximately 12 faculty members and one administrative member. The administrator was a former faculty member and attended key meetings where recommendations were being brainstormed. Some of the 12 members were recruited to ensure representation from all departments. Five of the 12 members were untenured. However, two of the five had significant industry experience and several of the untenured faculty had previous academic experience at other institutions. Their contributions were significant during the process.

Gathering Information from Key Stakeholders

The Committee split into sub-committees, typically comprising two to three faculty, to collect data from students, employers, alumni, and faculty. These sub-committees worked primarily independently and contemporaneously. The tools used to gather the feedback were decided on a sub-committee preference. Separate surveys were created and distributed to each of the stakeholder groups. In addition, it is both important and required by AACSB to consider what peer schools and aspirant schools have incorporated into their curriculum and assess how appropriate that is for the mission of your own school.

Voice of the Employer

During an Accounting and Finance Career Fair an open-ended survey was provided to the employers. The survey informed the employers that the School of Business was strategically identifying common skills that all business students need prior to graduation. The employers were asked to identify and list the soft/social and technical skills that they want the students to possess when hiring the school's students. The questions focused on 1) Type of organization and 2) The soft/social and technical skills required. There should be a systemic method for gathering feedback from employers.

Twenty accounting and finance employers provided feedback. Table 2 provides a summary of the results. Excel, communication (oral) skills, writing skills, and analytical skills ranked as the top four skills students should possess upon graduating.

Table 2 Feedback from employers.

Feedback from 20 Employers at the Fall 2016 Accounting/Finance Career Fair	Total
Excel	14
Communication skills (speaking, presentation, small talk, interview)	12
Writing skills (letters, resumes, email, note taking)	12
Analytical skills/Critical thinking/problem solving	7
Detail oriented	5
Dress	5
Time management	4
Teamwork	4
Research Ref skills	3
Willing to ask questions	3
Networking	3
Organization	3
Quickbook	3
Confidence	3
Problem solving	3
Ability to prioritize	3
Leadership capabilities	3
Ettiquette - dining/email/phone	3

The Marketing department provided informal feedback from employers hiring marketing majors. Feedback included engagement, social skills, customer service, and communication (oral and written) skills as well as marketing specific skills. The M.I.S. department chair informally interviewed employers and provided feedback which included demonstration of initiative to learn outside of the classroom, interviewing skills, and scripting languages.

Voice of the Faculty

After reviewing preliminary feedback from the Voice of the Employer and the skills/knowledge items from the previous curriculum review, the CCMC members met for a half-day brainstorming session on what would be the skills and items the committee members would like to see in the curriculum if the business core curriculum was being developed from scratch. This resulted in 56 skills/knowledge items. A sub-committee then synthesized the list to 19 items based upon commonality of the topic/curricula concept (Table 3). A survey was then developed and sent out to the faculty. The survey had seven questions (Table 4).

Table 3 CCMC Recommended Core Business Skills/Knowledge.

CCMC Recommended Core Business Skills/Knowledge	
1.	Financial and managerial accounting concepts
2.	Communication skills
3.	Financial concepts
4.	Information systems concepts
5.	Marketing concepts
6.	Critical thinking and analytical thinking
7.	Entrepreneurial thinking
8.	Global and external awareness
9.	Interpersonal skills and awareness
10.	Legal environment of business
11.	Motivation and leadership
12.	MS Office
13.	Operations management
14.	Professionalism, etiquette, and time management
15.	Quantitative data analysis
16.	Research (primary and secondary applied)
17.	Sales skill
18.	Sustainability, social responsibility. ethics/moral issues
19.	Team work and organizational behavior

Table 4 Faculty survey.

Faculty Survey	
1.	What department are you in?
2.	Are you tenured, tenure-track non-tenured, non-tenure track?
3.	Below is a list of 19 general skills categories plus "Other" for a total of 20 categories. To illustrate what you think should be the emphasis of the Core Curriculum, score each of the categories with a minimum of 0 points and a maximum of 10 points. You must distribute exactly 100 points.
4.	If you scored points in the "Other" category, please identify the skill.
5.	Do you think the courses in the curriculum should change?
6.	What course or courses (if you suggest dropping a course(s) should be added?
7.	If you believe the list of core courses should change, which courses should be retained or dropped?

Forty-one faculty responded to the survey. Key findings are reflected in Table 5. The results of the faculty survey identified all the discipline introduction courses in the top 10 categories. Faculty in all five disciplines identified critical thinking skills in the top 10 categories. Microsoft Office skills were ranked in the top 10 in all the discipline areas except marketing, where it ranked 19 out of 20.

Table 5 Results from Faculty Survey.

Results from Faculty Survey

		Total	Tenured	Non-tenured	Other
Sample Size	Accounting	15	4	6	5
	Finance	6	3	1	2
	Management	6	3	3	0
	Marketing	7	3	3	1
	MIS	7	6	0	1
	Total	**41**	**19**	**13**	**9**

Notes

(1) **Core Accounting/Communication/Information Systems/ Marketing Concepts** - All disciplines ranked in top 10
(2) **Critical Thinking Skills** - All 5 Disciplines ranked in the top 10
(3) **MS Office** - All disciplines ranked in the top 10 except Marketing; Marketing rated this last of 19
(4) **Interpersonal Skills and Awareness** - Accounting, Finance, MIS ranked in top 10; Marketing & Management ranked #11
(5) **Research** - Accounting Marketing, MIS ranked in top 10
(6) **Entrepreneurial Thinking** - Finance & Marketing had Entrepeneurial thinking in top 10; MIS ranked #11
(7) **Teamwork & Organization** - Marketing & MIS ranked in top 10;Finance ranked #11
(8) **Quantitative** - Finance & Management ranked in top 10
(9) P**rofessionalism/Etiquette/Time Mgmt** - Accounting & MIS ranked in top 10
(10) **Legal Environment of Business** - Management ranked in top 10; Accounting ranked #11
(11) **Global and External Awareness** - Marketing ranked in top 10.

Voice of the Students

The Voice of the Students sub-committee, started with the 56 items from the CCMC brainstorming session, the feedback from the Voice of the Employer, and the School of Business mission statement selected what they believed to be the 33 most important items (see Table 6). This resulted in a survey that asked students how well-prepared they thought they were related to 33 skills/topics. Most of the skills/topics were taken from feedback identified by employers as important skills students should possess by graduation. Students were asked to rank each individual skill/topic on a Likert-scale (1-5) ranging from Highly-prepared to Not-prepared at all. In addition, demographic data related to the student's major and class-level were asked.

Table 6 Student perspective of skills/topics.

Student Perspective of Skills/Topics	
1.	Ethics/Integrity
2.	Critical thinking
3.	Teamwork
4.	Management skills
5.	Ability to ask questions
6.	Ability to receive feedback
7.	Communication – oral
8.	Adaptability
9.	Time management/Organization
10.	Communication – written
11.	Diversity (from mission statement)
12.	Leadership (from mission statement)
13.	Professional dress/etiquette
14.	Motivation/Positive attitude
15.	Understand financial statements
16.	Big picture thinking
17.	Conflict resolution
18.	Understand cash flows
19.	Technical knowledge in your field
20.	Understanding current business environment
21.	Business research
22.	Marketing skills
23.	Information technology
24.	Data/Information security
25.	Quantitative data analysis
26.	Community engagement (from mission statement)
27.	Information systems
28.	Personal financial planning
29.	Theory to application
30.	Globalization and external awareness (from Mission statement)
31.	Networking
32.	Sales skills
33.	Entrepreneurship (from vision statement)

A total of 322 students responded. Ninety-one percent of the students were juniors or seniors. Thirty-three percent of the students were accounting majors, followed by 23% finance majors, 15% M.I.S. majors, 12% management majors, 11% marketing majors, and 6% listed Other.

In all but four categories greater than 50% felt highly-prepared or prepared. The top responses were in the following categories: Ethics/Integrity (79%), Critical thinking (78%), Teamwork (78%), Management skills (76%), and Ability to ask questions (76%). The categories that students ranked the lowest in highly-prepared or prepared were Globalization & external awareness (48%), Networking (47%), Sales skills (42%), and Entrepreneurship (39%).

Voice of the Alumni

No new feedback was solicited by the CMCC, but prior feedback was reviewed and included. In the previous year, a general survey covering many topics was sent to alumni. Included in the survey was a question asking alumni if there was a particular skill or attribute critical to your career that you wish would have received greater emphasis in your degree program at the university. One hundred and twenty-eight alumni completed the survey (54 accounting, 17 finance, 45 management, 12 marketing, and 0 M.I.S. alumni). Fifty-two of the alumni provided a relevant response to this question with 25 of the 52 questions pertaining to Excel skills. No other responses were remotely close to the skill.

Voice of the Advisory Council

Feedback from the School of Business Advisory Council and the Accounting Department Advisory Council was also provided. During the meetings council members provided feedback on the skills and knowledge that graduates should possess upon graduation. The School of Business Advisory Council stressed communication and Excel skills while the Accounting Department Advisory Council recommended advanced Excel skills and data analytics skills (e.g., IDEA software) as well as oral and written skills citing ability to express thoughts concisely and e-mail etiquette.

Other

As part of review of the business core curriculum, a spreadsheet comparing the university's business core curriculum and required courses by major to 12 other universities' business core curriculum and required major courses was created. The 12 universities included geographical competitor schools and top business schools and universities. This information was shared with all members of the committee at the start of the process. The results of the comparison indicated a high degree of similarity amongst business core curriculum.

Analysis and Recommendations

The sub-committees representing each of the key stakeholders provided summaries to the CCMC. The CCMC met a twice to review the findings. This information was disseminated by committee members to their departments either in a department meeting or via e-mail. The findings were informally shared with faculty at an Assurance of Learning (AOL) results review. Overall, there were several common themes received from the key stakeholders – communication, EXCEL, and teamwork skills ranked very high as skills needed by students.

AOL Results

As part of the on-going improvement process, each year the faculty and administration of the school has an offsite AOL results review to discuss progress towards achieving AOL goals and suggestions towards improvement in achieving those goals. Many of the faculty involved in the AOL learning outcome sub-committees were also involved in the CCMC. The AOL results review happened to occur at the same time the CCMC was synthesizing the results and starting to develop recommendations. Two recommendations related to curriculum were proposed at the AOL results review. First, the faculty suggested that key issue modules be created and shared across several courses in each department. Each module would be focused on a specific learning goal (e.g. teamwork, ethics, Excel) and developed as a drop-in addition to any course's online learning management system (e.g., Blackboard). The second recommendation was to develop a third-year cross-disciplinary course to reinforce the various disciplines beyond each student's major to improve their success in the fourth-year cross-disciplinary capstone course.

Current Business Core Curriculum and Practical Limits

The school has nine required business-core curriculum courses which include eight introductory courses and a capstone course. The introductory courses include two accounting courses (financial and managerial), and a course in each of the following: finance, law, managerial communications, management, M.I.S., and marketing. The capstone strategy course is intended to bring all of the students of each discipline back together to deal with business problems and issues on an interdisciplinary and team basis. Each course is three credits for a total of 27 credits in the business core. Due to general education requirements, the school is limited to a total of 30 credits that can be allocated to the business core. In addition, the school is limited to changing many of its core courses as there is an agreement between the four-year state universities and the state's community colleges whereby many of the business core courses taught at the state community colleges contractually transfer in to the university.

Proposed Recommendations to the Business Core Curriculum

The major recommendation from the CCMC was a proposed new third-year integrated business course, focusing on business problem solving through projects and cases. Emphasis would be placed on teamwork, communication, critical thinking, ethics, and personal branding. Included in the course would be intensive training and application of targeted skills. After deliberations and thorough review, the committee achieved a consensus that twenty-five percent of the course content would cover development of Excel skills and 25% would extend communications skills beyond the introductory managerial communications course to include more focus on careers, personal and online identity, and further reinforcement of interviewing skills, particularly behavioral interview techniques. Approximately 6% would introduce a few moral and ethical theories and have the students solve an ethical business issue applying one of the theories. Another 6% would involve learning the stages of team building and conflict resolution. The course would include both oral and written communication assignments. The remainder of the course would involve integrated activities through cases. The cases reinforce thinking, presentation, Excel, ethics, and teamwork skills.

Outside of changes to the core curriculum and beyond the mission of the committee, there were other benefits from the process. Other faculty recommendations included encouraging cross-departmental collaboration in course development, encourage faculty "Brown Bag" lunches where faculty could share topics/ concepts taught in courses. This would include courses that include team work, Excel, and ethics assignments covered across the curriculum. Also, the CCMC recommended that each department review feedback from the key stakeholders and AOL results and identify where appropriate assignments could be added to reinforce or develop these skills. Examples of incorporating these finding from the key stakeholders, business needs, AOL results, and the school's mission and strategy into the curriculum outside of the core courses include the management department adding an entrepreneurship major and minor, and the accounting department requiring each course to contain at least two Excel assignments to reinforce Excel skills. Additionally, introducing IDEA software into an accounting applications elective course was recommended. This is an example of extending application of the process to specific disciplines. Recommendations for curricula improvement were based upon the highest priority gaps identified from all of the feedback. Specific recommendations by course were documented for subsequent review within future analysis of AOL results.

Lessons Learned

This was the first time a formal business process was used to review the business core curriculum. The planning and design took approximately one semester while the implementation of the core curriculum management review process covered another full semester. Some of the input from key stakeholders had been gathered in a prior semester. A significant amount of time was dedicated by CCMC members during the implementation of the process. The CMCC met several times each month including two four-hour meetings. This does not include the time spent by the sub-committees, analysis, documentation, and other written and verbal communications. None of the committee members received course load relief or grant money. There was a sense of urgency by the committee to meet a deadline. Now that a formal process is in place, the start of the next cycle will begin much sooner in the continuous improvement review process.

One of the success factors was sub-committee flexibility. The work of gathering feedback could be done simultaneously or the work of one subcommittee could inform other subcommittees. This allowed later work to take advantage of what was learned from previously surveyed stakeholders. In particular, feedback from employers and alumni informed the questions asked of faculty and students.

Feedback from several committee members indicate that a key success factor was the existence of a clear process in place for the committee to keep the diverse faculty group focused on the assigned task, while minimizing wasted efforts and "mission creep." Any endeavor whose goal is to seek substantial cross-disciplinary faculty buy-in for significant and substantive changes requires a large amount of energy. A substantial share of that energy must be focused on highlighting acknowledged weaknesses and the need to win the "hearts and minds" of all faculty stakeholders as much as address the technical issues.

Other positive feedback obtained through the "lessons learned" process was the benefit of specific goal setting having a constructive impact on meeting deadlines. Expectations and deliverables for subsequent meetings were clear and helped maintain focus and commitment.

Areas for improvement identified in the "lessons learned" stage centered on improving our data gathering. The surveys asked overly broad questions. Going forward more narrow questions to gather specific information should be utilized. This would take advantage of the lessons already learned in both process and substance.

CONCLUSION

A significant amount of time is required from the committee members. Further, to implement bold and significant change into the business curriculum requires involvement of all stakeholders as well as leadership support, release time, and supplemental financial grants to faculty members significantly involved [2,5,6]. One curriculum review of a school's marketing curriculum and using a zero-based approach took two years including time during the summer. Their approach collected input from employers, alumni, and other industry contacts to identify the necessary skills and knowledge demanded [5]. The nature of the academic environment does not lend itself to consistent progress, especially when considering or proposing changes to the status quo.

A business-process-based approach to curriculum management provides a well-defined, documented method for ensuring that curriculum is reviewed on a regular basis. As part of that review it ensures that each of the key stakeholders is represented and their perspective is considered. The process utilizes business processes familiar to the external stakeholders and reinforces the implementation of business methods amongst faculty. Prior to implementation of the business-process-based approach, the business core curriculum had very little review that was only conducted irregularly. Courses were modified without communication across disciplines and without data to support which learning outcome(s) the changes supported. Through the implementation of a business-process-based approach, the results are regular reviews of the business core curriculum that is both data driven by key stakeholders input as well as guided by AOL results, changing business practices, and the school's mission. Leadership support, in combination with periodic reminders and progress reports, are also key to business process success.

This paper introduced a flexible business process for reviewing the business core curriculum that can be applied to other curriculum reviews. A real-life implementation of the business process was presented along with findings and recommendations.

References

Akao, Y. (1972), "New product development and quality assurance – quality deployment system". *Standardization and Quality Control*, 25(4): pp. 7-14.

Albrecht, W. S., Clark, D. C., Smith, J. M., Stocks, K. D., and Woodfield, L. W. (1994), "An accounting curriculum for the next century". *Issues in Accounting Education,* 9(2): p. 401.

Association to Advance Collegiate Schools of Business (AACSB) (2017). AACSB International accreditation continuous improvement review handbook http://www.aacsb.edu/-/media/aacsb/docs/accreditation/handbooks/circ-review-handbook-business-2013.ashx?la=en (Accessed September 13, 2017).

Association to Advance Collegiate Schools of Business (AACSB) (2017). http://www.aacsb.edu/-/media/aacsb/docs/accreditation/standards/business-2017-update.ashx?la=en (Accessed September 13, 2017).

Borin, N., Metcalf, L.E., and Tietje, B.C. (2007), "A replicable zero-based model for marketing curriculum innovation", *Journal of Marketing Education*, 29 (2): pp. 164-174.

Cohen, A. R., Fetters, M., and Fleischmann, F. (2005), "Major change at Babson College: Curricular and administrative, planned and otherwise". *Advances in Developing Human Resources,* 7 (3): pp. 324-337.

Cooper, S., Parkes, C., and Blewitt, J. (2014), "Can Accreditation Help a Leopard Change its Spots?" *Accounting, Auditing & Accountability Journal,* 27 (2): pp. 234-58.

Gunderson, D, Evans-Jennings, S., Dunn, D., Fisher, W., Koulievtsev, M., and Rogers, V. (2011), "A Pillar for Successful Business School Accreditation: Conducting the Curriculum Review Process – A Systematic Approach". *American Journal of Business Education,* 4 (5): pp. 39-48.

Julian, S., and Ofori-Dankwa, J. (2006), "Is Accreditation Good for the Strategic Decision Making of Traditional Business Schools?" *Academy of Management Learning & Education,* 5 (2): pp. 225-233.

Kouns, J. and Minoli, D. (2010), *Information Technology Risk Management*, Wiley & Sons, Hoboken, NJ.

Kundu, G.K. and Bairi, J. (2016), "A process model framework for participants' area of AACSB standards". *Business Process Management Journal*, 22 (6): pp. 1044–1068.

Smith, H. and Finger, M., (2006), *Business Process Management: The Third Wave*, Megan-Kiffer Publishing. Tampa, FL.

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.4033.
Belhadjali, M., Whaley, G. L., & Abbasi, S. M. (2017). Online Information Systems: Who Should be Responsible for Preventing the Spread of Fake News? *Archives of Business Research, 5(12),* 332-337.

Online Information Systems: Who Should be Responsible for Preventing the Spread of Fake News?

Moncef Belhadjali
Norfolk State University

Gary L. Whaley
Norfolk State University

Sami M. Abbasi
Norfolk State University

ABSTRACT

The dissemination of "Fake News" online has been deemed as a form of misinformation. This paper utilizes data from a survey of Internet users to compare their perceptions of who should take a great deal or a fair amount of responsibility in preventing the spread of fake news. The three main players concerned with taking additional responsibility in dealing with fake news are members of the public, government, and social networking sites. The users were defined by three demographic variables, and their perception of the amount of responsibility that the three players should have in preventing fake news stories from gaining momentum. The majority of respondents (91%) think that made up news stories hinder Americans. Also, the majority of Americans agree that all three players should be more responsible -public (76%), government (73%), networking sites (76%). The results showed that there is a statistically significant gender difference, females are more likely than males to assign additional responsibility to all there players, regardless of ethnicity and party affiliation. In addition, the results showed that there is no statistically significant difference among Americans based on ethnicity and party affiliation. The one exception is that Democrats are more likely than Republicans to assign additional responsibility to social networking sites.

Keywords: Social media, fake online news, gender, ethnicity, party affiliation

INTRODUCTION

Alternative facts and fake news have had an impact on journalistic content (Himma-Kadakas, 2017), on American citizens' political opinions (Brewer et al., 2013), and triggered an increase in efforts to identify new tools to combat it (Burkhardt, 2017).

Lately, and according to a CNN online report, President Trump had a fake Time magazine cover hanging in at least five of his golf clubs (CNN 6/28/2017). Newsweek (5/24/2017) reported that two thirds of Americans think that the mainstream media publishes fake news. In addition, that a Harvard-Harris poll revealed that 53% of Democrats, 80% of Republicans, and 60% of Independent voters believe that news media publish stories that are not true. The term "Fake News" has become a popular buzzword, especially during the last presidential campaign. Volumes of political news are uploaded and shared daily through social media sites and others online news outlets. It is important to take a closer look at this phenomena, especially since about 4 in 10 Americans obtain their news online (Mitchell et al., 2016). This ratio is higher (50%) for younger adults ages 18-29. During the early days of the Trump administration, 89% of democrats say the news media criticism keeps leaders in line, while only 42% of Republicans feel the same (Barther & Mitchell, 2017). It was reported that in a recent study, there was evidence that 62% of adults in the USA get their news from social media, and the most popular fake news stories were shared through Facebook (Allcott & Gentzkow, 2017). A survey in the United Kingdom (digiday.com, 2/7/2017), found only 4% of those surveyed were able to correctly identify a story by the headline, and that men identified more stories correctly as true or false. The site digiday.com/uk reported that 49% of Brits surveyed are confident that they can distinguish between fake news and real news stories. According to a survey by the Pew Research Center (Barthel et al., 2016), 84% of Americans surveyed are confident in recognizing a made up news. This same survey found that 16% shared a political news that they later found out was made up, and 14% shared a news knowing that it was made up. The purpose of this paper is to investigate certain aspects of fake news stories such as the perceptions of users as to its impact on others and the degree of responsibility of different players.

METHODOLOGY

Data

The data used in this study were downloaded from the datasets available through the Pew Research Center (http://www.pewinternet.org). This dataset was collected December 2016, includes more than 1000 records, and uses at least 24 variables. The sample includes adults, 18 years of age or older, living in the continental United States. The interviews were conducted by phone, in English and Spanish. The combined landline and cellphone sample are weighted using an iterative technique that matches gender, age, education, race, Hispanic origin and region to parameters from the U.S. Census Bureau's 2014 American Community Survey and population density to parameters from the decennial census. During preprocessing, seven variables were selected as being of interest to the researchers. Four outcome variables relate to the perception of the impact of fake news and who should take more responsibility to counter this trend: members of the public, government, or social networking sites such as Facebook and Twitter. Three demographic variables were also selected, they are gender, ethnicity, and party affiliation. Many researchers consider these three variables as relevant in a political context. Next, all records with missing values were eliminated. Finally, the dataset was reduced to 769 records. Table 1 provides a snapshot of the final dataset used in this study.

TABLE 1
Data By Gender, Ethnicity, And Party Affiliation

	White			Black			Hispanic			Totals
	R	D	I	R	D	I	R	D	I	
Male	100	66	123	0	23	10	8	20	17	367 (48%)
Female	115	98	90	0	42	7	10	23	17	402 (52%)
Totals	215 (28%)	164 (21%)	213 (28%)	0 (0%)	65 (9%)	17 (2%)	18 (2%)	43 (6%)	34 (4%)	769 (100%)

Note: Party affiliation: Republican (R); Democrat (D); Independent (I)

Table 1 above shows zero (0%) for Black Republicans. This could be due to the sampling methodology adopted, and doesn’t necessarily reflect the status of the US population. In addition, the majority of the sample is White Americans (77%), with 11% and 12% Black and Hispanic Americans respectively. Also, females make up the majority (52%) of the respondents in this this sample.

Results

The three main players concerned with taking additional responsibility in dealing with fake news are members of the public, government, and social networking sites. The majority of respondents (91%) think that made up news stories hinder Americans. Tables 2 thru 7 were designed through a series of pivot tables. A drill-down OLAP operation using pivot tables provided a closer look at the respondents in all clusters. The results shown reflect respondents' perception of the responsibility of members of the public, government, and social networking sites respectively. The level of responsibility attributed ranges from a great deal or a fair amount, to not much or not at all. The majority of Americans agree that all three players should be more responsible -public (76%), government (73%), networking sites (76%).

Tables 2 thru 4 use the two dimensions gender and ethnicity. As a first observation, Table 2 shows that the proportions for females and males are 80% and 71% respectively. This may indicate that regardless of the ethnicity, females are more likely than males to assign responsibility to members of the public. In addition, and according to the proportions, Blacks and Whites are more likely than Hispanics to assign responsibility to members of the public. A Z-test statistic revealed a significant gender difference (p-value = 0.00079 < 0.05). But, there is no statistically significant difference based on ethnicity.

TABLE 2
The Public Has A Great Deal To A Fair Amount Of Responsibility

	Female	**Male**	**Total**
Black	Proportion= (40/49) = **82%**	Proportion= (23/33) = **70%**	Proportion= (63/82) = **77%**
Hispanic	Proportion= (37/50) = **74%**	Proportion= (31/45) = **69%**	Proportion= (68/95) = **72%**
White	Proportion= (246/303) = **81%**	Proportion= (205/289) = **71%**	Proportion= (451/592) = **76%**
Total	Proportion= (323/402) = **80%**	Proportion= (259/367) = **71%**	Proportion= (582/769) = **76%**

Regarding government responsibility, Table 3 shows that the proportions for females and males are 77% and 69% respectively. This may indicate that females are more likely than males to assign responsibility to the government. This is the case, except for Black ethnicity where males are more likely than females to assign responsibility to the government (79% versus 71%).

In addition, and according to the proportions, there is no clear difference among Blacks, Hispanics, and Whites. A Z-test statistic revealed a significant gender difference (p-value = 0.0041 < 0.05). But, there is no statistically significant difference based on ethnicity.

TABLE 3
The Government Has A Great Deal To A Fair Amount Of Responsibility

	Female	**Male**	**Total**
Black	Proportion= (35/49) = **71%**	Proportion= (26/33) = **79%**	Proportion= (61/82) = **74%**
Hispanic	Proportion= (38/50) =**76%**	Proportion= (32/45) = **71%**	Proportion= (70/95) = **74%**
White	Proportion= (237/303) = **78%**	Proportion= (194/289) = **67%**	Proportion= (431/592) = **73%**
Total	Proportion= (310/402) = **77%**	Proportion= (252/367) = **69%**	Proportion= (562/769) = **73%**

Table 4 shows that the proportions for females and males are 81% and 70% respectively. This may indicate that females are more likely than males to assign responsibility to social networking sites. This is the case, except for Black ethnicity where males are more likely than females to assign responsibility to social networking sites (73% versus 69%). In addition, and according to the proportions, Hispanics and Whites are more likely than Blacks to assign responsibility to social media. A Z-test statistic revealed a significant gender difference (p-value = 0.00034 < 0.05). But, there is no statistically significant difference based on ethnicity.

TABLE 4
The Social Media Sites Have A Great Deal To A Fair Amount Of Responsibility

	Female	Male	Total
Black	Proportion= (34/49) = **69%**	Proportion= (24/33) = **73%**	Proportion= (58/82) = **71%**
Hispanic	Proportion= (43/50) = **86%**	Proportion= (29/45) = **64%**	Proportion= (72/95) = **76%**
White	Proportion= (247/303) = **82%**	Proportion= (204/289) = **71%**	Proportion= (451/592) = **76%**
Total	Proportion= (324/402) = **81%**	Proportion= (257/367) = **70%**	Proportion= (581/769) = **76%**

Tables 5 thru 7 use the two dimensions gender and party affiliation. As stated earlier, in the context of gender and ethnicity, here also regardless of the gender and party affiliation, the majority of respondents (91%) agree that fake news impact Americans, and leave them confused a great deal or some. As a first observation, Table 5 shows that the proportions for females and males are 80% and 71% respectively. This may indicate that regardless of the party affiliation, females are more likely than males to assign responsibility to members of the public. In addition, and according to the proportions, democrats and independents are more likely than republicans to assign responsibility to members of the public. Also, and according to the proportions, the gender difference is clearer among the independents. A Z-test statistic revealed a significant gender difference (p-value = 0.00082 < 0.05). But, there is no statistically significant difference based on party affiliation.

TABLE 5
The Public Has A Great Deal To A Fair Amount Of Responsibility

	Female	Male	Total
Democrat	Proportion= (129/163) = **79%**	Proportion= (80/109) = **73%**	Proportion= (209/272) = **77%**
Independent	Proportion= (99/114) = **87%**	Proportion= (105/150) = **70%**	Proportion= (204/264) = **77%**
Republican	Proportion= (95/125) = **76%**	Proportion= (74/108) = **69%**	Proportion= (169/233) = **73%**
Total	Proportion= (323/402) = **80%**	Proportion= (259/367) = **71%**	Proportion= (582/769) = **76%**

Regarding government responsibility, Table 6 shows that the proportions for females and males are 77% and 69% respectively. This may indicate that females are more likely than males to assign responsibility to the government. In addition, and according to the proportions, democrats are more likely than independents and republicans to assign responsibility to the government. A Z-test statistic revealed a significant gender difference (p-value = 0.0041 < 0.05). But, there is no statistically significant difference based on party affiliation.

TABLE 6
The Government Has A Great Deal To A Fair Amount Of Responsibility

	Female	Male	Total
Democrat	Proportion= (127/163) = **78%**	Proportion= (76/109) = **70%**	Proportion= (203/272) = **75%**
Independent	Proportion= (86/114) = **75%**	Proportion= (103/150) = **69%**	Proportion= (189/264) = **72%**
Republican	Proportion= (97/125) = **78%**	Proportion= (73/108) = **68%**	Proportion= (170/233) = **73%**
Total	Proportion= (310/402) = **77%**	Proportion= (252/367) = **69%**	Proportion= (562/769) = **73%**

Table 7 shows that the proportions for females and males are 81% and 70% respectively. This may indicate that females are more likely than males to assign responsibility to social networking sites. In addition, and according to the proportions, democrats and independents are more likely than republicans to assign responsibility to social media. A Z-test statistic revealed a significant gender difference (p-value = 0.00034 < 0.05). Also, there is a statistically significant difference based on party affiliation between democrats and republicans (p-value = 0.04 < 0.05). The results of Table 7 reveal the same trend observed throughout all previous tables. That is, females are more likely than males to assign more responsibility to all players involved. One might speculate that female respondents are more concerned with the damage that fake news stories could create, and that more women than men prefer that all players are involved in identifying a solution.

TABLE 7
The Social Media Sites Have A Great Deal To A Fair Amount Of Responsibility

	Female	Male	Total
Democrat	Proportion= (134/163) = **82%**	Proportion= (79/109) = **72%**	Proportion= (213/272) = **78%**
Independent	Proportion= (93/114) = **82%**	Proportion= (108/150) = **72%**	Proportion= (201/264) = **76%**
Republican	Proportion= (97/125) = **78%**	Proportion= (70/108) = **65%**	Proportion= (167/233)= **72%**
Total	Proportion= (324/402) = **81%**	Proportion= (257/367) = **70%**	Proportion= (581/769) = **76%**

Throughout the results shown above, the analysis revealed that the most informative cluster includes the majority of respondents that perceive made up news stories as leaving Americans confused. Also, White and Hispanic females are more likely to assign responsibility than males. However, Black males are more likely to assign responsibility than Black females. In the context of party affiliation, the clear trend is that regardless of the party affiliation, females are more likely to assign responsibility. These preliminary results have implications that could benefit policy makers, among many others that play a role in managing online information systems and educating the public. The majority of American are concerned with the negative impact of fake news, and agree that member of the public, government, and social networking sites should be responsible for combatting the dissemination of fake news. The solution should involve all three players, and take into account the gender difference, since women are more concerned regardless of their ethnicity and party affiliation.

References

Allcott, H, & Gentzkow, M. (2017). Social media and fake news in the 2016 election. Journal of Economic Perspectives, V31 (2).

Barthel and Mitchell. (2017). American's attitudes about the news media deeply divided along partisan lines. Pew Research Center, May 10, 2017.

Barthel, M., Mitchell, A., & Holcomb, J. (2016). Many Americans believe that fake news is sowing confusion. Pew Research Center, December 15, 2016.

Brewer, P. R., Young, D. G., & Morreale, M. (2013). The impact of real news about "Fake News": Intertextual processes and political satire. International Journal of Public Opinion Research, V25 (3).

Burkhartdt, J. M. (2017). Combating fake news in the digital age. Library Technology Reports, V53 (8).

CNN: June 28, 2017: Faking a Time magazine is the most Trump ever. http://www.cnn.com/2017/06/28/politics/trump-time-magazine/

Digiday.com: February 7, 2017: Demographic divides: The global state of fake news in 5 charts. https://digiday.com/uk/demographic-divides-global-state-fake-news-5-charts/

Himma-Kadakas, M. (2017). Alternative facts and fake news entering journalistic content production cycle. Cosmopolitan Civil Societies Journal, V9 (2).

Mitchell, A., Gottfried, J, Barthel, M., & Shearer, E. (2016). Pathways to news. Pew Research Center, July 7, 2016.

Newsweek: May 24, 2017: Over two thirds of Americans think that the media publishes fake news. http://www.newsweek.com/fake-news-mainstream-media-614968

Zhang, H., Abdul Alim, MD., & Li, X. (2016). Misinformation in online social networks: Detect them all with a limited budget. ACM Transactions on Information Systems, V34 (3).

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.4012.
Agwu, M.E. & Onwuegbuzie H.(2017) Strategic importance of functional level strategies as effective tools for the achievement of organizational goal. *Archives of Business Research, 5(12),* 338-348.

SOCIETY FOR SCIENCE AND EDUCATION

Strategic Importance of Functional Level Strategies as Effective Tools for the Achievement of Organizational Goals

M. E. Agwu - PhD
Associate Professor of Strategic Management
Faculty of Strategy and Entrepreneurship, Lagos Business School,
Pan-Atlantic University, Km 22, Lekki-Epe Expressway, Ajah, Lagos, Nigeria

Henrietta Onwuegbuzie - PhD
Senior Lecturer in Entrepreneurship
Faculty of Strategy and Entrepreneurship, Lagos Business School,
Pan-Atlantic University, Km 22, Lekki-Epe Expressway, Ajah, Lagos, Nigeria

ABSTRACT

Present business environment is characterized by high levels of competition, dynamism and technological sophistication. This is especially challenging to organizational managers since they have to design and implement strategies that can achieve and sustain competitive advantages. Consequently, the topic functional level strategy plays a pivotal role as organizations aim at gaining industry leadership. This study set out to investigate functional level strategy as a tool for achieving organizational goals. Gaining insight from existing literature and theoretical models four hypothesis were developed and investigated through the survey of the strategic business units of selected financial organizations. Copies of well-structured questionnaire were administered. Findings revealed that there is a relationship between marketing strategy and customer satisfactions, the price of a product and consumer purchasing such product. It also indicated that effective productivity facilitation of the firm resources help expand the firm. The authors recommends that in order to be more competitive, organizational managers must be strategically aware of how effective control of the various functional departments in the organization help organization to be aware of customer needs and offer unique products and services that satisfy such needs.

Keywords: Firm Competitive Strategy, Product Features, Customer's Needs, Product Quality, Organization Behavior.

INTRODUCTION

In a highly competitive business environment and unattainable economic situation managers are increasingly seeking for strategies, approaches to accomplish, improve and sustain organizational performance and competitive advantage. Strategy and its formulation play a vital part in the firm's management process. The strategy gives the direction that a business has in mind and which way they want to achieve their goals. Earlier research demonstrated that firms that set out a clear strategy for example: a quality differentiation or a cost leadership strategy will outperform those firm that engage a mixed strategy (Beckman & Rosenfield 2008). Amongst the many strategies implemented in firms, competitive strategy has been proven as an essential tool globally for any business to remain in the competitive market environment and become stronger (Schroeder, Goldstein, & Rungtusanatham 2011). Barnes (2008) postulate that competitive strategies implies the analysis of the market and its environment, customer purchase behavior, competitive activities, needs and competencies of market intermediaries. Competitive strategy is about being unique. It means consciously choosing to carry out activities differently or to perform different activities than competitors to survey a unique mix of value (David, 2003). Therefore to possess the edge over rivals firm employ innumerable competitive strategies, principally because each company strategic style entails custom-designed actions to fit its own circumstances and industry environment (Thompson, & Strickland, 1998). Ward, McCreery, & Anand, 2007) stressed that that to excel in a competitive environment, a firm must determine the critical success factors which are those things the company must get right to stay ahead of their competitors. These things that they must get right are the weaknesses of their competitors and mostly things they get wrong or o not even do at all. Every firm possesses certain unique capabilities and competencies that distinguish them from other firm.

REVIEW OF RELATED LITERATURE

Functional level strategy is an area of operational management based on a specific department or discipline within an organization, such as human resources, finance or marketing. Weir, Kochhar, LeBeau &, Edgeley (2000) defines functional level strategy as a plan of action to strengthen organizations functional or organization resources, as well as its coordination abilities, in order to create core competencies. The strategic goal of each function is to create a core competence that gives the organization a competitive advantage. Wetherbe, (1996) stressed that functional strategy is the approach a functional area takes to achieve corporate and business unit objectives and strategy by maximizing resource productivity. It is concerned with developing and nurturing a distinctive competence to provide a company or business unit with competitive advantage. Also functional level strategy is aimed at improving a company's ability to attain superior efficiency, quality, innovation, and customer responsiveness. Looking at the definitions given above, two key elements of the definitions should be noted; the part of functional level strategy being a plan and the second part of it being geared towards improving the companies abilities. It is a 'plan' because it has procedures. To run an organization successfully it is essential to plan a strategy at each level but to gain maximum benefit of planning it is important to align the plans at every level. Without alignment department functions will contradict each other's purpose and the overall corporate strategy will become less effective. No matter how well corporate level strategies are designed and formulated but if the execution of corporate level strategy fails in meeting the expected standard all the effort will go in vein, (Wheelen & Hunger, 2000). The success of strategy is largely determined at the functional level. Functional level checks the reality of corporate level and business level strategy and brings the desired result by turning strategies and planning into realities. The functional level of your organization is the level of the operating divisions and departments. It is the responsibility of the strategist to provide direction to functional managers regarding the execution of plan and strategies for the successful implementation. The role of functional level strategy is very crucial for the existence of an organization. The functional strategy provides support to overall business strategy and secondly it spell out as how functional managers will proceed to achieve the set goals and objectives. Departments like marketing, finance, production and human resource are based on the functional capabilities of an organization. The development of functional strategies is conceived and designed by top level management. Strategies manager plan executable functional strategies. Functional strategies support the overall business and corporate level business. Functional-level-strategy refers to strategies developed by functional or departmental managers such finance, marketing, production and human resource manager. It is their duties to develop action plans to manage individual functional areas.

Marketing Strategy

Marketing is focused on identifying and satisfying customer's need. A marketing strategy consists of an integrated but externally focused set of decisions about the organization addresses its customers in the context of a competitive environment. Williams, D'Souza, Rosendfeldt, & Kassaee (1995), defined strategic marketing means taking the entire of the organization's portfolio of markets, and dealing with the portfolio to attain the company's overall goals, (Miller, 1998). A marketing strategy, according to Hunger & Wheelen, (1998), may also be described a long-term plan to achieve the organization's objectives which are as follows:

- By specifying what kind of resources should be allocated to marketing department.
- By specifying how these resources ought to be used to take advantage of opportunities which are expected to arise in the future.

Production strategy

The production department is very important because it's through the department; the product (either *tangible or intangible)* is created, provided to satisfy the customer for profit. The supervision and operations of the functional area of management depend heavily on the type of product the organization deals in. Hunger (2000) defines production strategy as a reliable pattern of making decisions in the operations function linked to the organization's business strategy. Collis & Montgomery (2005) define production strategy as a device for effective use of operations assets as a competitive tool for achieving of organization's business and corporate goals. The definition distinctively recognizes two unique properties of production strategy content; decisions that determine the capabilities of the production system, and the existence of specific production objectives.

Human Resource Strategy

The human resource department as a functional area deals with the coordination of the employees- who are seen as very vital resources for effective accomplishment of organizational goals, (David, 2003). The job of the manager in this field includes motivating, leading, welfare services, training, recruiting and selection. The organisation is more likely to be successful. The main responsibilities of the human resources function Working conditions Training, development and promotion Includes the legal rights and responsibilities of employer and employees. Human resource is responsible for recruiting new employees and ensuring that each vacancy is filled by the best person for the job, (Grewal, 1997). This is important because the recruitment process is expensive and time-consuming. Hiring the wrong person can be costly and cause problems both for the individual and the firm. The human resources of a business are its employees. Wise organisations look after their staff on the basis that if they are well trained and committed to the aims of the business, (Boyer & McDermott, 1999).

Financial Strategy

Finance has to do with monetary terms. The finance department manages the organization's spending and recording receipts and obtaining financial information from different units in the organization. A lot of entrepreneurs consider this unit or department to be the most vital function in the business. Finance staff account for all the money earned and spent so that the higher level managers would always know exactly how much profit or loss is made by each part of the business and how much money is currently held by the business. This enables decisions to be made fast and accurately, based on factual information.

Theoretical underpinnings

Strategy as a plan; is a consciously intended course of action, a guideline (or set of guidelines) to deal with a situation. A kid has a "strategy" to get over a fence; a corporation has one to capture a market. By this definition, strategies have two essential characteristics:

- They are developed consciously and purposefully (Mintzberg, 2004).
- Strategic plans are the essence of strategy, according to the classic view of strategy.

A strategic plan is a carefully crafted set of steps that a firm intends to follow to be successful. Virtually every organization creates a strategic plan to guide its future.

Theory of Mintzberg's 5Ps of strategy

Defining strategy is not simple. The field of strategic management cannot afford to rely on a single definition of strategy. Strategy is a complex concept that involves many different processes and activities within an organization. To capture this complexity, Professor Henry Mintzberg of McGill University in Montreal, Canada, articulated what he labeled as "the 5 Ps of strategy." According to Mintzberg (2004) understanding how strategy can be viewed as plan, ploy, position, pattern, and perspective is important. Each of these five ways of thinking about strategy is necessary for understanding what strategy is, but none of them alone is sufficient to master the concept. Most business managers brainstorm on various opportunities and then plan how we will take advantage of them. Unfortunately, while this type of approach is important, we need to think about much more than this if we want to be successful. After all there is no point in developing a strategy that ignores competitors reactions, or doesn't consider the culture and capabilities of your organizational and it would be wasteful not to make full use of your company strengths-whether these are obvious or not. Management expert, Henry Mintbzerg, argues that it's really hard to get strategy right. Each of the 5 Ps is a different approach to strategy. These are: Plan, Ploy, Pattern, Position, and Perception. By understanding each P, managers can develop a robust business strategy that takes full advantage of your organization's strength and capacities, (Montanari, Morgan, & Bracker, 1990).

Strategy as a plan

Planning is something that many managers are happy with, and it's something that comes naturally to us, (Bartol, Martin, Tein, & Matthews, 1998). As such, is the default, automatic approach that we adopt-brainstorming options and planning how to deliver them. This is fine, and planning is an essential part of the strategy formulation process. Here PEST analysis, SWOT analysis, and brainstorming help you to think about and identify opportunities. The problem of planning, however, is that it's not enough on its own. This is where the other four Ps come into play.

Strategy as ploy

Mintzberg (2004) states that getting the better of competitors, by plotting to disrupt, dissuade, discourage, or otherwise, influence them, can be part of a strategy. This is where strategy can be ploy, as well as play. Here, techniques and tools such as the future wheel, impact analysis, and scenario analysis can help you explore the possible future scenarios in which competition will occur. Game theory the give you powerful tools for mapping out how the competitive "game" is likely to unfold, so that you can set yourself up to win it.

Strategy as pattern

Strategy plan and ploys are both deliberate exercises, (Dangayach & Deshmukh 2006). Sometimes, however, strategy emerges from past organizational behavior. Rather than being as intentional choice, a consistent and successful way of doing business can develop into strategy. To use this element of the 5Ps, take note of the patterns you see in your team and organization. Then, ask yourself whether these patterns have become an implicit part of your strategy; and think about the impact this pattern should have on how you approach strategic planning. Tools such as USP analysis and core competence analysis can play a greater role in this. A related tool, VRIO analysis can also be deployed to explore resources and assets (rather than pattern) that a manager focus on when thinking about strategy.

Strategy as position

Position is another way to define strategy- that is how you decide to position yourself in the market place. In this way, strategy helps you explore the fit between your organization and your environment, and it helps you develop a sustainable competitive advantage. When you think about strategy position it helps to understand your organization's "bigger picture" in relation to external factors (Bartol, Martin, Tein, & Matthews, 1998). To do this, use PEST analysis to analyze your environment-these tools will show where you have a strong position, and where you might have issues. As with "strategy as a pattern" core competence analysis, USP analysis, and VRIO analysis can help you craft a successful competitive position. You can also use SWOT analysis to identify what you do well, and to uncover opportunities, (Barnes 2008).

Strategy as a perspective

The choice an organization makes about its strategy rely heavily on its culture-just as patterns of behavior can emerge as strategy, patterns of thinking will shape an organizations perceptive, and the things that it is able to do well. To get an insight into your organizations perspective use cultural analytical tools such as the cultural web, Deal and Kennedy's cultural model and the congruence model.

Complexity theory and corporate strategy

Corporate strategy focuses on the central strategic choices that are faced by multi business firms with regard to creating competitive advantage and enhancing corporate performance. Multi-business firms are typically structured using multi-business-unit organization (sometimes termed M-form) in which the firm is divided into business-units that are focused on particular product-market segments and yet also have some degree of interconnection with one another (e.g. shared human resource function, bundled products, or collaborative R&D projects), and are led by a corporate office (Grewal, 1997). The central strategic choices that form the substance of corporate strategy are typically considered to be 1) Motivation and control of the firm's BUs, 2) Collaborations across BUs, and 3) Firm scope, (Boyer & McDermott, 1999).

METHODOLOGY

The study is concerned with finding out functional level strategy as a tool for achieving organizational goals; it is for this cause that the quantitative technique was adopted for this study.

Population and Sampling size determination

The research population is estimated number of employees in two selected financial institutions in Lagos State of Nigeria. Considering the size of the population, this study employs the yards formulae to select the appropriate sample size.

Reliability of research instrument

Reliability is the extent to which empirical measures that represents a theoretical concept are accurate and stable when used for study of the concept in several studies (Churchill, 2002). There are three major ways to assess reliability: test-retest, equivalent form the internal constituency, for the purpose of the study, internal consistency was used to test the reliability as it required only one administration of the measuring instruments and it's reputed to be the most efficient, particularly in field studies. Internal consistency implies a high degree of generalization across the items within the measurement. In this context, the reliability statistics of Conbach's Alpha stands at 0.702 and number of items is 20.

Data analytical technique

The method of data presentation includes the use of frequency table to allow for easy understanding of the findings in the research work. Research is meant to generate data for analysis and this usually results in a large volume of statistical information, which is mostly in its raw stage. In other to use data for the objective of a research, they have to be reduced to manageable dimension. In addition we made use of regression analysis; this will be used to summarize the information generated in a tabular form. All data analysis was carried out using the Statistical Package for Social Science (SPSS) version 15.0.

ANALYSIS OF DATA

Correlation analysis was used to measure the effect of the independent variable to the dependent variable of hypothesis 1 & 2; regression analysis was used to measure the significant relationship between the dependent variable and the independent variable in hypothesis 3 and hypothesis 4

Test of Hypothesis 1

- Ho: There is no significant relationship between marketing strategy and customer Satisfaction.
- H1: There is a significant relationship between marketing strategy and customer satisfaction

Computation of the Statistics

Table 1: Hypothesis 1
Correlations

		Customer Satisfaction	Marketing Strategy
Customer Satisfaction	Pearson Correlation	1	.004
	Sig. (2-tailed)		.968
	N	117	117
Marketing Strategy	Pearson Correlation	.004	1
	Sig. (2-tailed)	.968	
	N	117	117

****. Correlation is significant at the 0.05 level (2-tailed).**

Interpretation

It can be seen from the table that the simple coefficient correlation between marketing strategy and customer satisfaction recorded 0.04 values indicating a medium relationship with 0.01 significance. Thus obtained from the table ($r = 0.04$, $P < 0.001$, $n = 117$). The Pearson correlation of $r = 0.04$ therefore implies 8.0000% shared variance between marketing strategy ang customers satisfaction. Therefore, we can conclude that marketing strategy is 8.0000% of the variablity of customers satisfaction. Having found out that there is a significant relationship between the marketing strategy and customers satisafaction, we therefore reject the null hypothesis and accept the alternative hypothesis. We can say that there is a significant relationship between maketing strategy and customers satisfaction. This therefore implies that the marketing strategy would stimulate customers satisfaction.

Test of Hypothesis 2

Statement of Hypothesis:

- Ho: There is no significant relationship between financial strategy and profitability.
- H1: There is a significant relationship between financial strategy and profitability

Computation of the Statistics

		Profitability	Financial Strategy
Profitability	Pearson Correlation	1	.113
	Sig. (2-tailed)		.282
	N	93	93
Financial Strategy	Pearson Correlation	.113	1
	Sig. (2-tailed)	.282	
	N	93	115

****. Correlation is significant at the 0.05 level (2-tailed).**

Interpretation

Thus obtained from the table (r = .113, P < 0.001, n = 93). The Pearson correlation of r = .113 therefore implies 22.6000% shared variance between financial strategy and expansion of the firm. Therefore, we can conclude that financial strategy is 22.6000% of the variablity of expansion of the firm. Having found out that there is a significant relationship between the financial strategy and expansion of the firm, we therefore reject the null hypothesis and accept the alternative hypothesis. We can say that there is a significant relationship between financial strategy and expansion of the firm. This therefore implies that the financial strategy would stimulate expansion of the firm.

Testing of Hypothesis 3

- Ho: There is no link between human resource and good corporate citizen.
- H1: There is a link relationship between human resource and good corporate citizen.

Computation of the statistics

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.406(a)	.165	.142	.62758

a Predictors: (Constant), Employees motivation increases their inputs into the firm, Employment of Stakeholders improves the image of the firm, Staff training helps the firm to serve the community better

ANOVA (b)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	8.630	3	2.877	7.304	.000(a)
	Residual	43.718	111	.394		
	Total	52.348	114			

- Predictors: (Constant), Employees motivation increases their inputs into the firm, Employment of Stakeholders improves the image of the firm, Staff training helps the firm to serve the community better
- Dependent Variable: Good neighbor policy of the firm help employees to exist harmoniously with the society

Interpretation

The results from the table therefore shows that the extent to which the variance in the effect the frequency of human resource strategy on the good neighbor policy of the firm is 16.5% i.e. (R square = 0.165%)

From the table above, it can be concluded that the frequency of There is a link relationship between human resource and good corporate citizen. Therefore, this implies that “The frequency “There is a link relationship between human resource and good corporate citizen”. This therefore is an alternative hypothesis.

Testing of Hypothesis 4

Statement of Hypothesis:

- Ho: Production strategy has no impact on the firm expansion.
- H1: Production strategy has an impact on the firm expansion.

Computation of the statistics hypothesis 4

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.311(a)	.097	.073	.54209

- Predictors: (Constant), Flexibility in the production system of the firm enhances the growth of the firm, Good work ethics encourages the expansion of the firm, and work design of the firm increases productivity and enhances the size of the firm.

ANOVA (b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.503	3	1.168	3.974	.010(a)
	Residual	32.619	111	.294		
	Total	36.122	114			

- Predictors: (Constant), Flexibility in the production system of the firm enhances the growth of the firm, Good work ethics encourages the expansion of the firm, Work design of the firm increases productivity and enhances the size of the firm
- Dependent Variable: Productivity facilitations of the firm help to expand the firm.

Interpretation

The results from the table therefore shows that the extent to which the variance in the effect the frequency of production strategy on the firm expansion is 9.7% i.e. (R square = .097%). The Anova table reveals the assessment of the statistical significance of the result. The alternative hypothesis is reject because the P-value is greater than 0.05. The model in this table reaches statistical significance (sig = .010), in which the P-value is equal to .010, and greater than 0.05. Therefore, we reject the alternative hypothesis. From the table above, the frequency was concluded and there is a link relationship between production strategy and the expansion of the firm. Therefore, this implies that “The frequency “There is a link relationship between production strategy and expansion policy of the firm”. This therefore is an alternative hypothesis.

DISCUSSION

Implementation involves the development of operational plans which must be based on, and provide strong support for, selected functional strategies. Such plans can take many forms, for example, standing plans (policies, standard operating procedures, rules and regulations); single-use plans (specific programs and projects); and budgets. To give teeth to plans, resources must be allocated to specific functional areas. When it comes to financial resources, how much each area gets must be assessed according to that area's strategic importance to the company. Assessing these bids according to three criteria can facilitate allocating resources among competing bids: resource identification fit with existing resources and fix between required resources. Marketing strategy, like every other strategy, plays significant roles in creating customer satisfaction. The price of the product also plays a role in encouraging or discouraging customers from the purchase of such products. The benefits derivable from these products serve as incentives for repeat purchases. The distribution channel used for the product serves as an attraction for customers to purchase the product. The type of promotion used on a product has a way of influencing customers to purchase the product. Effective budgeting system of a firm increases returns on investment of profit. The company's earnings per capital plays a significant role on investors and shareholders. Firms that invest much on advertising increases their profitability ratio. Effective staff training plays a significant role in helping the firm serve the community better. Good neighborhood policy and corporate social responsibilities of the firm helps them to exist harmoniously within the society. Employee's motivation has a significant in increasing their inputs to the firm. Good work ethics encourages the expansion of the firm. Work design of the firm increases productivity and enhances the size of the firm. Effective productivity facilitations of the firm resources help to expand the firm. Flexibility in the production system plays a significant role in enhancing the growth of the firm.

CONCLUSION

To run an organization successfully it is essential to plan a strategy at each level but to gain maximum benefit of planning it is important to align the plans at every level. Without alignment department functions will contradict each other's purpose and the overall corporate strategy will become less effective. No matter how well corporate level strategies are designed and formulated but if the execution of corporate level strategy fails in meeting the expected standard all the effort will go in vein. The success of strategy is largely determined at the functional level. Functional level checks the reality of corporate level and business level strategy and brings the desired result by turning strategies and planning into realities.

RECOMMENDATIONS

Based on the various findings of this study, the researcher proposes the following recommendations:

- The high level of the application of functional level by the covenant university is due to the already existing knowledge that explains the advantages of carrying out the use of strategy in the organizations performance.
- Because of the increasing competition, Covenant university should be more proactive in tracking customer's feelings and interests, thereby leading to the development of new functional strategies rendered to satisfy their customers adequately and outwitt their competitors, which would require constant renewal of the organizations strategy already put in place.
- Management should also ensure that they make effective use of information system becauseit helps in storing the data of the company and bringing about reports and uick decision-making.

- Gathering of relevant information or data is also very important in that the information is meant for better knowlege about the customers and the econmoy as a whole. The information is also important because it provides and idea of the kind of strategy that is to be adopted and put in place inorder to better their performance.
- Strategy implementation and renewal should be done in a continous process because the consumers tend to change their needs on a daily, weekly, monthly or yearly basis. That is the organisation should make the process a constant activity in the organization.

It is vital to understand the importance of synchronizing the major areas or units or departments in an organization which includes marketing, production, finance and HR, because their interrelatedness is the key for attainment of organizational goals. In the past, business managers failed to recognize the fact that each unit is dependent on the other and at such, they focus all effort on improving one department and thus pose a grave on organizational growth. Hence, the understanding of this topic enables managers to coordinate effectively the various functional units of the organization for successful performance and realization of organizational goals in today's complex and dynamic business environment.

References

Barnes D (2008). Operation Management: An international perspective. Thomson Learning. London.

Bartol, K.M; Martin, DC; Tein, MH & Matthews, GW (1998). Chapter 9. In *Management: A Pacific Rim Focus*. McGraw-Hill Book Company: Sydney, pp. 416-419.

Beckman S, & Rosenfield D (2008). Operation Strategy. McGraw-Hill Press.

Boyer KK, & McDermott C (1999). Strategic consensus in operations strategy. J. Oper. Manag. 17:289-305.

Collis DJ, & Montgomery CA (2005). Corporate Strategy-A Resource-Based Approach. McGraw-Hill Press.

Dangayach GS, Deshmukh S (2006). An exploratory study of manufacturing strategy practices machinery manufacturing companies in India. Omega 34(3):254-273.

David, F R (2003). Chapter 7 'Implementing strategies: Management issues'. In *Strategic Management Concepts.* 9th edition. New Jersey: Prentice Hall.

Grewal, D. (1997). Satisfaction with quality assurance systems: A study of the UK freight transport industry. University of Wales, Cardiff.

Hawkins, J (1993). *Strategic Management Study Guide*. Tasmania: Australian Maritime College.

Hunger J D (2000). *Strategic Management Business Policy.* 7th edition. USA: Prentice Hall.

Hunger, J D and Wheelen, T L (1998). *Strategic Management.* 6th edition. USA: Addison Wesley.

Miller, A. (1998). Chapter 4 'Internal analysis'. In *Strategic Management.* 3rd edition. USA: McGraw-Hill, pp. 146-153.

Mintzberg, H. (2004). Managers not MBAs: A hard look at the soft practice of managing and management development. San Francisco: Berrett-Koehler Publishers.

Montanari, J R; Morgan, C P & Bracker, J (1990). 'The choice perspective of strategic management'. In *Strategic Management: A Choice Approach.* Chicago: The Dryden Press. Chicago.

Schroeder RG, Goldstein SM, & Rungtusanatham MJ (2011). Operation Management. New York: Mc Grow-Hill press.

Thompson, A & Strickland, A (1998). Chapter 11 'Implementing strategy: Culture and leadership'. In *Strategic Management.* 10th edition. USA: McGraw-Hill, pp. 339-357.

Ward P, McCreery J, & Anand G (2007). Business strategies and manufacturing decisions, An empirical examination of linkages. Int. J. Oper. Prod. Manag. 27(9):951-973.

Weir KA, Kochhar AK, LeBeau SA, & Edgeley DG (2000). An empirical study of the alignment between manufacturing and marketing strategies. Long. Range. Plan. 33(6):831-848.

Wetherbe, J C (1996). 'The world on time'. *Vision Book Summaries*, no.156.L &

Wheelen T, & Hunger D (2000). Strategic Management and and Business Policy. Prentice hall.

Williams F, D'Souza D, Rosendfeldt M, & Kassaee M (1995). Manufacturing strategy, business strategy and firm performance in a mature industry. J. Manag. 13(1):19-33.

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.4050.
Bosire, E. M., Kivoi, D., & Nduvi, S. N. (2017). Effects Of Judicial Transformation Framework (2012-2016) On The Performance Of The Judiciary In Kenya. *Archives of Business Research, 5(12),* 349-364.

Effects Of Judicial Transformation Framework (2012-2016) On The Performance Of The Judiciary In Kenya

Eric M. Bosire
Young Professional
Kenya Institute for Public Policy Research and Analysis

Douglas Kivoi, Ph.D
Policy Analyst
Kenya Institute for Public Policy Research and Analysis

Steve N. Nduvi
Young Professional
Kenya Institute for Public Policy Research and Analysis

ABSTRACT

The purpose of this study was to examine whether the transformation of the judiciary (using Business Process Reengineering as a proxy) improved the performance of Judiciary in Kenya. A review of the literature showed that there is scanty information on how the Public Sector could improve on service delivery by implementing BPR, especially in developing economies. The study targeted a population of 320, drawn from Judicial Officers, Judicial Staff, and advocates in stations within Nairobi and Kiambu Counties. Quota sampling method was used to sample the population. Data was collected through structured questionnaires. Descriptive statistics was used to define the study variables particularly the sample profile. Pearson correlation coefficient was used to determine the level of significance of related variables, Chi-Square test to ascertain the existence of a significant association between variables and Regression analysis to determine the predictive power of BPR on the performance of the Judiciary. The results of the study showed a significant effect of the implementation of BPR on the performance of the Judiciary. In conclusion, the successful implementation of BPR was found to be premised on the recruitment of visionary top leadership, and change of organizational focus. To that extent, the need to have an organizational wide commitment is inevitable.

Keywords: Transformation, Business Process Reengineering, Organizational Performance, ICT, Leadership, Customer focus, financial resources

JEL Classification: K41, K42

INTRODUCTION

With constant environmental fluctuations facing organizations today, it is imperative for them to adapt their core activities to such changes to remain relevant (Johnson and Scholes, 2008). Public entities have not been left behind, calls for reforms and transformation have become an agenda in every institution. Development blueprints emphasize on the need for institutions to be aligned to the principles of effectiveness, accountability and inclusivity. Specifically, Sustainable Development Goal number 16 is clear on this. The third aspiration of Africa agenda 2063, appreciates the significance of good governance, delivery of justice to all and the need to uphold the rule of law. In Kenya, vision 2030 places public service as an anchor for development.

Premised on this, the judiciary in Kenya is shouldered with a responsibility of ensuring all people irrespective of status have access to justice without any undue delay. Unfortunately, the

Kenyan judiciary suffered total decay in public confidence, its integrity levels sunk to a bottom low, consequently it became dysfunctional. This led to public outcry especially in 2007/2008 elections when one of the presidential aspirants categorically declined to file a petition in court, eventually Kenyans went into arms against each other and a coalition government was formed. Consequently, the Constitution of Kenya (2010) gave a reconstruction of the Kenyan society and a transformation agenda to all institutions in the country and the judiciary was not an exception. As a result, a Judiciary Transformation Framework (JTF), 2012-2016 which spelled out key strategies to lifting itself out of political manipulation, unprofessionalism, delinquent jurisprudence, high levels of corruption and financial diffidence into a cadre of institutional independence and autonomy to attract public confidence was formulated. The 2010 constitution required that the courts deliver justice to all Kenyans regardless of economic or social status and without delay or undue regard for bureaucratic practices. Some of the proposed deliverables include a complete overhaul of leadership and its structures, the adoption of Information Communication Technology (ICT) as an enabler of justice, infrastructural improvement and acquisition of adequate financial resources.

According to Davenport and Thomas (1992), transformation basically is a reengineering of core processes and procedures to achieve dramatic improvements in productivity, efficiency, cycle time and quality. In this study transformation will be proxied by business process reengineering. In business process reengineering, organizations rethink their existing processes, adopt new value systems, reduce organizational layers, eliminate unproductive activities and adopt use of ICT to improve on data diffusion and decision making (Oakland, 2002). The main aim of BPR is to boost measurable organizational performance both financially and otherwise, redefine organizational culture and value proposition to attract and retain the best personnel. Covert, (1997) asserts that, organizations must examine how strategy and reengineering complement each other by quantifying strategy in form of cost, timetables and milestones, by owning the strategy across the entire organization and linking it to the budgeting cycle.

LITERATURE REVIEW

Theoretical Orientation

Three theories guided this study, group dynamic theory, the open school system theory and the gestalt field psychologist theory.

Group Dynamic Theory

This theory relates to the attitudinal and behavioral aspects of a group. It looks at how groups form, how they are structured, their processes and how they function (Etcoff, 2005). This theory argues that, individual behavior is a relationship between the intensity and the valence of both positive and negative forces impacting on the individual. To bring change, organizations should focus upon influencing the group behavior through group norms, beliefs and value systems as opposed to the individual. This is because individual behavior can be shaped to conform to the group behavior (Marcus, 2013). Effort must be made to ensure goals of cohesive groups are well aligned to the goals of the organization. Otherwise poorly misaligned group goals may be detrimental to the entire organization.

Group dynamic theory recognizes that Strong leadership is critical within a group. That is, reforms can only succeed if there is strong leadership at the apex of the group. Group dynamics theory also recognizes how individual personalities affect team dynamics. Each person working within a group brings to that group his/her own individual personality and skills set.

Recognizing each person's style of work, motivation, and level of aptitude can play a key role in identifying how everyone will impact on the envisaged reforms and team work of the group

The Open School System Theory

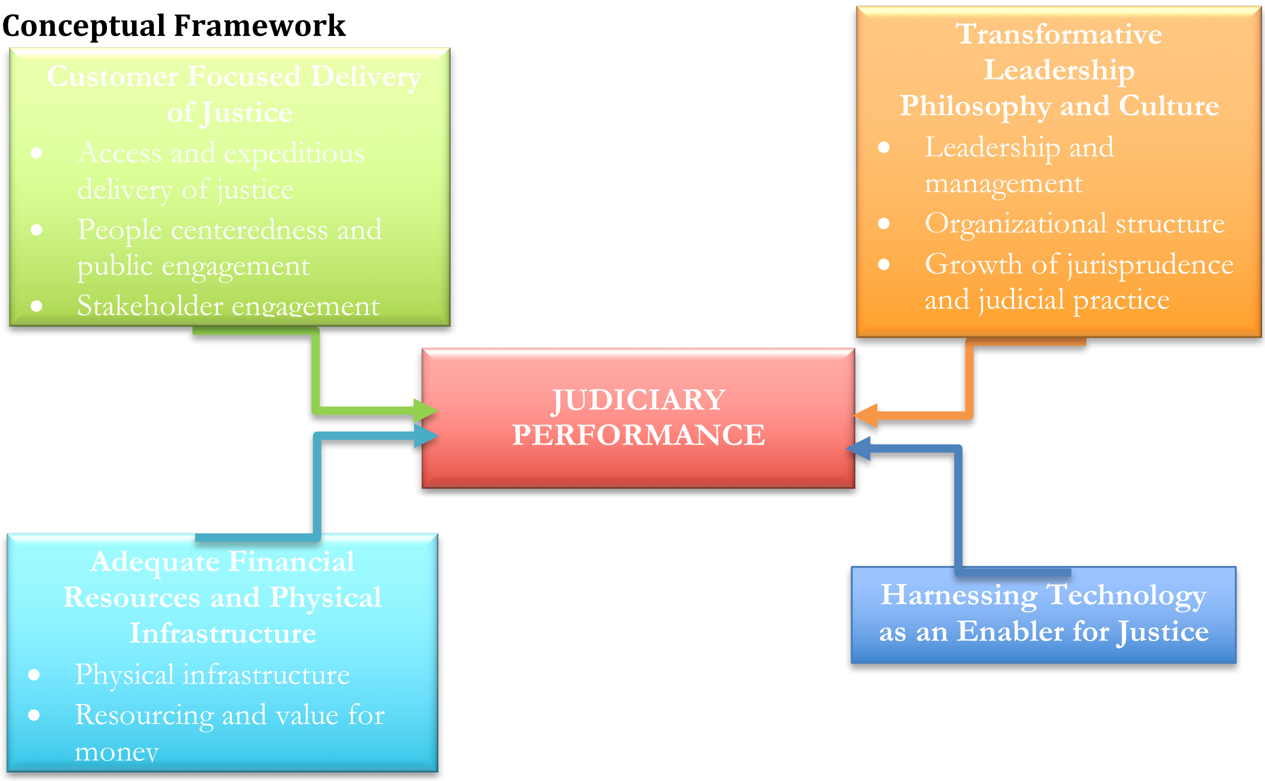
Organizations are largely composed of interconnected subsystems, such that a change in one system will affect other systems, eventually causing a change in the performance of the entire organization. Lawrence, Lorsch and Thompson (2011) argue that, organizations that operate in a stable and more predictable environment tend to be more productive and efficient when they operate in a traditional hierarchical structure where as those operating in a rapidly changing environment and technologies tend to more successful when they incorporate technology in the processes and procedures. The higher the level of environmental changes and uncertainty the more the subsystems specialization become necessary. Hence, need for superior technologies and coordination among diverse groups within the organization.

Open systems theory stipulates that the functions of a system must coincide with the environmental conditions. That is, the judicial Transformation framework benefits from the open school system theory since it considers the dynamic nature of the operations of court processes which keeps changing with time. JTF saw the Judiciary introduce Alternative Dispute Resolution mechanisms to help address the problem of backlog of cases in the system. It also saw the roll out of computerization of court records and processes.

The Gestalt Field Psychologist Theory

This theory states that, learning is a continuous process of gaining, changing insight, changing expectations, having a different outlook or changing a thought process. An individual's interaction with the environment is just but a partial explanation. The behavior of an individual is derived from his/her immediate environment and reason. This theory explains people's actions and responses, it helps to understand needs of individual members against their immediate environment and how that can affect their behavior. It forms a basis for performance improvement through motivation, incentives, rewards and organizational culture and value proposition.

Conceptual Framework



According to the constitution of Kenya (2010), judicial power is derived from the people. Therefore, the judiciary should adopt a system that ensures access to justice by all without undue delay and equality of all people before the law regardless of status. The public and stakeholders should be effectively engaged at all stages of justice administration as a means of complimenting and supporting its role.

Previously, the public approached the judiciary with fear and uncertainty hence a need to shift its culture and philosophy from that of conventional dominance and prestige to a progressive institution where equality and service is core. The leadership and management team of the judiciary should be visionary, competent, selfless, decentralized and capable of driving the institution’s transformation agenda. For it to command respect from government and the public and assert its authority, the judiciary should be able to upgrade the quality of jurisprudence from its courts. Also, some Judicial officers had long been able to get away with corruption, incompetence, and laziness; and reforms were likely to be met with resistance from those who had taken advantage of the weak system.

Financial resource is a core pillar in transformation. The judiciary needs to upgrade its physical infrastructure and the working environment to boost staff motivation. To establish its independence, adequate funds and accountability systems is imperative.

In the 21st century, Information and communication technology is key in establishing efficient and effective institutions. To this extent, the judiciary should adopt ICT as an enabler of justice to facilitate faster trials and enhance administrative functions.

Research hypotheses

From the above conceptual framework, the following hypotheses were generated and consequently tested.

$H1_a$: ICT has a significant influence on Operational performance of the judiciary in Kenya.

$H1_b$: Leadership has a significant influence on operational performance of the judiciary in Kenya.

$H1_c$: Focus on the customer has a significant influence on the operational performance of the judiciary in Kenya.

$H1_d$: Adequate financial resources have a significant influence on operational performance of the judiciary in Kenya.

$H1_e$: Business Process Reengineering has a significant influence on operational performance of the judiciary in Kenya.

Business Process Reengineering

To achieve a dramatic improvement in performance, organizations tend to holistically address end to end processes as opposed to departments alone (Hammer and Champy, 2004). BPR is not about marginal improvements but rather quantum leaps in performance, thus achieving a break through. Performance is measured by increased speed or greater accuracy and reduced costs. ICT enablement principle brings out the critical role of ICT systems in achieving organizational radical change in its operation. It facilitates seamless flow of information which increases efficiency in organizations and improves on coordination of interactions within the organization.

According to Al-Mashari and Zairi (2000), BPR encompasses changes in people behavior, culture, processes and technology. Change management component, which involves all human, social related issues and cultural adjustments, is a necessary component to insert newly designed processes and structures into a working practice and to effectively deal with resistance.

Peronja (2015) investigated on the effects of business process change on performance of large enterprises in Croatia and established a positive and significant relationship between business process change and performance of big companies in Croatia. The study was conducted on 150 companies with 250 employees and above. Factor analysis was adapted as a means of analysis. Conducting a study on business process reengineering and organizational performance, Altinkermer, Chaturvedi and Kondareddy (1998), concluded that companies that had reengineered successfully, were adopting prescriptions in the critical success factors literature except moving away from revenue maximization and cost cutting strategies. On establishing the relationship between business process reengineering and financial performance measures the study established a positive effect of reengineering on sale but did not find such effect on other financial measures. The study employed an exploratory longitudinal analysis on 70 companies over a period of 5 years, from 1992-96.

Reengineering focuses on altering business processes and procedures and seeks to comprehend the market, competitors better and positioning of the company within the larger industry. This is according to Eke and Adaku (2014), who studied business process reengineering in organizational performance in Nigerian banking sector.

Skrinjar et al, (2008), did his research on the impact of business process orientation on financial and non-financial performance and concluded that higher levels of business process reengineering leads to a better financial and non-financial performance. The study found a strong direct impact of BPR on non-financial performance measures. The study collected primary data by use of questionnaires and conducted exploratory factor analysis.

According to Mohammad and Elaheh (2014), who did a study on the effect of business, process reengineering factors on organizational agility established that business process reengineering factors have a statistically significant effect on organizational agility. The study received 104 questionnaires which they analyzed by use of path analysis.

Nzewi et al (2015), studied business process reengineering and performance of courier service organizations in Anambra state, Nigeria and revealed that all variables between business process reengineering and organizational performance were statistically significant except for flat structure. The study further showed positive associations between independent variables and organizational performance except for change management which exhibited a negative relationship. The study depended on primary data collected by use of structured questionnaires which were analyzed by use of multiple regression analysis.

According to Nadeem and Ahmed (2016), who performed a study on the impact of business process reengineering on the performance of banks in Pakistan, banks in Pakistan have adopted BPR as a means of redesigning their operations and the results have been significant. The adoption of ICT and change management has increased performance of the said banks. The study used primary data by use of structured questionnaire.

RESEARCH METHODOLOGY

The study targeted all judicial officers and staff and advocates in Nairobi and Kiambu counties. Most of the judicial work happen in these two regions and were considered a good representative for generalization purposes. Quota sampling approach was adopted and a total sample of 252 was selected which represented 78% of the population. However only 213

(84.5%) questionnaires were returned and they became the basis for this analysis.

DATA ANALYSIS AND DISCUSSION

Introduction

The study adopted regression analysis to establish the predictive power of business process reengineering on the performance of the judiciary in Kenya. Each of the 4 independent variables was regressed against performance followed by a composite model of all the independent variables. The study adopted the following multiple regression model;

$$Y = \boldsymbol{\beta}_0 + \boldsymbol{\beta}_i ICT + \boldsymbol{\beta}_{ii} LEAD + \boldsymbol{\beta}_{iii} FOCUS + \boldsymbol{\beta}_{iv} FIN + \varepsilon_0 \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (4.1)$$

Where:

Y = Performance of the judiciary

ICT = ICT Infrastructure

LEAD = Change in leadership

FOCUS = Customer focused delivery of services

FIN = Enhanced financial resources

ε_0 = error term associated with regression model.

$\boldsymbol{\beta}_0$ = Constant associated with regression model

$\boldsymbol{\beta}_i$, $\boldsymbol{\beta}_{ii}$, $\boldsymbol{\beta}_{iii}$, $\boldsymbol{\beta}_{iv}$ = Coefficient estimates of independent variables (ICT, LEAD, FOCUS and FIN)

Correlation of Variables

The study conducted a correlation analysis of key variables as shown in table 4.1 below and established that leadership and BPR had significant positive relationship (p- value = 0.01, r = 0.17) with performance of the judiciary at a 0.05 significance level. The means that when leadership increases by one unit, performance of the judiciary also increases. ICT also seems to be having a significant positive association (p- value = 0.009, r = 0.18) with the performance of the judiciary. This also means that a unit increase in ICT leads to a corresponding increase in the performance of the judiciary.

Table 4.1: Correlation of Key Variables

		ICT	LEAD	FOCUS	FIN	PERFOM
Information and Communication Technology	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	213				
Leadership and BPR	Pearson Correlation	.784**	1			
	Sig. (2-tailed)	.000				
	N	213	213			
Focus in the customer	Pearson Correlation	.354**	.329**	1		
	Sig. (2-tailed)	.000	.000			
	N	213	213	213		
Financial Resources	Pearson Correlation	.297**	-.061	.351**	1	
	Sig. (2-tailed)	.000	.378	.000		
	N	213	213	213	213	
Performance of the Judiciary	Pearson Correlation	.179**	.173*	.079	.347**	1
	Sig. (2-tailed)	.009	.011	.251	.000	
	N	213	213	213	213	213

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Hypothesis Testing

The study sought to test hypotheses assuming a linear relationship between the explanatory variables (BPR) and the dependent variable. The study adopted an ordinary least square method to draw a regression line of best fit.

Relationship between ICT and Performance of the Judiciary

$H1_a$: ICT Has a Significant Influence on the Performance of the Judiciary

The study conducted a linear regression analysis which produced an ANOVA output presented in table 4.2. The outcome F-value (1, 211) = 6.99 with a significance value = 0.009. This means (p – value < 0.05) at a 0.05 significance level.

Table 4.2: ANOVA Output of ICT and Performance of the Judiciary

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.840	1	.840	6.994	.009[b]
	Residual	25.354	211	.120		
	Total	26.195	212			

a. Dependent Variable: performance of the judiciary
b. Predictors: (Constant), information and communication technology

The model summary of ICT and performance of the judiciary shown in table 4.3 indicate a Durbin-Watson statistic of 1.51 which indicates that residuals in the data set had no multicollinearity. R^2 = 0.03 which indicates that model 1 had a strong fit.

Table 4.3: Summary Model of ICT and performance of the judiciary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.179[a]	.032	.027	.34664	.032	6.994	1	211	.009	1.514

a. Predictors: (Constant), information and communication technology
b. Dependent Variable: performance of the judiciary

Coefficients of ICT under model 1 in Table 4.4 confirms that ICT had significant coefficients with an associated p-value = 0.009. The study therefore failed to reject $H1_a$ at 95% confidence level, meaning there was a significant relationship between ICT and performance of the judiciary in Kenya.

Table 4.4 Coefficients of ICT and Performance of the judiciary

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower B	Upper B
1	(Constant)	3.173	.129		24.687	<.001	2.920	3.427
	information and communication technology	.096	.036	.179	2.645	.009	.024	.167

a. Dependent Variable: performance of the judiciary

Relationship Between Leadership and the Performance of the Judiciary

$H1_b$: Leadership has a Significant Influence on the Performance of the Judiciary in Kenya

The ANOVA output presented in Table 4.5 shows an F-value (1, 211) = 6.51 and its significance value = 0.011. Model 1 was significant (p-value <0.05) at 0.05 levels in explaining the linear relationship between leadership and performance of the judiciary in Kenya.

Table 4.5 ANOVA of Leadership and OP

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.783	1	.783	6.506	.011[b]
	Residual	25.411	211	.120		
	Total	26.195	212			

a. Dependent Variable: performance of the judiciary
b. Predictors: (Constant), leadership and BPR

An examination of the model summary of leadership and performance in Table 4.6 shows an *F*-value = 0.01 under model 1. This means that leadership under model one had a significant influence over performance. The $R^2 = 0.03$, implied model 1 provided a weak fit.

Table 4.6 Model Summary of Leadership and Performance of the Judiciary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.173[a]	.030	.025	.34703	.030	6.506	1	211	.011	1.618

a. Predictors: (Constant), leadership and BPR
b. Dependent Variable: performance of the judiciary

The coefficients of leadership under model 1 in Table 4.7 shows that the associated p-value = 0.01, hence significant. The study therefore failed to reject $H1_b$ at 95% confidence level, meaning there was a significant relationship between leadership and performance on a simple regression relationship.

Table 4.7 Coefficients of Leadership and Performance of the Judiciary

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	3.238	.108		29.864	<.001	3.024	3.451
	leadership and BPR	.072	.028	.173	2.551	.011	.016	.128

a. Dependent Variable: performance of the judiciary

Relationship between Focus in Customer and Operational Performance

$H1_c$: Focus in the customer has a significant influence on operational performance of the judiciary in Kenya.

The ANOVA output presented in Table 4.8 shows an F-value (1, 211) = 1.32 and its significance value = 0.25. Model 1 was not significant (p-value > 0.05) at 0.05 levels in explaining the relationship between focus in customer and performance of the judiciary.

Table 4.8 ANOVA of Focus on Customer and Performance of the Judiciary

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.163	1	.163	1.324	.251[b]
	Residual	26.031	211	.123		
	Total	26.195	212			

a. Dependent Variable: performance of the judiciary
b. Predictors: (Constant), focus in the customer

The model summary of focus in customer and performance in Table 4.9 shows an *F*-value = 1.32. This means that focus on customer under model 1 had no significant influence on operational performance. The adjusted $R^2 = 0.06$, shows model one provided a weak fit.

Table 4.9 Summary Model of Focus on Customer and Performance of the Judiciary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.079[a]	.006	.002	.35124	.006	1.324	1	211	.251	1.661

a. Predictors: (Constant), focus in the customer
b. Dependent Variable: performance of the judiciary

The coefficients of focus in customer under model 1 in Table 4.10 shows that the associated p-value = 0.25, hence non-significant. The study failed to accept $H1_c$ at 95% confidence level, indicating there was no significant relationship between focus in customer and performance on a direct regression relationship.

Table 4.10 Coefficients of Focus on Customer and Performance of the Judiciary

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	3.136	.324		9.692	<.001	2.498	3.774
	focus in the customer	.095	.082	.079	1.151	.251	-.068	.258

a. Dependent Variable: performance of the judiciary

Relationship Between Adequacy of Financial Resources and Performance

$H1_d$: Financial resources have a significant influence on operational performance of the judiciary in Kenya.

ANOVA table presented in Table 4.11 below, observed that F-value (1,211) = 28.98 and it had a significance value P = <.01. Model 1 was therefore significant (p- value < 0.05) at 0.05 levels explaining the linear relationship between financial resources and performance of the judiciary.

Table 4.11 ANOVA of Financial Resources and Performance of the Judiciary

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.163	1	3.163	28.977	<.001[b]
	Residual	23.032	211	.109		
	Total	26.195	212			

a. Dependent Variable: performance of the judiciary
b. Predictors: (Constant), financial resources

The model summary in table 4.12 indicates an F – value = 28.98. Meaning that, financial resources under model 1 had a significant influence on performance in the judiciary. The adjusted $R^2 = 0.11$, indicating that model 1 gave a strong fit.

Table 4.12 Model Summary of Financial Resources and the Performance of the Judiciary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.347[a]	.121	.117	.33039	.121	28.977	1	211	<.001	1.570

a. Predictors: (Constant), financial resources
b. Dependent Variable: performance of the judiciary

Table 4.13 below brings out the coefficients of financial resources under model 1 and it shows an associated *p – value* = <.01, hence significant. This study therefore failed to reject $H1_d$ at a 95% confidence level, and hence concluded that financial resources have a significant influence on the performance on a direct regression relationship.

Table 4.13 Coefficients of Financial Resources and the Performance of the Judiciary

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	2.599	.170		15.270	<.001	2.264	2.935
	financial resources	.333	.062	.347	5.383	<.001	.211	.455

a. Dependent Variable: performance of the judiciary

Relationship Between BPR and Performance of the Judiciary

$H1_e$: BPR Has a Significant Effect on Performance of the Judiciary in Kenya.

Hierarchical multiple regression was preferred in the assessment of the ability BPR to predict the levels of performance. The ANOVA table 4.14 was generated which shows that model 1 had an F- value (1, 211) = 28.98 and its sig. value = <.01. Model 2, had F (2, 210) = 19.78 and its sig. = <.01. Model 3, had F (3, 209) = 15.56 and its sig. = <.01. Model 4, had an F (4, 208) = 13.18, and it had a significance value = <.01. This means that model 1, 2, 3 and 4 were all significant (p-values< 0.05) at 0.05 levels in explaining the relationship between BPR and performance of the judiciary.

Table 4.14 ANOVA of BPR and the Performance of the Judiciary

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	3.163	1	3.163	28.977	<.001[b]
1	Residual	23.032	211	.109		
	Total	26.195	212			
	Regression	4.153	2	2.076	19.784	<.001[c]
2	Residual	22.042	210	.105		
	Total	26.195	212			
	Regression	4.784	3	1.595	15.564	<.001[d]
3	Residual	21.411	209	.102		
	Total	26.195	212			
	Regression	5.297	4	1.324	13.180	<.001[e]
4	Residual	20.898	208	.100		
	Total	26.195	212			

a. Dependent Variable: performance of the judiciary
b. Predictors: (Constant), financial resources
c. Predictors: (Constant), financial resources, leadership and BPR
d. Predictors: (Constant), financial resources, leadership and BPR, information and communication technology
e. Predictors: (Constant), financial resources, leadership and BPR, information and communication technology, focus in the customer

The model summary in Table 4.15 shows Durbin-Watson statistic = 1.66, which means the data set used in this analysis showed no problem of multicollinearity. Models 1and model 2 were both significant with *F*-values = <.01and 0.02 respectively. Model 3 and model 4 had an *F*-value = 0.01 and 0.025 respectively. This means model 3 and model 4 were not significant in explaining the relationship between BPR and performance in the judiciary. The R square column shows model 1 had R^2= 0.12, model 2 had R^2= 0.159, model 3 had R^2= 0.18 and model 4 had R^2 = 0.20, meaning that these models provided the best fit.

Table 4.15 Model summary of BPR and the Performance of the judiciary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.347[a]	.121	.117	.33039	.121	28.977	1	211	.000	
2	.398[b]	.159	.151	.32398	.038	9.433	1	210	.002	
3	.427[c]	.183	.171	.32007	.024	6.155	1	209	.014	
4	.450[d]	.202	.187	.31697	.020	5.108	1	208	.025	1.662

a. Predictors: (Constant), financial resources
b. Predictors: (Constant), financial resources, leadership and BPR
c. Predictors: (Constant), financial resources, leadership and BPR, information and communication technology
d. Predictors: (Constant), financial resources, leadership and BPR, information and communication technology, focus in the customer
e. Dependent Variable: performance of the judiciary

An examination of the coefficient of BPR and performance in Table 4.16 shows that models 1,2,3 and 4 were significant with both having p-values < 0.05. This meant all the variables, i.e. ICT, leadership, focus on the customer and financial resources had a significant influence on Operational performance. The study therefore, failed to reject $H1_e$ at 95% Confidence Interval and deduced that BPR had a significant relationship with the performance of the judiciary.

Table 4.16 Coefficients of BPR and Performance of the Judiciary

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	2.599	.170		15.270	<.001	2.264	2.935
	financial resources	.333	.062	.347	5.383	<.001	.211	.455
2	(Constant)	2.265	.199		11.359	<.001	1.872	2.658
	financial resources	.344	.061	.359	5.666	<.001	.224	.464
	leadership and BPR	.082	.027	.195	3.071	.002	.029	.134
3	(Constant)	2.176	.200		10.875	<.001	1.782	2.571
	financial resources	.444	.072	.463	6.147	<.001	.301	.586
	leadership and BPR	.183	.049	.437	3.768	<.001	.087	.279
	information and communication technology	-.161	.065	-.300	-2.481	.014	-.288	-.033
4	(Constant)	2.685	.300		8.956	<.001	2.094	3.276
	financial resources	.508	.077	.530	6.603	<.001	.356	.660
	leadership and BPR	.213	.050	.509	4.274	<.001	.115	.312
	information and communication technology	-.171	.064	-.320	-2.663	.008	-.298	-.044
	focus in the customer	-.194	.086	-.162	-2.260	.025	-.364	-.025

a. Dependent Variable: performance of the judiciary

Evaluating the Model defined by BPR and Performance of the Judiciary

The coefficients in Table 4.16 show a significant relationship between BPR and performance. Given the significant coefficients under model 4, the following fitted model was derived:

$$P = 2.685 + 0.508FIN + 0.213LEAD - 0.171\ ICT - 0.194FOCUS \ldots\ldots\ldots\ldots\ldots\ldots (4.2)$$

Sig.= <.001 <.001 0.008 0.025

R^2 = 0.202

Where:
P = Performance
FIN = Financial Resources
LEAD = Leadership
ICT = Information and Communication Technology
FOCUS = Focus on the Customer
2.685 = Constant associated with the regression model

The results in equation (4.2) show that R^2 = 0.202. This means that the four independent variables financial resources, leadership, ICT and focus on the customer explained only 20.2% of the variations in performance of the judiciary. The coefficient of determination of 0.20 shows the model provides a weak fit. The independent variable with the highest coefficient was Financial resources = 0. 508. This meant that a unit change in financial resources would positively influence performance 50.8% of the times. The coefficient of focus on customer was = -0.194. This meant that a unit increase in focus on the customer had the potential of negatively influencing performance 19.4% of the times.

FINDINGS

The following is a short description of the findings from this study based on the objectives and hypothesis under study.

Effects of ICT Investments on the Performance of the Judiciary
Looking at the first objective this study which was to determine the relationship between ICT investments and the performance of the judiciary in Kenya, this study found out that an investment in Information and Communication technology in the judiciary had a significant influence on the performance of the judiciary. An assessment of the same variable in the presence of other subcomponents of BPR also gave an indication that ICT had a significant relationship with the operational performance of the judiciary.

A similar finding was demonstrated by Bhattacharjee, (2012), where computerization and information technology was found to play a key role in the improvement of the quality and delivery of justice. Zucker (2002) observed that organizational communication and the degree to which employees are informed, is closely linked with employee performance. This study found that the respondents agreed that improvement in communication had contributed to Judiciary's performance.

Effect of Change in Leadership on the Performance of Judiciary
The second objective was to find out the relationship between the change in leadership of the judiciary and its performance. In this regard, the study established that revamped leadership within the judiciary starting with the change of the Chief Justice, the introduction of the Deputy Chief Justice, the restructuring of the office of the Chief Registrar Judiciary, introduction of directorates and introduction of regional offices had a significant influence on the performance of the judiciary. When this variable was examined in the presence of other sub component variables describing BPR, this study also came up with a finding that the change in leadership had a significant relationship.

This finding corresponds with the findings of Grover et al., (1995) and Guimareas and Bond (1996) that management support and commitment are critical in the improvement in organizational performance. Empowering leaders use encouraging behaviours that build competence and confidence in their organizations. This is the kind of leadership support that the respondents agreed has been provided by the new leadership in the Judiciary.

Effects of Customers Focused Delivery of Services on the Performance of Judiciary
On the third objective that was to establish the relationship between customers focused delivery of services within the judiciary and its performance, this study found out that, customer focused delivery of services within the judiciary had no significant influence on the performance of the judiciary. But when this same variable was analysed in the presence of the composite model of all other components explaining BPR in this study, it was found out that it had a significant relationship with operational performance of the judiciary. That means that there was a significant improvement in the level of public confidence on the institution. Similar findings were recorded by Pearce & Robinson (2010), in that improvement in the organizational performance was within the organization's internal environment. Balogun (2004) concluded that majority of organizational changes take the form of structural changes.

Relationship Between the Enhancement of Financial Resources Within the Judiciary and Its Performance.
The last objective was to determine the relationship between the enhancement of financial resources within the judiciary and its operational performance. To this extent the study determined that financial resources had a significant influence on the operational performance of the judiciary. At the same time when examining the variable enhancement of financial resources in the presence of the variables those help to define BPR in this study. We found out the financial resources had a significant relationship with performance. This agrees with the

observation of Ahadi (2004), who observed that that the radical changes required for successful implementation of BPR calls for significant financial investment.

Relationship Between BPR and the Performance of the Judiciary
On assessment of the last hypothesis that addresses the main objective of this study, it has been established that business process reengineering as a proxy of judicial performance has a significant influence upon the performance of the judiciary in Kenya. these results coincide with that of Nadeem and Ahmed (2016), conducting a study on the banking industry of Pakistan and business process reengineering and established a Signiant relationship between the business process reengineering and the performance of the banks in Pakistan.

CONCLUSIONS

From the above findings, this study established that, business process reengineering as a proxy of judicial transformation in its entirety had a significant influence on operational performance of the judiciary. Massive investment in ICT tools and equipment had a significant influence on the operational performance of the judiciary. This means that the massive investment of ICT tools and equipment, the training of the judicial officers and staff within the judiciary on ICT issues, the enhanced use of ICT materials did not go to waste. Revamping the top leadership of the judiciary also had a significant influence upon the performance of the judiciary. The efforts that the new regime in the judiciary put in cannot be over emphasised, the staff seems to be rejuvenated and well informed about their specific roles and responsibilities. This has brought about a new wave of servant leadership within the judiciary.

Customer focused delivery of services within the judiciary seemed to have no significant influence on the operational performance of the judiciary but on a composite model it was significant. This means that focussing the delivery of services to the customer adds no value but when it is made a goal of the organization and pursued together with other goals it makes meaning and adds value to the organization. This led to the increase in the public confidence to the judiciary and a change in perception. Finally, enhancing the financial resources to the judiciary also had a significant influence on the operational performance of the judiciary. Financial resources are the bed rock of any business process reengineering and when adequately provided within the expected timelines and judiciously expended, pillars of restructuring are well implemented. To this the judiciary is not alone.

RECOMMENDATIONS

Based on the findings, this study recommends: organizations that are carrying out Business process reengineering should take time to invest in ICT tool and equipment, and train their staff on how to exploit ICT resources to bring down the cost of operations, enhance efficiency, increase the speed at which operations are carried out and increase the quality of goods and services. Secondly, every successful organization depends on the direction of the top leadership to be steered to higher grounds. The change of the Chief Justice, the introduction of the Deputy Chief Justice, the restructuring of the office of the Chief Registrar of judiciary, and the introduction of directorates worked in sync with the transformation agenda of the judiciary. Worth noting is the change in organizational culture brought about by the new leadership which opened the judiciary and instilled new values like; team work, humility, professionalism, integrity and customer focused delivery of justice. In as much as the institution is not yet there, strides made are appreciated. Therefore, Organizations should take time to recruit top leadership with a vision. An adage goes, *"Customer is king"*, which simply means that organizations should take time to provide goods and services aimed at satisfying the needs of customers always. To this end they are expected to carry out a customer needs analysis and find out means and ways of meeting them. Without the customer, the organization ceases to exist. In as much financial resources are necessary when carrying out business process reengineering, organizations should put in place internal control measures to curb corruption, misallocation and misappropriation of funds. When funds are directed to the right cause, value is attained.

AREAS FOR FURTHER RESEARCH

There are many factors that define business process reengineering like, employee involvement on the BPR process, change in methods and tools, and enhancement of communication. Future studies should focus on these variables.

References

Ahadi, H. (2004), "An Examination of the Role of Organizational Enablers in Business Process Reengineering and the Impact of Information Technology" *Information Resources Journal* Vol. 17(4)1-19

Al-Mashari, M. and Zairi, M. (2000), Revisiting BPR: a holistic review of practice and development, *Business Process Management Journal*, Vol. 6 (1) 10-42.

Altinkermer K, Chaturvedi A, and Kondareddy S, (1998), Business Process Reengineering and Organizational Performance: An Exploration of Issues, *International Journal of Information Management,* vol.18 (6)381-392

Balogun, J. (2004), "From Blaming the Middle to Harnessing its Potential: Creating Change Intermediaries", *British Journal of Management,* Vol 14

Bhattacharjee, S. (2012), "Role of Information Technology in Quality of Judgment and Delivery" *Journal of Science and Information Technology Management (ISSN: 2251-1563)*

Covert M. (1997), *Successfully Performing Business Process Reengineering, Visible Systems Corporation, 201* Spring Street Lexington MA 02421 USA

Davenport, Thomas H. (1992) Process Innovation: Reengineering Work Through Information Technology. *Harvard Business School Press*,

Etcoff, N., (2005), Employee Commitment and Productivity at The Workplace: Harvard and Massachusetts General Hospital Researchers. *Journal of American Psychology, Vol 39 No.2*

Eke G.J and Adaku N.A, (2014), Business Process Reengineering in Organizational Performance In Nigerian Banking Sector, *Academic Journal of Inter-Disciplinary Studies* Vol. 3 no. 5 pp. 113-124

Government of Kenya (2010) *The Constitution of Kenya*. Nairobi Government press

Judiciary of Kenya (2012) *Judiciary transformation framework 2012-2016*

Grover, V., Jeong, S., Kettinger, W. and Teng, J. (1995), The implementation of business process reengineering, *Journal of Management Information Systems*, Vol. 12 (1)109-44

Guimaraes T, and Bond W, (1996). Empirically assessing the impact of BPR on manufacturing firm, *International Journal of Operations & Production Management,* Vol. 16 (8) 5-28,

Hammer M. and Champy, J. (2004), "Reengineering the Corporation: *A Manifesto for Business Revolution*", *Harper Business, New York 1993*; revised updated edn, HarperCollins,

Johnson G, Scholes K and Whittington, (2008), *Exploring corporate strategy, Eight edition,* Pearson Education Limited, Edinburgh gate, England

Lawrence, P., Lorsch, J. and Thompson, J.D. (2011) *Organization and environment: managing differentiation and integration,* 12th edition, Boston, M.A: Harvard University

Marcus, D.K., (2013), Group Dynamics: Theory, Research and Practice; *Examining the effects of group influences, 39-42*

Mohammad M.M and Elaheh M, (2014), The Effect of Business Process Reengineering Factors on Organizational Agility Using Path Analysis: Case Study of Ports & Maritime Organization in Iran, *Asian Economic and Financial Review*, 2014, 4(12)

Nadeem M and Ahmed R (2016), Impact of Business Process Reengineering on the Performance of Banks in Pakistan, *Business and Economics Journal*, Vol. 7, iss 1. Pp. 1-3

Nzewi H.N, Nzewi U.C and Moneme P (2015), Business Process Reengineering and Performance of Courier

Service Organizations in Anambra State, Nigeria, *American Journal of Social and Management Sciences,* 6(1) pp. 24-33

Oaklands J.S, (2002), Total Organization Excellence – *Achieving World Class Performance. Butterwort*h-Heinemann Oxford, England

Pearce, A. and Robinson J.B (2010), "*Strategic Management Formulation Implementation and Control* (12th Edition). New York: NY McGraw Hill Irwin

Peronja I, (2015), Performance Effects of The Business Process Change in Large Enterprises: The Case of Croatia, *Management,* Vol. 20 (1)1-22

Skrinjar R, Bosilj-Vuksic V and Indihar-Stumberger M, (2008), The Impact of Business Process Orientation on Financial and Non-Financial Performance, *International Journal of Operation and Production Management*, Vol 29. Issu 3 pp. 214-240

Zucker, R. (2002), More Than a Name Change – Internal Branding at Pearl *Strategic Communication Management.* Vol 6, 24-27

Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.4046.
Iyoha, F. A. (2017). An Empirical Investigation Of The Exchange Rate Pass-Through To Domestic Prices In Nigeria. *Archives of Business Research, 5(12),* 365-377.

SOCIETY FOR SCIENCE AND EDUCATION

An Empirical Investigation of The Exchange Rate Pass-Through To Domestic Prices in Nigeria "Exchange Rate Pass-Through To Domestic Prices"

Faith Arekpetan Iyoha
Department of Economics and Statistics, University of Benin

ABSTRACT

The sensitivity of prices to fluctuations in the nominal exchange rate of the Nigeria's currency has become a prominent subject for business and policy makers. The persistent depreciation in exchange rate and high domestic prices currently above the policy target is the basis of this study. The study adopted secondary data of monthly frequency covering January-2000 to June-2017, to test the exchange rate pass-through to domestic prices in Nigeria while controlling for effects of other variables such as monetary aggregates and fuel prices. Impulse response functions and variance decomposition under the purview of Vector Auto-regressive (VAR) modelling approach are employed for the analyses. It finds that the exchange rate pass-through to domestic prices is complete six months after exchange rate shock. However money supply and fuel price effect are stronger than the exchange rate effect although the fuel price impact decay over time. Given the stronger impact of money supply on prices, the study concludes that inflation is a monetary phenomenon thereby giving credence to the current policy anchor on money supply as a policy tool to control inflation. It therefore recommends that policy makers should continue to pursue and maintain exchange rate stance that eases the depreciation pressure.

Keywords: Inflation, Exchange rate, Vector Auto-Regression
JEL Codes: C32, E31, F31,

INTRODUCTION

The transmission of exchange rate movements to changes in the domestic price level has become an increasingly important issue in developing and emerging economies as the adoption of inflation targeting, floating exchange rates, and the elimination of capital controls has become more fashionable in recent times. Since no economy operates in isolation, the sensitivity of domestic prices to fluctuations in the nominal exchange rate of the country's currency has become prominent in international economics and monetary policy especially in developing and emerging markets.

The adoption of inflation targeting by many countries in the past two decades, with its reliance on inflation forecasting, has probably enhanced interest in Exchange Rate Pass-Through (ERPT). Many have adopted floating exchange rates and eliminated capital controls thereby exposing countries to speculative pressures, contagion, and capital flows reversals. Having confirmed a strong correlation between exchange rate pass-through and inflationary environment in emerging and developing economies (Hakura 2001), monetary policymakers in small, open economies may face price stability challenges in countries with greater import dependence and highly volatile exchange rate susceptible to shock (McCarthy, 2006).

Thus, appropriate monetary policy response to currency movement is critical in the move towards achieving price stability – one of the major objective of monetary policy. Apart from the fact that understanding of pass-through magnitude contributes to the design of country's trade policy, estimates of the pass-through can help guide exchange rate policy and provide insights into the degree of exchange rate flexibility that is appropriate considering the characteristics of the economy (Frankel, David, and Shang-Jin 2005; Ho and McCauley, 2003).

Furthermore, low exchange rate pass-through may explain the persistence of trade deficit despite secular declines in the domestic currency. It therefore follows that economies may be less concerned about the potential inflationary consequences of exchange rate fluctuations. While the extent of exchange rate pass-through has important macroeconomic implications, it is predominantly a microeconomic phenomenon and significantly depends on the types of goods being traded.

The evaluation of pass-through in Nigeria is necessitated by the recent persistent weakness of the naira, with the currency exchanging currently at all-time lows of ₦365/$ and ₦305/$ in Parallel and NIFEX markets respectively as at August-2017. Essentially, we are interested in the impact, and strength of the ERPT as well as whether the pass through from exchange rate to price is complete. The paper also seeks to determine whether the degree of ERPT is generally declining or intensifying over time.

The objective of the study is to estimate the ERPT to the price level specifically consumer price index in Nigeria in the presence of conditioning variables. In doing this, we hypothesize non-zero, incomplete pass-through from exchange rate shocks to inflation as in most countries. The outcome of this study will serve as useful guide to policy maker in determining appropriate anchor for containing inflationary pressure. A basic contribution of this study to existing literature is the inclusion of petrol motor spirit (generally known as fuel) price as a control variable in the modelgiven therising cost of doing business engendered by self-generated power supply and transportation cost.

Following the introduction, the rest of the paper is organised as follows: Section two presents a brief stylized facts of exchange rate in Nigeria. Section three presents the review of the literature. Section four discusses the methodology and data. Section five presents an analysis of the empirical result of the model while section six concludes and proffer recommendation for policy.

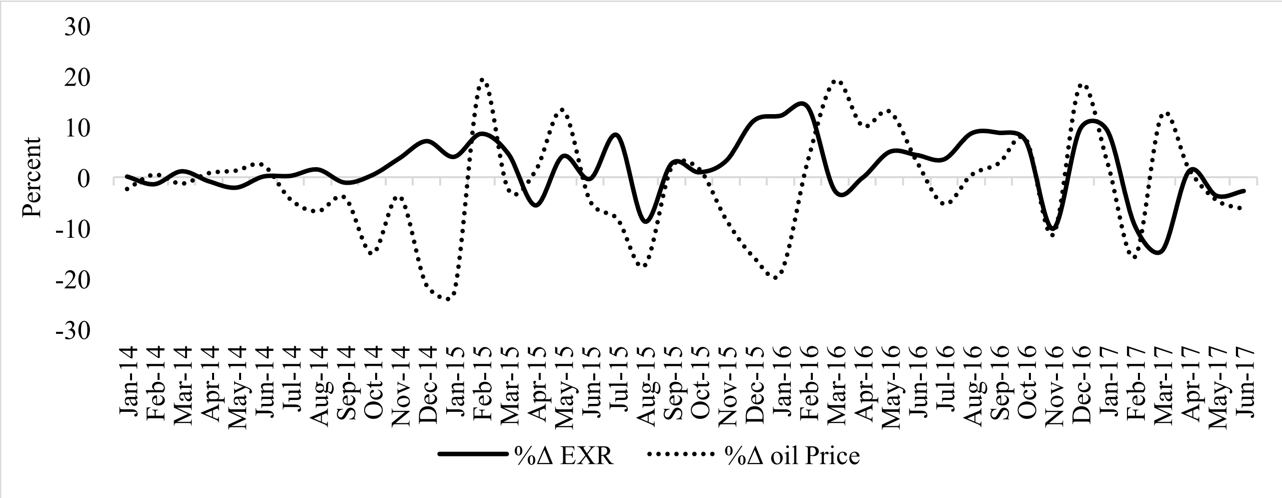
LITERATURE REVIEW

Stylized Facts: Exchange rate in Nigeria

The Nigerian currency has been weak owing to the decline and persistently low oil price in the international market that have come to stay. The weakness of the Naira stems from the fact that the country is a near mono-product economy which depends on oil export as a major source of foreign exchange supply and budgetary spending. As shown in Fig 1, the relationship between change in exchange rate and change in oil price (Nigeria bonny Light) is quite strong but negative with exchange rate tracking oil price with a lag. This means that although it takes some time for exchange rate to respond to change in oil price but every decline in oil price will lead to a depreciation in exchange rate (rise in the unit of Naira to Dollar) whilst a rise in oil price will lead to an appreciation in exchange rate (decline in the unit of Naira to Dollar).

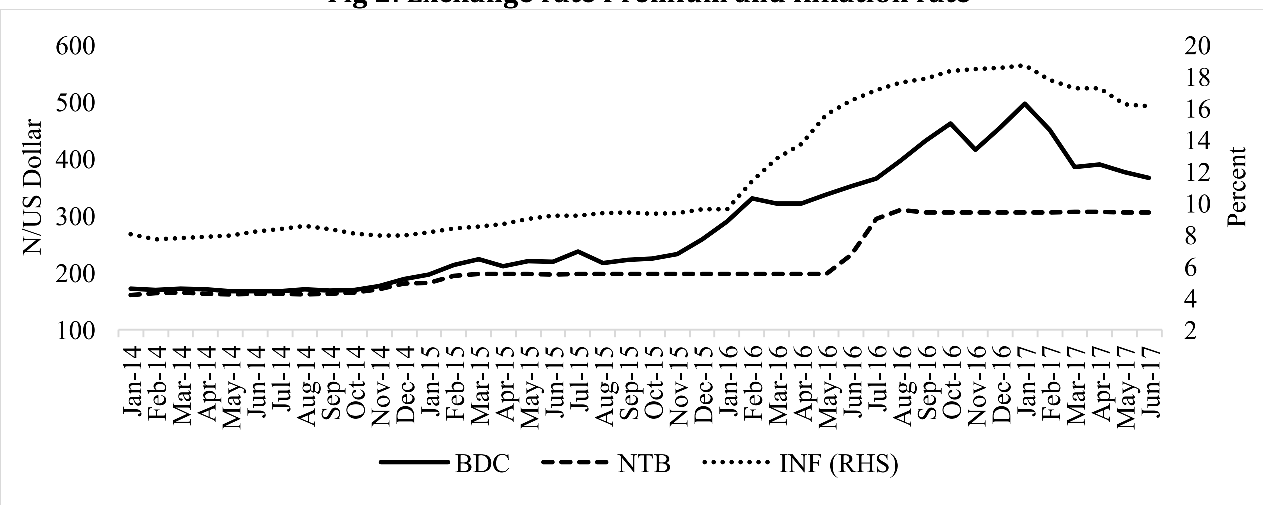
This decline in Naira lead to proliferation of exchange rate with over five different rate amongst which Interbank rate (NTB), Official rate and Bureau de-change (BDC) were the familiar. A major consequence of the speculation and proliferation of exchange rate was a wide premium (₦60 as at August-2017) between the interbank and BDC rate (see Fig 2) thereby encouraging arbitrage activities.

Fig 1: Exchange rate and Oil Price Trend



The weakness of the exchange rate has become a source of concern to both policy maker, consumers and business as the rate of price change (inflation) stands outside the current maximum policy target of 11 percent (16.1 percent – June 2017) as the persistent pressure on the Naira remains transmitted to prices. In a bid to tackle the weakness of the Naira policy makers have enacted several policies ranging from the ban of over forty items to partial deregulation and adjustment of the exchange rate window to ₦305/$ from ₦197/$. In spite of these policies which led to a lower premium compared to the all-time high premium of ₦191 as at Feb-2017, inflation remains persistent and above the target for 2017 amidst a five months consecutive decline. Other major source of pressure on prices are rising cost of doing business engendered by self-generated power/energy and transportation cost. This links the price of Petrol Motor Spirit (PMS) also known as fuel to changes in domestic price.

Fig 2: Exchange rate Premium and Inflation rate



Theoretical and Empirical Review

Considerable literature exists on exchange rate pass-through as an accurate understanding of the adjustment of domestic prices following changes in the exchange rate allows policy makers to formulate appropriate macroeconomic policies. The pricing-to-market as proposed by Krugman (1986) portends the micro theoretical foundation for the possibility of a direct but less than a one-for-one relationship between exchange rate and domestic inflation. Pricing-to-market may be defined as percentage change in prices in the exporter's currency due to a one percent change in the exchange rate, but in this regards importers may absorb shock in exchange rate by adjusting profit margin. However, if import prices change by the same proportion as the change in the exchange rate, the result is full or complete pass-through and hence no pricing-to-market.

Also, the theoretical relationship derived from the law of one price (Purchasing Power Parity {PPP}) posits that exchange rate depreciation translates directly into import thereby suggesting a one-to-one relationship between exchange rate changes and changes in the consumer price. However, most empirical studies have shown that movements in the exchange rate and prices are not only directly related.

Lafleche (1996) finds existence of direct exchange rate pass-through which works through import price of finished or intermediate goods; and indirect channels of exchange rate pass-through engendered by high demand for substitute goods or more competitive export. Similarly, Dubravko and Marc (2008) conclude that the most direct way of transmitting nominal exchange rate changes into domestic inflation is by altering the domestic currency prices of imported goods. In the words of Taylor (2000), responsiveness of domestic prices to exchange rate fluctuation depends positively on inflation.

However, ERPT to domestic prices maybe high or low (Burstein, Eichenbaum and Rebelo {2002}, Bhundia {2002}) depending on the definition of shock (Bhundia {2002}) and the inflation environment (Yelena, 2008). Specifically, Bhundia (2002) concludes that average exchange rate pass-through in South Africa was low, it is however higher for nominal than for real shock. The effect of exchange rate pass-through may be long lasting (Goldfajn and Werlang {2000}, Leigh and Rossi {2002}). Yelena (2008), using a Phillips curve framework to analyze exchange rate pass-through to aggregate prices and inflation with a focus on real exchange rate finds that reduction in pass-through can be attributed in part to the low-inflation environment. More explicitly, Charles, Simon and Daniel (2008), opine that the rate of pass through amongst others depends on the quality of the imported good, price elasticity of demand, openness, and the monetary policy of the central bank and Stock market volatility.

In the purview of multivariate co-integration Kim (1998), concludes that exchange rate contribute significantly to the producer prices in the United States. Using time series data for six industrialized OECD countries and a recursive VAR, McCarthy (1999) found that exchange rate has a modest effect on consumer prices and pass-through is correlated with the degree of economy openness. Similarly, following the conclusion of correlation, Goldfajn and Werlang (2000) also found pass-through coefficient to increase immediately after a devaluation and reaches a peak after 12 months. Following the floating of the Real in Brazil, Rabanal and Schwartz (2000) found that the pass-through to domestic price in Brazil lasted 20 months.

In Nigeria, Aliyu, Yakubu, Sanni and Duke (2008) employing the vector error correction methodology for time series data covering 1986-Q1 to 2007-Q4 finds a significant and persistent exchange rate pass-through to consumer prices but pass through to import price was slightly higher. Adetiloye (2010) adopts the correlation and Granger causality method and finds a high positive correlation between the ratio of imports and price index and a unidirectional causality running from import ratio to consumer prices. Ogundipe and Egbetokun (2013), using the variance decomposition analysis derived from a structural estimate found a large pass-through and conclude that exchange rate has been more important in explaining Nigeria's rising inflation phenomenon than the actual money supply. Using similar methodology as Ogundipe and Egbetokun (2013), Zubair, Okorie and Sanusi (2013) find that pass-through is incomplete, low and fairly slow.

Previous studies on exchange rate pass-through in Nigeria were carried out using quarterly data. The current study deviates from period studies by using monthly data on relevant variables to examine exchange rate pass-through to domestic prices in Nigeria. This is because higher frequency data will yield more reliable results than data with lower frequency of observation.

MODEL AND METHODOLOGY

In the estimation of pass-through, a review of the literature suggests that both the simple and the systems of equations method has been employed however, the most dominant method was the Vector Auto-regression (VAR). The primary research question that we set out to answer is whether the exchange rate pass-through to domestic price is complete as well as the speed of adjustment. To provide answers to the research questions, we will use secondary data sourced directly from the Central Bank of Nigeria Statistical Bulletin (CBN) and the National Bureau of Statistics (NBS). The variables of interest are time series monthly data of Consumer's price index (CPI), Exchange rate, Money supply and price of Fuel (PMS) over the period Jan-2000 to June-2017.The choice of the period is the availability of the 2009 base year Consumer Price Index (CPI) data. Furthermore, the exchange rate used for the analysis is the parallel market (Bureau de Change) rate given that most business depends on the supply of forex from the parallel market.

Following Zubair, Okorie and Sanusi (2013), the unrestricted VAR approach will be employed to contribute to the body of already existing study in Nigeria. The choice of this modeling techniques lies in its flexibility by allowing for endogenous interactions between the exchange rate and other macroeconomic variables. The pass-through relationship assumes a unidirectional causal relationship between exchange rate and domestic variables, with causality running from exchange rate to domestic prices. However, a reverse causation – impact of domestic prices on the exchange rate may also exist. In addition, the Variance Decomposition (VDC) will be employed to analyse the pass-through of exchange rate to prices, while the impulse response function analysis will be done to examine the effect of exogenous shock to exchange rate on domestic prices (if the estimated baseline VAR model is found to be stable. We would also perform the usual diagnostic/robustness checks on our models, seeking to detect and correct for serial correlation, heteroscedasticity and multicollinearity among others.

The multivariate VAR contains four variables in a log-linear form. These are price of fuel (PMS) and broad money supply (M2), parallel market exchange rate – Bureau de Change (BDC), and the domestic inflation (INF) measured as the monthly percentage changes in the Consumer Price Index (CPI). The exchange rate and domestic inflation are the key variables of interest.
The unrestricted VAR is in the form:

$$\beta(Z)y_t = \varepsilon_t$$

Where

$$\beta(Z) = \sum_{i=0}^{i} \beta_i z_i \text{ -- } 1$$

y_t is a column vector of the endogenous variables, that is
y_t =[ΔPMS, ΔM2 , ΔBDC, ΔCPI];

Where Δ represents the first difference operator

$\beta(Z)$ is a 4 × 4 matrix polynomial in the lag operator Z and ε is a column vector of serially independent errors:

$$\varepsilon_t = (\varepsilon_t^{PMS}, \varepsilon_t^{M2}, \varepsilon_t^{BDC}, \varepsilon_t^{CPI})$$

Data analysis

The statistics below especially the Jarque-Bera statistic suggests that data are normally distributed whereas the standard deviation show that there is minimum variance and as such model analysis from the data boast high reliability.

Table 1: Descriptive Statistics

	L_CPI	L_BDC	L_M2	L_PMS
Mean	4.4715	5.0726	29.3930	3.9560
Median	4.4886	4.9982	29.7549	3.6889
Minimum	3.3810	4.6474	27.1979	2.9957
Maximum	5.4560	6.2086	30.7976	4.9767
Std. Dev	0.5583	0.3112	1.0475	0.5647
Skewness	-0.1499	1.9313	-0.3627	0.0647
Kurtosis	1.9344	6.4922	1.6933	1.9516
Jarque-Bara	10.723***	237.26***	19.543***	9.7637***

Note: *** indicates significant at the 1 percent level

The correlation coefficient is shown in Table 2. Result represent a positive relationship between all variables. This relationship as shown in the table suggests a high relationship of 74 percent, 98 percent and 97 percent between domestic price level and nominal exchange rate, broad money supply and price of fuel respectively. We also found a positive and high relationship of 65 percent between Money supply and exchange rate and also about 93 percent between fuel price and money supply.

Table 2: Correlation Coefficient

Variables	L_CPI	L_BDC	L_M2	L_PMS
L_CPI	1.0000	0.7446	0.9820	0.9679
L_IFEM		1.0000	0.6540	0.7576
L_M2			1.0000	0.9334
L_PMS				1.0000

RESULT AND ANALYSIS

In determining the stationarity and order of integration, the Augmented Dickey Fuller (ADF) test for unit roots was conducted. Results suggests that domestic prices and fuel price are stationary at levels whilst the parallel market exchange rate and broad money supply were stationary only after taking a first difference of the series. However, econometricians have resolved the debate that stationarity and non-stationarity of variables is irrelevant for VAR modelling and as such, level VAR is allowed.

Table 3: Unit Root Test of Logged Variable

Variables	Levels	First Difference	Comment
L_CPI	-3.3560**	-14.1068***	I(0)
L_BDC	-1.0151	-10.5987***	I(1)
L_PMS	-3.6544**	-16.6922***	I(0)
L_M2	-1.2207	-17.4014***	I(1)

The table shows the result of the Augmented Dickey-Fuller (ADF) set of unit root test with I(1) indicating integrated of order 1. The symbol *** and **, indicate significant at the 1 percent and 5 percent level of significance respectively.

The VAR Model

Using the Aikaike and schwarts criterion, a 1 period lag was selected. The model as expected suggests that change in domestic prices is endogenously reinforce by domestic prices itself. However, the effect of exchange rate and money supply was positive and significant whilst the effect of fuel price was positive but insignificant. Also, the AR roots graph (see appendix, fig 2) suggests that the VAR model is stable while the Trace and the Maximum Eigenvalue tests concludes that there is no co-integration. Furthermore, an exogeneity Wald test (See appendix) was conducted to test the direction of causality. The result suggest that domestic prices is prone to collective shocks in all variables however, causality is unidirectional running from exchange rate to domestic prices, from money supply to domestic prices while fuel price was a concurrent variable.

The Pass-Through

Impulse response functions (IRF) and variance decompositions (VD) from a VAR are used to assess the pass-through from exchange rate to domestic prices. The pass-through to domestic prices over T periods is defined as the accumulated effect of a structural one-standard deviation shock of exchange rate in period t on domesticprices in period T. (Sanusi, 2010).

The Table below shows the accumulated response of price to a structural one standard deviation shock to each of the variables. It is clear from the plot (see appendix) that there is an evident significant and positive elasticity effect of an exchange rate, money supply and fuel price shocks on domestic prices however, all these shocks have a delayed impact. Specifically, the effect of a 1 percent shock to the exchange rate at a period, say period 1 for instance will result in a one month delayed increase in price level by about 0.0006 (or 0.06 percent).This result suggests that exchange rate pass-through in Nigeria is small at impact but becomes successively large if shocks are sustained or reinforces and pass-through is complete six months after shock.

Table 4: Impulse Response of CPI

Period	L_CPI	L_BDC	L_M2	L_PMS
1	0.0158	0.0000	0.0000	0.0000
2	0.0153	0.0006	0.0009	0.0008
3	0.0149	0.0013	0.0017	0.0013
4	0.0145	0.0019	0.0024	0.0016
5	0.0141	0.0024	0.0030	0.0017
6	0.0138	0.0029	0.0036	0.0017
7	0.0135	0.0034	0.0041	0.0017
8	0.0132	0.0039	0.0046	0.0015
9	0.0129	0.0043	0.0050	0.0013
10	0.0127	0.0047	0.0053	0.0010
11	0.0125	0.0051	0.0056	0.0007
12	0.0123	0.0055	0.0059	0.0004

Money supply and fuel price effect are stronger than the exchange rate effect however the fuel price impact decays with time. The Money supply shocks effect on domestic prices was positive and significant with a delayed effect of 0.09 percent increase in price level but full effect quickly realised as a result of multiple shock following policy adjustments and reversals.

Consistent with the IRFs discussed above, the variance decomposition reveal that money supply shocks contributes more to rate of domestic price change than exchange rate shocks. Specifically, while exchange rate changes account for only 0.08 to 5 percent of the variations of the price level, money supply shocks account for about 0.2 to 7 percent at the same time horizon respectively. This suggests that inflation in Nigeria is highly influenced by money supply change consistent with monetary theoretical relationship between money and rate of price change and therefore calls for a solid monetary surveillance.

Table 5: Variance Decomposition of CPI

Period	**Std. Error**	**L_CPI**	**L_BDC**	**L_M2**	**L_PMS**
1	0.0158	100.0000	0.0000	0.0000	0.0000
2	0.0221	99.6285	0.0864	0.1646	0.1206
3	0.0267	98.8914	0.2839	0.5137	0.3110
4	0.0306	97.8977	0.5852	1.0107	0.5064
5	0.0340	96.7266	0.9805	1.6221	0.6707
6	0.0370	95.4348	1.4589	2.3182	0.7881
7	0.0398	94.0621	2.0088	3.0733	0.8558
8	0.0424	92.6368	2.6186	3.8659	0.8788
9	0.0448	91.1791	3.2771	4.6777	0.8660
10	0.0472	89.7040	3.9739	5.4940	0.8282
11	0.0494	88.2227	4.6989	6.3026	0.7758
12	0.0515	86.7444	5.4433	7.0939	0.7184

CONCLUSION

The paper investigated the exchange rate pass-through to consumer prices for Nigeria using the VAR approach. The degree of exchange rate pass-through was estimated by means of IRFs from the VAR analysis, covering the period January-2000 through to June-2017. The result suggests that exchange rate pass-through to consumer prices in Nigeria is small, delayed and complete in six months. Unlike Ogundipe and Egbetokun (2013), the Variance decomposition analysis indicates that money supply changes dominate exchange rate shocks in explaining Nigeria's high inflation. This provides some support to the theoretical claim that inflation is a monetary phenomenon contrary to findings of Salami and Kelikume (2013).

The likely drawback of the work is the inability to add the supply shock variable of output proxied by the Gross Domestic Product (GDP) because data are not available in monthly series. Nevertheless, the strong impact of money supply on domestic inflation implies that the continuous use of monetary policy tool to achieve price stability in Nigeria is laudable however since the impact of exchange rate increases with time, policy maker should continue to maintain and strengthen the current exchange rate stances that has tend to ease the depreciation pressure.

References

Adetiloye K. A., (2010), "Exchange Rates and the consumer price Index in Nigeria: A causality Approach", Journal of Emerging Trends in Economics and Management sciences JETEMS 1(2), pp.114 -120.

Aliyu, S. U R., M. U. Yakub, G., K. Sanni, and O. O. Duke (2008) "Exchange rate pass-through in Nigeria: Evidence from a Vector Error Correction Modell", paper presented at EDIA conference.

Burstein, A., M. Eichenbaum and S. Rebelo (2002), "Why is Inflation so Low after Large Devaluation?" NBER Working Paper No. 8748, (Cambridge, Massachusett)

Bhundia, A (2002), "An empirical investigation of exchange rate pass-through in South Africa", IMF Working Paper No 02/165, September

Charles A., Simon H. and Daniel A., (2008), "Effect of exchange rate volatility on the Ghana stock exchange", African Journal of Accounting, Economies and Banking Research, Scheme 3

Dubravko M. and Marc K., (2008), "Exchange rate pass-through in emerging market economies: what has changed and why? Working Paper 35, Bank for International Settlements

Frankel, J., Parsley, D. and Wei, S. (2005), Slow Pass-Through around the World: A New Import for Developing Countries, NBER Working Paper No. 11199.

Goldfajn, I and S da Costa Werlang (2000): "The pass-through from depreciation to inflation: a panel study", Central Bank of Brazil.

Choudhri, E. U. and Hakura, D. S., (2001), "Exchange Rate Pass-Through to Domestic Prices: Does Inflationary Environment Matter?" Working Paper No. 01/194, International Monetary Fund

Ho C. and McCauley, R. (2003), "Living with Flexible Exchange Rates: Issues and Recent Experience in Inflation Targeting Emerging Market Economies," Working Paper 130, Bank for International Settlements, Basel.

Kim, K. H. (1998), US Inflation and the Dollar Exchange Rate: A Vector Error Correction Model, Applied Economics 30 (5), 613-619.

Krugman, P. (1986). "Pricing to Market When the Exchange Rate Changes." NBER Working Paper No. 1926.

Lafleche T., (1996), "The import of Exchange Rate movement on consumer prices", Base of Canada Rerians writer 1996 – 1997, pp. 21-32.

Leigh, Daniel and Rossi, Marco, (2002), "Exchange Rate Pass-Through in Turkey", IMF Working Paper, Vol. 2(204), pp. 1-19.

McCarthy, J. (1999), "Pass-Through of Exchange Rates and Import Prices to Domestic Inflation in Some Industrialized Economies", BIS Working Papers, No. 79

McCarthy, J. (2000), "Pass-Through of Exchange Rates and Import Prices to Domestic Inflation in some Industrialised Economies", Staff Reports, 111, Federal Reserve Bank of New York

Ogundipe, A.A. and Egbetokun, S. (2013), "Exchange Rate Pass-Through to Consumer Prices in Nigeria", Journal of Business Management and Applied Economics, 2 (4)

Rabanal, P., and G. Schwartz (2000), "Exchange Rate Changes and Consumer Price Inflation: 20 Months After the Floating of the Real in Brazil: Selected Issues and Statistical Appendix", IMF Country Report No. 01/10, Washington, IMF.

Salami D. and I. Kelikume (2013), "Is Inflation Always and Everywhere a Monetary Phenomenon? The Case of Nigeria", International Journal of Business and Finance Research, Vol. 7(2), pp. 105-114.

Taylor, J (2000): "Low inflation, pass-through and the pricing power of firms", European Economic Review, Vol. 44, June, 1389–1408.

Yelena, T. F., (2008), "Understanding Changes in Exchange Rate Pass-Through", Federal Reserve Bank of San Francisco Working Paper No. 13

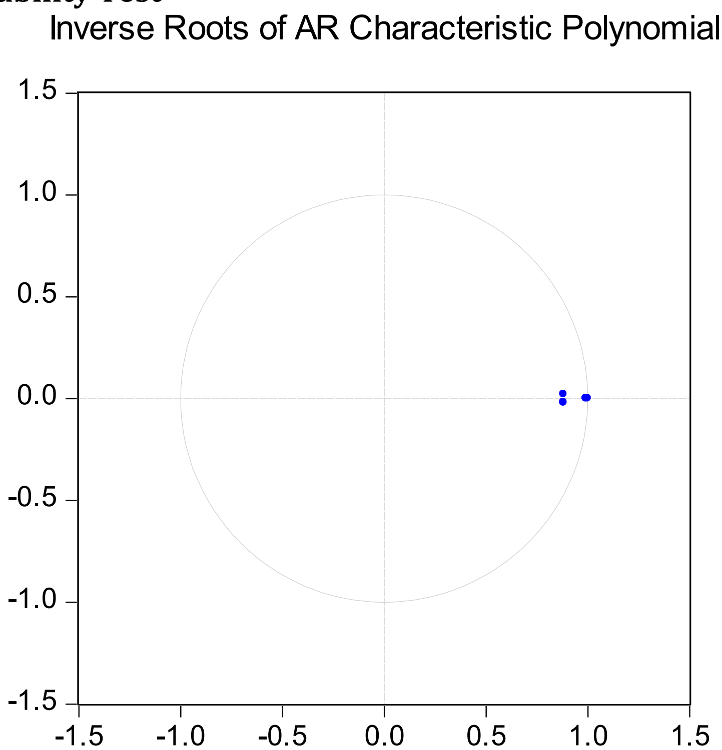
Zubair, Okorie and Sanusi (2013), "Exchange Rate Pass-Through to Domestic Prices in Nigeria: An Empirical Investigation", Central Bank of Nigeria Economic and Financial Review, Vol. 5 (1)

APPENDIX

Appendix 1: VAR Lag Length Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	75.08485	NA	5.81e-06	-0.703810	-0.638300	-0.677305
1	1515.382	2809.292	4.37e-12*	-14.80576*	-14.47821*	-14.67323*
2	1529.185	26.37622*	4.46e-12	-14.78401	-14.19442	-14.54546
3	1533.321	7.739880	5.02e-12	-14.66654	-13.81491	-14.32197
4	1542.514	16.83863	5.38e-12	-14.59915	-13.48547	-14.14855
5	1550.614	14.51574	5.82e-12	-14.52093	-13.14521	-13.96431
6	1564.759	24.78828	5.94e-12	-14.50256	-12.86480	-13.83992
7	1573.987	15.80659	6.37e-12	-14.43551	-12.53571	-13.66685
8	1588.567	24.39620	6.49e-12	-14.42145	-12.25961	-13.54677

Appendix 2: VAR Stability Test



Appendix 3: Exogeneity Wald Tests

Dependent variable: LCPI

Excluded	Chi-sq	df	Prob.
LBDC	7.236210	2	0.0268
LM2	5.170931	2	0.0754
LPMS	1.508760	2	0.4703
All	9.292840	6	0.1578

Dependent variable: LBDC

Excluded	Chi-sq	df	Prob.
LCPI	1.575948	2	0.4548
LM2	0.420226	2	0.8105
LPMS	4.345386	2	0.1139
All	5.890964	6	0.4355

Dependent variable: LM2

Excluded	Chi-sq	df	Prob.
LCPI	3.816170	2	0.1484
LBDC	3.756395	2	0.1529
LPMS	2.215287	2	0.3303
All	5.803900	6	0.4455

Dependent variable: LPMS

Excluded	Chi-sq	df	Prob.
LCPI	0.114868	2	0.9442
LBDC	5.639949	2	0.0596
LM2	0.975207	2	0.6141
All	15.12668	6	0.0193

Appendix 4: Cointegration Tests

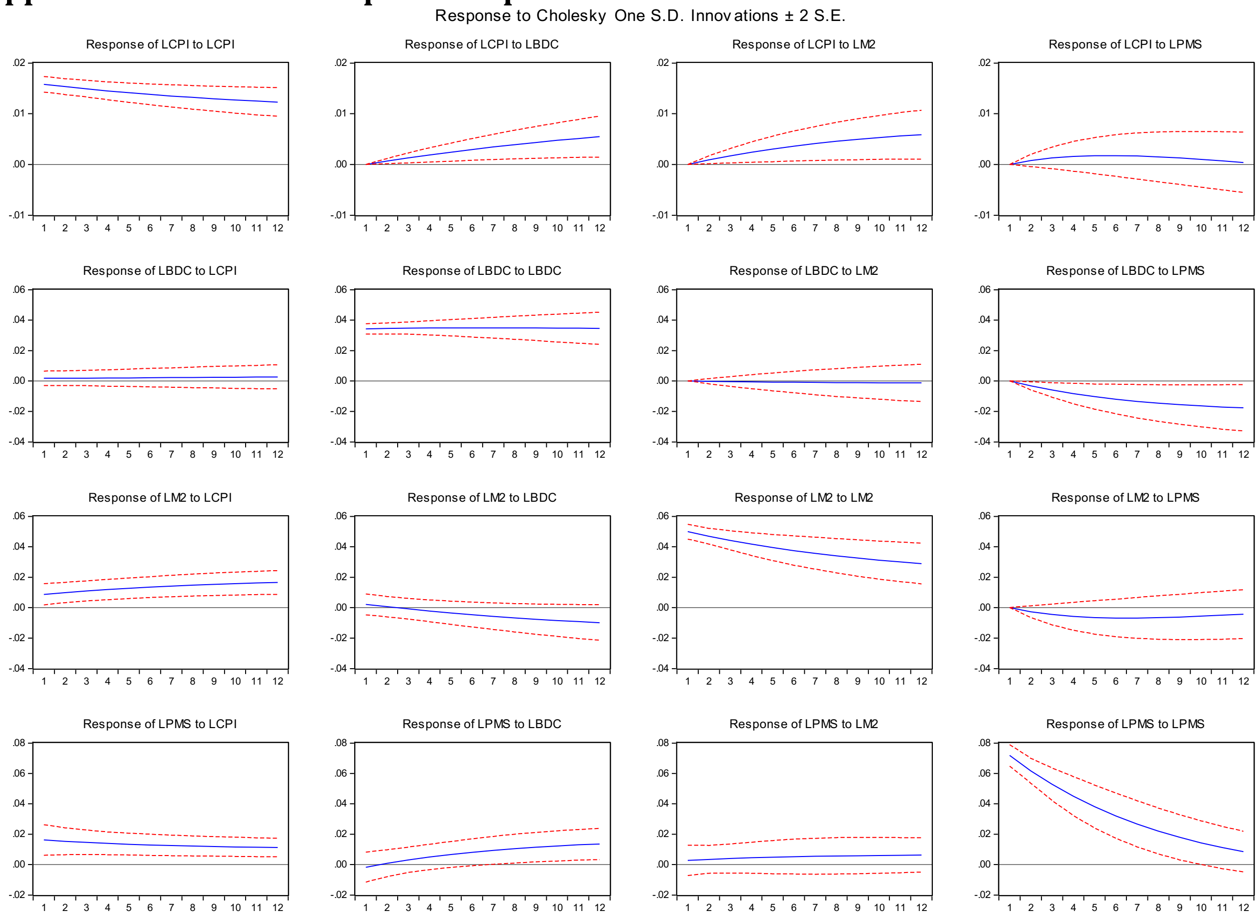
Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.082484	40.96277	47.85613	0.1899
At most 1	0.074973	23.14307	29.79707	0.2391
At most 2	0.032629	7.011079	15.49471	0.5764
At most 3	0.000696	0.144225	3.841466	0.7041

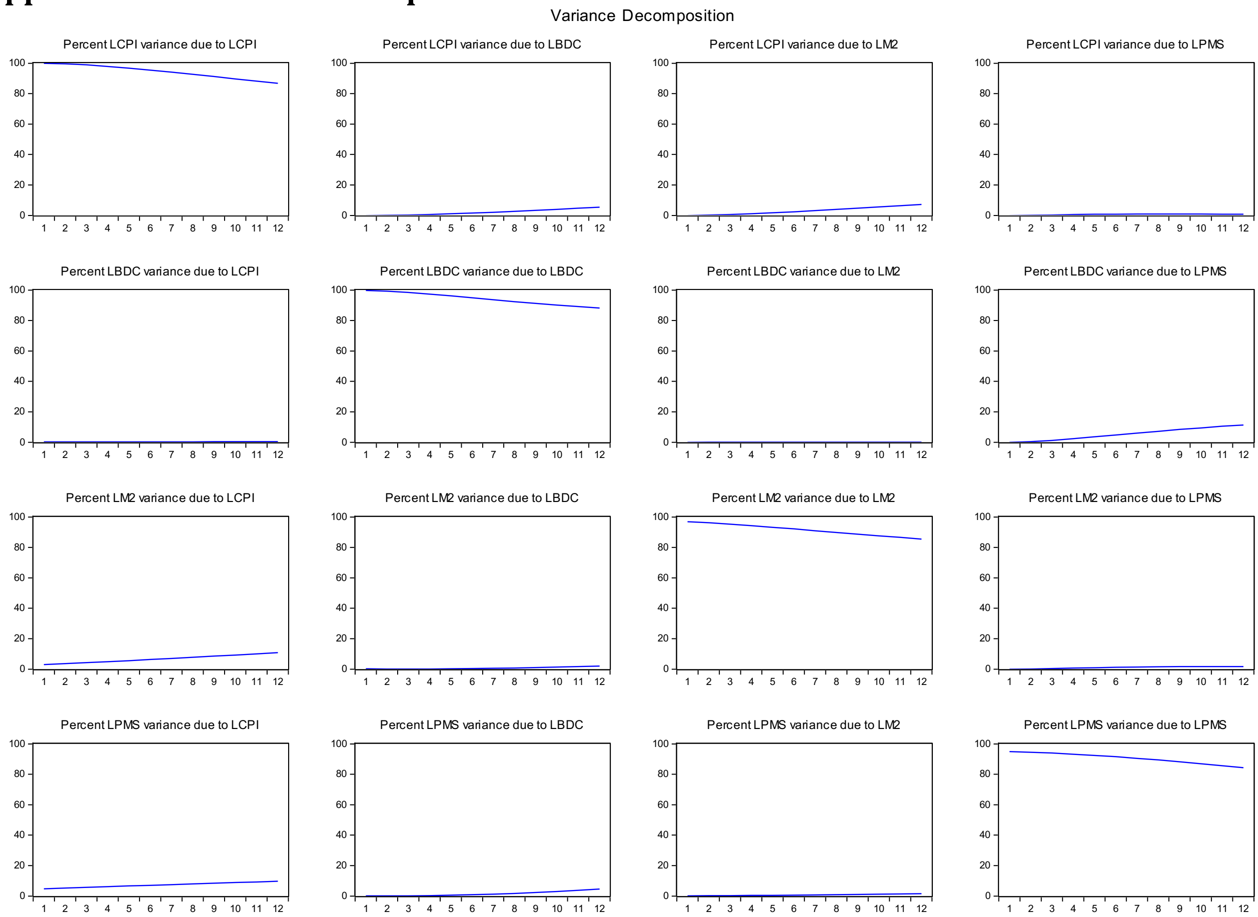
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None	0.082484	17.81970	27.58434	0.5102
At most 1	0.074973	16.13199	21.13162	0.2172
At most 2	0.032629	6.866854	14.26460	0.5050
At most 3	0.000696	0.144225	3.841466	0.7041

Appendix 5: Combined Impulse Response Function for the 4-Variable VAR



Appendix 6: Variance Decomposition for the 4-Variable VAR



Archives of Business Research – Vol.5, No.12
Publication Date: Dec. 25, 2017
DOI: 10.14738/abr.512.4054.
Awino, Z. B., Ayuya, A. M., Machuki, V. N., & Wainaina, G. (2017). Strategic Choice and Performance: An Overview Of Institutions Of Higher Learning. Archives of Business Research, 5(12), 378-390.

SOCIETY FOR SCIENCE AND EDUCATION

Strategic Choice and Performance: An Overview Of Institutions Of Higher Learning

Zachary B. Awino
Associate Professor, School of Business, University of Nairobi.

Angeline Mukokho Ayuya
Doctoral Student, School of Business, University of Nairobi.

Vincent N. Machuki
Senior Lecturer, School of Business, University of Nairobi.

Gituro Wainaina
Associate Professor, School of Business, University of Nairobi.

ABSTRACT

Organizational performance is critical for both empirical and conceptual research in strategy. Strategic choice serves as a major connection between the organization and the environment in which it operates and involves decisions on the mix of business portfolio. Scholars attribute the strategic choices which determine organizational performance to the type of strategies they choose, yet there is no agreement on the extent to which these strategic choices influence performance. This paper sought to contribute to knowledge by assessing the extent to which strategic choice influences organizational performance. The objective of this paper was to establish the influence of strategic choice on organizational performance. The research used a cross sectional survey. This study used a sample of fifty two (52) private and public accredited universities. Both primary and secondary data was collected using semi structured questionnaires. An analysis was done using correlation and regression analysis to test the hypotheses. The objective confirmed significant results on non-financial performance. The findings of this research are consistent with most of the previous studies. This study therefore extends the knowledge frontiers in strategic management through the finding that strategic choice influences organizational performance. The findings provide a diversity of implications on theory, policy and practice. Policy makers will utilize the findings from this study as a guide in the policy formulation and implementation of strategic choices aimed at the success of the institutions of higher learning.

Key words: Strategic Choice, Organizational Performance, Empirical Investigation, Institutions of Higher Learning

INTRODUCTION

Strategic choice is central to strategy making. Johnson, Scholes and Whittington (2009) define strategic choice as a process that takes into consideration what the stakeholders expect, identifying options available, then evaluating and selecting the best strategic options for implementation. The Strategic choice indicates the various ways and directions in which a strategy may be implemented (Johnson et al., 2009). The managers who make strategic decisionsare expected to be involved in various organizational activities that require strategic thinking.They are expected tobe knowledgeable about their organization and the operational environment. They are also required to have information about the competitors' operation, and the prevailing regulatory systems (Bukszar& Connolly, 1988).According to Johnson et al (2009), strategic management involvesassessingthe current strategic position of an organization in order to choose and manage the best strategies for the organization.Strategic choiceprovides a connection between an organization and the environment in which it operates. The focus is on how the top managers are able to gain knowledge and understanding of how to manage the organization's environment and find ways of how these organizations can respond to the prevailing environmental conditions(Machuki, 2011;Namada, 2013). According to Pfeffer and Salancik (1978) and Dutton and Duncan (1987), strategic choice involves decisions on the mix and emphases of business portfolio which includes strategic alliances, diversification and internal restructuring.

The type of strategic choice and how effective it is depends on how the top managers interpret the environmental issues and adopt the right choices Dutton and Duncan, (1987). Tushman and Romanelli (1985) argue that it is how the top managers perceive the changes in the environment that determines the choice of viable strategies. The top management teams therefore allow for creativity and innovativeness in the choice of the strategies. Due to globalization and advancements in technology, organizational environments go through catastrophic changes and organizations have to go through these upheavals which usually surpass their capacities to adapt (Meyer, Stanley, Herscovitch & Topolynyscky, 2002).The turbulence in the environment is so fast that in the face of lack of or obsolete market information, viable strategic windows open and shut very fast and the cost of mistakes may lead to an organization’s exit from the market (Meyer et al, 2002)..

If organizations have to remain viable and competitive, the top managers must make strategic choices which match with the turbulent environment. Ansoff and Sullivan (1993) argue that these strategic choices should be complimented by the aggressiveness of these choices. This argument is supported by Machuki and Aosa (2011) in the thinking that organizational performance depends on how an organization aligns with the changes in the environment. This study seeks to find out how an integration of the Strategic choice of internal restructuring, diversification and strategic alliances conceptualized in this study in accredited universities in Kenya can improve their performance.

Organizational performance relates to the efficiency and effectiveness of the firm in converting inputs into outputs (McCann, 2004). Efficiency can be described as the cost per unit in relation to the goods and services produced and the resources that have been utilized in the production process.Anorganization’s performance is measured by the level of expected customer-related results which can be measured by customer satisfaction level, their loyalty, frequency of purchase and repurchase of an organization’s products (Kaplan &Norton, 1996).In the context of accredited universities in Kenya, organizational performance is a measure of capabilities in research and innovation, number of quality degree programmes offered, growth in number of students who have graduated, growth and expansion of schools and faculties.Different methods are used to measure organizational performance as it remains a complex multidimensional phenomenon in strategic management (Balta, 2008).

Sabina (2009) argues that it is imperative to measure organizational performance so that managers and researchers can evaluate the position of the organization against its rivals. It has however, been realized that measurement of organizational performance has posed a major challenge to both researchers and practitioners. According to Sink and Turtle (1989) model, organization performance system is categorized in terms of effectiveness, efficiency, quality of products, productivity, quality of work life, innovation and profitability.Many studies of organizational performance have used performance as the dependent variable but with different variables which indicate the level of variations in performance. (Muchemi, 2013; Namada, 2013).Schendeland Hatten (1972) positthat foran organization to succeed the top managers must be able tocombine many factors. According to Lenz, (1980) empirical studies address particular aspects of this broad problem of managing multiple dependencies. Financial measures of performance include financial ratios, cash flow or liquidity measures, activity ratios among others. Financial ratios may be calculated in different ways, using different figures and measures include profitability ratios (gross profit, net profit, Return on Investment (ROI), Earnings Per Share (EPS), growth in sales, market valuation, total assets and liquidity ratios among others.

Due to the inefficiencies of the financial measures, Kaplan and Norton (1996) introduced the balanced score card (BSC) as a tool to measure organizational performance. It measures performance using four perspectives: financial perspective, customer perspective, learning and growth and internal business processes. Over the years, organizations are using sustainable balanced score cardwhich includes corporate social responsibility and environmental perspectives (Hubbard, 2009). Organizations should endeavour to make use of both financial and non-financial indicators to measure their organizational performance (Velcu, 2009). The debate on measurement of organizational performance still continues. Different organizations use different ways of measuring organizational performance which are either qualitative or quantitative (Krager& Parnell, 1996). Irungu (2007) in his study used financial measures only, while Orucho (2014) used both financial and non-financial measures. It has been argued (Kaplan & Norton, 2001) that financial indicators do not take into consideration non-financial measures such as efficiency, customer perspective, new business processes and do not focus on the future. As Kennerly and Neely (2003) pointed out, many organizations cannot cope with the fast changing performance measurement system. Thus, poor performance is attributed to inadequate performance measurements and inappropriate strategic choice (Oyewobi, Windapo&Rotimi, 2002).

Some researchers further argue that both financial and non-financial measures should be used due to failure of financial measures in explaining what really contributes to the achievement of performance in organizations (Cooper &Aouad, 2001; Bourne, Mills, Wilcox, Neely &Platts, 2000).This study conceptualized organizational performance as an independent variable and adopted the Sustainable Balanced Score Card framework as a performance measurement tool which incorporates financialperformancemeasurementsdin terms of surplus/deficit, research grants and endowment funds. Thenon-financial organizational performance has been operationalized using customer perspective, new business processes, learning and growth both ofwhich are relevant to accredited universities in Kenya.

Accredited world universities and colleges are a key area of interest in strategic management as they play a key role in the economy (Gichaga & Wainaina, 2005; UNESCO, 2014). Studies in higher education in Asia (Malaysia and Thailand) Chapman (2015) and Ozsoy (2011) study of 179 universities across Europe, Latin America and Sub-saharan Africa, posit that higher education through universities and colleges are centres of economic development in the area of research, innovation and production of highly skilled manpower.These studies established that technology and globalization affect the accredited world universities and colleges in the various regions.Theworldaccrediteduniversities are resource dependent on fees, income generating units and other stakeholders. They operate in uncertain fluctuating environments and are affiliated to institutions that ensure quality assurance as they develop expansion strategies within and across continents. American universities are guided on various policies on research and quality education under the Association of American Universities (AAU). Other universities are affiliated to the Association of Commonwealthuniversities. Research has shown that universities in the developing countries depend on donor funding for research activities and scholars are sponsored by various organizations such as Ford Foundation and Rockefeller Foundation.

There has been a growing emphasis on higher education in Kenya over the decades. This is in line with the demands of both economic and social developmental goals (Sifuna, 1998). The increase of the number of students leaving high school and seeking higher education has led to the congestion in the institutions of higher learning in Kenya, with poor working conditions and inadequate and poor facilities. The ever increasing demand for higher education in Kenya has therefore led to the increase in the number of both private and public universities over the decades.The change from the 7-4-2-3 cycle to the present 8-4-4 system of education in Kenya has led to the double intake by universities and his resulted in more public and private universities. The public universities rely on tuition fees and diminishing funding from the government while the private universities depend on tuition fees and private investors. The expansion of private universities is attributed to the failure of the public universities to meet the high demand for higher education (Ginies&Marzuelle, 2010).

Eshiwani (1999) in his study on higher education institutions of learning pointed out that apart from provision of education and training in a framework of teaching and research in professional disciplines (Law, Medicine, Engineering and Accounting among others) they provide human resource development. In addition, these institutions of higher learning are expected to function as centres of research operating in a wide range of disciplines. They are also expected to play their role in regional development and also maintain international collaborations. Their role in fostering social, intellectual and development is paramount.The emerging global knowledge society which is information driven economies and the expansion in the global higher education markets has increased the search for a myriad of factors to be addressed. There are complexities brought about by the increase in number of institutional of higher learning and increased student enrolments together with the resultant competition. The expectations of the society and the role in economic development given the inadequate resources both human and capital calls for this study which has integrated the choice of strategies, linked with organizational learning and top managers with different characteristics that influence performance.

LITERATURE REVIEW

Strategic management scholars and practitioners agree that the ability of organizations to learn faster than its competitors is theultimatesource of competitive advantage. Hutzschenreuter and Israel (2009) contend that strategic actions determinecompetitive strategy by making variations in the way organizational routines are carried out, and as a result, influences the strategic choices that will be made in future. Strategic choices based on innovation, product positioning, and chain relationship development have positive effects on performance, but this depends on the type of distinctive resources and capabilities that are used. Innovation is considered a very important capability within an organization as it improves performance (Teece, 2007; Ombaka, 2014). This underscores the importance of strategic choices in developing organizational culture through path dependence.

According to Davies and Walters (2004), strategic choice is used to secure revenues from customers and this is a key requirement in resource dependence. Strategic choice can also be used by organizations to seek a dynamic strategic link in the strategies they use to generate cashflows that are the key to the mitigation of resource dependence (Child, 1972). The challenge of financing and mobilizing resources has a negative effect on organizational performance. Carraresi, Mamaqi, Albisu, and Banterle(2011) did a study on relationship between SC and performance of Italian food SMEs and posits that SC has a positive influence on performance.The SC perspective (Child, 1972) focuses on the decisions the organizational top managers make in adapting to an environment which explains the organizational outcomes. Its proponents argue that many purposeful actions take place within organizations and that organizational top managers have substantial leeway in shaping their own fates. This implies that the focus is on individuals and groups within organizations which explains organizational processes. This focus on behavior therefore assumes that organizational top managers have the discretion of acting according to their own free will (Hambrick, 1984; Hambrick, 2007; Namada, 2013).

Strategic choiceas a contemporary contribution to organizational performance derives from its potential to integrate some of the different perspectives in organizational studies (Child, 1997). Organizational outcomes such as learning, strategies (diversification, strategic alliances and internal restructuring) and their effectiveness in organizations are considered as reflections of the values and cognitive bases of the powerful actors in the organizations (Hambrick&Mason, 1984;Namada, 2013). The most dynamic higher education institutions in the market place are those that are techno-intensive and they depend on the capacity to generate, adapt and utilize knowledge as the foundation. However, organizations have a challenge of production, dissemination and utilization of knowledge and technological innovations which affect performance (Kinyanjui, 2007).

METHODS

This study used a descriptive cross-sectional survey since the purpose of the study was to establish the relationship between and amongst the study variables and performance oftheaccredited universities in Kenya. The cross-sectional approach provides credence of results with conclusions on data at a given point in time.The unit of analysis was accredited universities in Kenya. The Commission for University Education had listed 70 accredited universities (CUE, 2015) which included public and private universities with their constituent colleges and institutions with letters of interim authority. The population of the study was, however, 52 accredited universities in Kenya listed by the Commission of University Educationwhichwere autonomous and had been in operation for at least five years – an adequate period for strategic plans. At the time of the study, out of the 52 accredited universities, 30were public universities while 22 were private universities.

The study targeted only one respondent from each accredited university in Kenya for purposes of objectivity and consistency. This method has been used successfully in other studies (Machuki&Aosa, 2011; Orucho, 2014). Primary data wastherefore collected by administering questionnaires to the Deputy Vice-Chancellor (Administration and Finance) or their equivalent (Deputy Vice-Chancellor, Research, Registrar, Administration assisted by the Finance officer/Director) in each accredited university. This is because these are the top management staff in the institutions that are endowed with the responsibility of running the institutions by setting and implementing strategies and are also in a position to provide useful information for this study.

Secondary data was obtained from existing sources at the accredited universities websites, financial reports and accounts for the period of this study (2009/2010, 2010/2011, 2011/2012. 2012/2013 and 2013/2014, financial statements, annual reports, World universities webometrics rankings, university calendars, strategic plans(2008-2013) and other existing records from (CUE) that were relevant to performance of accredited universities in Kenya. Performance contracting records between 2009 and 2014 from Ministry of Planning and Devolutions were also using records to this study since they are relevant and important as they provide an understanding of the operations and performance of the accredited universities in Kenya.According to Zikmund (2003), secondary data can be gathered using various sources including annual reports, books and periodicals, and government sources.

RESULTS

The paper sought to establish the independent influence of strategic choice on performance of accredited universities in Kenya. Strategic choice was operationalized as; internal restructuring, diversification and strategic alliances. Internal restructuring indicators are; automation of processes, decentralization of colleges, creation of income generating units, and establishment of schools. The indicators for diversification are entry in new markets, new degree programmes and acquisition of new constituent colleges. The indicators of strategic alliances are collaboration with research institutes, exchange programmes and public private partnerships. Non-financial indicator comprise of customer perspective, learning and growth and new business processes. The hypothesis was tested using simple linear regression analysis. The coefficient of determination R^2 together with standardized beta was used to find out the significance of the regression results.

The objective of this paper was to establish the influence of strategic choice on performance of accredited universities in Kenya and this was stated as:
H_{01}: Strategic choice has no significant influence on performance of accredited universities in Kenya.

The results of the tests of hypothesis are as shown in Table 1.

Table 1: Strategic Choice and Non-Financial Performance

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.774[a]	.599	.589	1.89446	2.136

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	214.212	1	214.212	59.686	.000[b]
	Residual	143.559	40	3.589		
	Total	357.770	41			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.954	1.580		5.034	.000
	Strategic choice	.589	.076	.774	7.726	.000

a. Predictors: (Constant), strategic choice

The results in Table 1 show that R^2 is .599 which means 59.9 percent of variation in non-financial performance was explained by strategic choice. The remaining 40.1 percent is explained by other factors not considered in the study. The beta coefficient of .774 shows that 1 percent change in strategic choice leads to .774 change in non-financial performance of accredited universities in Kenya. The model had a p-value significance of .000 which revealed a statistically significant model. This shows that strategic choice has a significant influence on non-financial performance of accredited universities in Kenya.

Strategic choice shows the various options of strategies employed by organizations to improve performance. These strategies connect the organization to the environment (Johnson et. al., 2009). Percentage growth was a component of non-financial performance in this study.

H_{01b}: There is no relationship between strategic choice and percentage growth

The paper sought to establish the relationship between strategic choice and percentage growth. The results of this relationship are shown in Table 2.

Table 2: Relationship between Strategic Choice and Percentage Growth

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.033[a]	.001	-.025	170.78131	2.120

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1207.578	1	1207.578	.041	.840[b]
	Residual	1137483.915	39	29166.254		
	Total	1138691.493	40			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	34.895	145.044		.241	.811
	Strategic Choice	1.418	6.970	.033	.203	.840

a. Dependent Variable: percentage growth
b. Predictors: (Constant), Strategic Choice

The results in Table 2 show that R^2 is .001 which means 0.1 percent variation in Strategic choice was explained by percentage growth. The remaining 99.99 percent is explained by other factors not considered in the study. The model had a p-value significance of .840 which revealed a no statistically significant model. This shows that SC has no significant influence on percentage growth in the accredited universities in Kenya.

Previous research (Namada, 2013) focused on non-financial measures of organizational performance only. Chavravarthy (1986) in his study used financial measures only and found that profitability did not distinguish the differences in strategic performance of organizations. This study tested the following hypothesis.

H_{01c}: There is no relationship between strategic choice and financial performance

The research sought to establish the relationship between strategic choice and financial performance of accredited universities in Kenya. Table 3 below shows the results.

Table 3: Relationship between Strategic Choice and Financial Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.305[a]	.093	.068	503081766.16174

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	935256586022863490.000	1	935256586022863490.000	3.695	.063[b]
	Residual	9111285483999018000.000	36	253091263444417152.000		
	Total	10046542070021882000.000	37			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-515233784.395	452778912.900		-1.138	.263
	Strategic Choice	41602368.551	21641693.716	.305	1.922	.063

a. Dependent Variable: financial performance
b. Predictors: (Constant), Strategic Choice

The results in Table 3 illustrate that R^2 is .093 which means 9.3 percent variation in financial performance was explained by strategic choice. The remaining 90.7 percent is explained by other factors not considered in the study. The model had a p-value significance of .063 which is greater than 0.05 the model was not statistically significant. This shows that strategic choice has no significant influence on financial performance of accredited universities in Kenya.

Research is a core function of the accredited universities in Kenya. The accredited universities receive and manage research and endowment funds and therefore the performance of these universities can be measured based on the amount of the funds received for research purposes. This study therefore sought to test the relationship between strategic choice and research and endowment funds. The results of the findings are shown in Table 4.

H_{01d}: There is no relationship between strategic choice and research and endowment funds

The results of the findings are shown in Table 4 below.

Table 4:Relationship between Strategic Choice and Research and Endowment Funds

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.320[a]	.102	.077	1197255520.68652

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5884001805957096400.000	1	5884001805957096400.000	4.105	.050[b]
	Residual	51603148145316910000.000	36	1433420781814358780.000		
	Total	57487149951274010000.000	37			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1261874939.212	1022785387.104		-1.234	.225
	Strategic Choice	99585134.852	49152426.837	.320	2.026	.050

a. Dependent Variable: research funds
a. Predictors: (Constant), Strategic Choice

The results in Table 4 showR[2] of .102 which means 10.2 percent variation in strategic choice was explained by research and endowment funds. The remaining 89.8 percent is explained by other factors not considered in the study. The model had a p-value significance of 0.05 which revealed a statistically significant model. This shows that research and endowment funds have a significant influence on strategic choice in accredited universities in Kenya.

This paper also sought to find out the strength of the relationship between internal restructuring and Performance of Accredited Universities in Kenya. The results are shown n Table 5 below.

Hypothesis H_{01}e: There is no relationship between internal restructuring and performance of accredited universities in Kenya

Table 5: Influence of Internal Restructuring on Organizational Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.770[a]	.592	.582	1.88650

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	211.859	1	211.859	59.529	.000[b]
	Residual	145.914	41	3.559		
	Total	357.773	42			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.589	1.500		5.725	.000
	SC_internal restructuring	.536	.070	.770	7.716	.000

a. Dependent Variable: Non-financial performance
b. Predictors: (Constant), SC internal restructuring

The results in Table 5 shows an R^2 of .592 which means 59.2 percent of the variation in organizational performance was explained by internal restructuring. The remaining 40.8 percent is explained by other factors not considered in the study. The model had a p-value of .000 which revealed a statistically significant model. This means that internal restructuring has a significant influence on non-financial performance.

The paper sought to test the strength of the relationship between diversification and performance of accredited universities in Kenya and the results are shown in Table6 below.

H_{01f}; There is no relationship between diversification and performance of accredited universities in Kenya

Table 6:Influence of Diversification on Organizational Performance

Model Summary					
Model		R	R Square	Adjusted R Square	Std. Error of the Estimate
1		.666a	.444	.430	2.20265

ANOVAa						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	158.855	1	158.855	32.742	.000b
	Residual	198.918	41	4.852		
	Total	357.773	42			

Coefficientsa						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.432	1.697		6.147	.000
	SCdiverse	.502	.088	.666	5.722	.000

a. Dependent Variable: Non-financial performance
b. Predictors: (Constant), SC diversity

The results in Table 6 show R^2 of .444 which implies that 44.4 percent variation in performance was explained by diversification. The remaining 55.6 percent is explained by other factors not considered in this study. The model had a p-value of .000 which revealed a statistically significant model. This implies that diversification has a significant influence on non-financial performance.

Strategic alliances was one of the indicators of SC and this study therefore sought to find out the magnitude of the strength of relationship of strategic alliances on performance of accredited universities in Kenya.

H_{o1g}: There is no relationship between strategic alliances and performance of accredited universities in Kenya.

Table 7: Influence of Strategic Alliances on Organizational Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.698a	.488	.475	2.14064

ANOVAa						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	174.477	1	174.477	38.076	.000b
	Residual	183.293	40	4.582		
	Total	357.770	41			

Coefficientsa						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.300	1.598		6.445	.000
	SC alliances	.465	.075	.698	6.171	.000

a. Dependent Variable: Non-financial performance
b. Predictors: (Constant), SCalliances

The results in Table 7 show R^2 of .488 which means 48.8 percent variation in organizational performance was explained by strategic alliances. The remaining 51.2 percent is explained by other factors not considered in this study. The model had a p-value of .000 which revealed a statistically significant model. This means that strategic alliances had a significant influence on non-financial performance.

CONCLUSION

The objective of this paper sought to establish the influence of strategic choice on performance of accredited universities in Kenya. A corresponding hypothesis Ho_1 was stated. The research findings established that strategic choice was not statistically significant on some of the sustainable balanced score card measures of performance. The results of the multivariate regression analysis which were carried out to determine the influence of strategic choice on non-financialperformance of accredited universities in Kenya revealed that strategic choice had positive relationships with non-financialperformance of accredited universities in Kenya, while there was no relationship between strategic choice and financial performance of accredited universities in Kenya.

When each of the three SC indicators were regressed with performance of accredited universities in Kenya, internal restructuring was found to be the most significant predictor of performance of accredited universities in Kenya with p-value <0.05, followed by strategic alliances with a p-value <0.05 and diversification with a p-value < 0.05. All the three predictors of SC were found to be statistically significant with p-values <0.05. The regression model relating each strategic choice and performance of accredited universities in Kenya was also established. All of them had a positive correlation withperformance of accredited universities in Kenya. These results were in consistent with both theory and practice, with internal restructuring as the most consistent and stable indicator ofperformance of accredited universities in Kenya.

In summary, the findings show that there exists high positive correlation between strategic choices and performance of accredited universities in Kenya. The relationship shows that these strategic choices explain 59.9 percent of the variation in performance of accredited universities in Kenya. Therefore, the null hypothesis 1 was rejected since there is a significant relationship between Strategic choice and performance of accredited universities in Kenya. These results are consistent with the Industrial Economics theory in relation with strategic choice and organizational performance. This theory emphasizes the organization's alignment to the environment through strategic choice that lead to superior organizational performance (Bain, 1951, Mason, 1939; Porter, 1981).

References

Ansoff, H.I. (1957). Strategies for diversification. *Harvard Business Review.*35, (5), 113-124.

Ansoff, H. I., & Sullivan, P.A. (1993). Optimizing profitability in turbulent environments: A formula for strategic success. *Long Range Planning Review,* 26, 11-23.

Bain, J. S. (1956). *Barriers to new competition*. Cambridge, Mass. Harvard University Press.

Balta, M.E. (2008). The impact of business environment and boards of directors on strategic decision-making: A case study of Greek listed companies*. Unpublished PhD Thesis*, Bruneri Business School.

Bourne, M., Mills, J., Wilcox, M., Neely, A., &Platts, K. (2000). Designing, implementing and updating performance measurement systems. *International Journal of Operations Management,* 20(7), 754-771.

Bukszar, E., &Connolly, T. (1988). Hindsight bias and strategic choice: Some problems in learning from experience. *Academy of Management Journal,* 31, 628-641.

Carraresi, L., Mamaqi, X., Albisu, L. M., &Banterle, A. (2011). *The relationship between strategic choices and performance in Italianfood SMEs: A resource-based approach*. McGrawHill: New Delhi.

Chakravarthy, B.S. (1986). Measuring strategic performance. *Strategic Management Journal,* 7(5), 437-458.

Chapman, D. W (2015). *Higher education in Asia: Expanding out: Expanding up*. UNESCO Institute of Statistics, Montreal, Canada.

Child, J. (1972). Organizational structure, environment and performance: The role of strategic choice. *Sociology,*6, 1-22.

Child, J. (1997). Strategic choice in the analysis of action, structure, organizations and environment: Retrospect and prospect. *Organization Studies,*18(1), 43-76.

Commission for University Education (2013).

Cooper, M.K., &Aouad, G. (2001). Performance management in construction: A conceptual framework. *Construction Management in Economics,* 19(1), 85-95.

Davies, L., &Walters, I. (2003). Strategic choice and the nature of the Chinese family business: An exploratory study of the Hong Kong watch industry. *OrganisationalStudies*, 24(2), 1405-1435.

Dutton, J.E.,& Duncan, R.B. (1987).The creation of momentum for change through the process of strategic issue diagnosis.*Strategic Management Journal,* 8, 279-296.

Dutton, J. E.,& Duncan, R.B. (1987).Strategic issue diagnosis and its relationship to organizational change.*Strategic Management Journal,* 4, 307-323.

Eshiwani, G.S. (1999). *Education in Kenya since independence.* East African Educational Publishers.

Ginies, P.,&Mazurelle, K. J. (2010).Managing university-industry relations: A study of institutional practices from 12 different countries. *Journal of Higher Education,* 5, 7-10.

Gichaga, F.J., &Wainaina, G. (2005). A study on university-industry linkage in Kenya.*A report submitted to the Commission for Higher Education*.

Hambrick, D.C. (2007). Upper echelons theory: An update*. Academy of Management Review,* 32(2), 334-43.

Hambrick, D. C.,& Mason,P. A. (1984).Upper echelons: The organization as a reflection of its top managers.*Academy of Management Review*, 9, 193-206.

Hubbard, G. (2009). Measuring organizational performance: Beyond the triple bottom-line. *Business Strategy and Environment,* 19, 177-191.

Hutzschenreuter, T., &Israel, S. (2009).A review of empirical research on dynamic competitivestrategy.*International Journal of Management Reviews,*11(4), 421–61.

Irungu, M.S. (2007). Effect of top management teams on performance of publicly quoted companies in Kenya.*Unpublished PhD thesis*, University of Nairobi.

Johnson, G., Scholes, K.,& Whittington, R. (2009).*Exploring corporate strategy*.(7thed.) Dorling, India.

Kaplan, R.S. (2001). Transforming balanced score card from performance measurement: Part 1. *Accounting Horizons,* 87-104.

Kaplan, R. S.,& Norton, D.P. (1996).*The balanced scorecard: Translating strategy into action,* Boston: HBS Press.

Kennerly, M.,& Neely, A. (2003).Measuring performance in a changing business environment.*Journal of Operations and Production Management,* 2, 213-229.

Kinyanjui, K. (2007). The transformation of higher education in Kenya: challenges and opportunities. *Paper presented at the 'mijadala on social policy, governance and development in Kenya' Nairobi*.

Krager, J.,& Parnell, J.A. (1996). Strategic planning emphasis and planning satisfaction in small firms: An empirical investigation. *Journal of Business Strategies,* 120, 131-139.

Lenz, R. T. (1980). Environment, strategy, organization structure and performance: patterns in one industry. *StrategicManagement Journal*, 1,209-226.

McCann, J. (2004). The changing definition of organizational effectiveness. *Human Resource Planning,* 1(27), 17-30.

Machuki, V.N. (2011). External environment, strategy co-alignment, firm level institutions and performance of publicly quoted companies in Kenya. *Unpublished PhD thesis*, University of Nairobi.

Machuki, V.N.,&Aosa, E. (2011).The influence of external environment on the performance of publicly quoted companies in Kenya.*Business Administration and Management Journal,* 1(7), 205-218.

Meyer, J. P., Stanley, D.J., Herscovitch, L.,&Topolynyscky (2002). Affective, continuous and normative commitment to the organization: A meta-analysis of antecedent, correlates and consequences. *Journal of Vocational Behaviour,* 61, 20-62.

Muchemi, A.W. (2013). Top management team diversity and performance of commercial banks in Kenya. *Unpublished PhD thesis*, University of Nairobi.

Namada, J.M. (2013). Strategic planning systems, organizational learning and performance of firms in export processing zones in Kenya. *Unpublished PhD thesis*, University of Nairobi.

Ombaka, B. E. (2014). Resources, external environment, innovation and performance of insurance companies in Kenya.*Unpublished PhD thesis, University of Nairobi.*

Orucho, M.N. (2014). Higher education-economic sector linkage strategies, competitive forces and performance of the public and private universities incorporated in Kenya. *Unpublished PhD thesis,* University of Nairobi.

Oyewobi, L.O., Windapo, A.O.,&Rotimi, J.O.B. (2002).The effects of business environment on corporate strategies and performance of construction organizations.*Association of Researchers in Construction Management,* 691-701.

Ozsoy, C. (2011). The contribution of higher learning to economic development. *University Journal*, 14, 5-9.

Pfeffer, J.,&Salancik, G.R. (1978). The external control of organizations: A resource dependence perspective. Harper and Row, New York.

Porter, M. E. (1981). The contributions of industrial organization to strategic management. *The Academy of Management Review,* 609-620.

Sabina, N. (2009). Top management team diversity: A review of theories and methodologies. *International Journal of Management Review,* 22, 1468-1470.

Schendel, D., &Hatten, K. J. (1972). Business Policy or Strategic Management: A Broader View foran Emerging Discipline.*Academy of Management Proceedings*, 99 –102.

Sifuna, D.N. (1998). The governance of Kenyan public universities. *Research in Post-secondary Education Review,* 3, 2-8.

Sink, S.,& Turtle, T. (1989). Planning and measurement in your organization of the future. Industrial Engineering and Management Press, Norcross G.A.

Teece, D. J., Pisano, G.,&Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal,* 18(7), 509–33.

Tushman, M.,&Romanelli, E. (1985). Organizational evolution: A metamorphosis model of convergence and re-orientation. *Research in Organizational Behaviour,* 7, 171-222.

UNESCO (2014). *Rankings and accountability in higher education: Uses and advances* (UNESCO publishing 7, Place de Fontonoy, 75352 07 SP, France.

Velcu, N. (2009). Exploring the effects of ERP systems on organizational performance: Evidence from Finnish companies. *The Journal of Industrial Management and Data Systems,* 9, 1316-1334.