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TABLE OF CONTENTS

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Does Actual Taxable Income Contain Valuable Information For Shareholders? Evidence From Finland

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ABSTRACT

There is much discussion about usefulness of book-tax differences in evaluating firm performance. This study contributes to this discussion assessing the information content of estimated and actual taxable income for Finnish corporate data from 2012-2013. The findings for year 2012 show that book income has higher explanation power of stock returns than other income concepts. However, estimated taxable income does not bring any incremental explanatory power to book income whereas actual taxable income contains more relative and also incremental information. The findings show that the explanation power of estimated taxable income in high earnings quality firms is comparable with that of book income but insignificant in low earnings quality firms. On the contrary, the explanation power of actual taxable income is lower in high earnings quality firms and higher in low earnings quality firms. For high earnings quality firms, neither of the taxable income concepts brings incremental information to book income. For low earnings quality firms, estimated taxable income does not bring any incremental information to book income whereas actual taxable income does. For these firms, actual taxable income brings significant incremental information also to estimated taxable income. For year 2013, anticipated significant tax rate reduction largely mitigated the relevant relationships between returns and income concepts.

Keywords: Estimated taxable income; actual taxable income; pre-tax book income; Helsinki Stock Exchange; stock returns

JEL classification: G Financial Economics; G1 General Financial Markets; G10 General; M Business Administration and Business Economics, Marketing, Accounting & Personnel Economics; M4 Accounting and Auditing; M40 General; M41 Accounting; H Public Economics; H2 Taxation, Subsidies, and Revenue; H25 Business Taxes and Subsidies

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Does actual taxable income contain valuable information for shareholders? Evidence from Finland

INTRODUCTION

Empirical studies on taxation suggest that book-tax differences are useful measures in evaluating firm performance (Hanlon, 2005; Lev & Nissim, 2004; Ayers, Jiang & Laplante, 2009; Hanlon & Heitzman, 2010). Shevlin (2002) and Hanlon, Laplante & Shevlin (2005) report that book income explains annual stock returns better than estimated taxable income that is calculated using financial statement disclosures. However, they also report that this estimated taxable income brings incremental explanatory power to book income indicating that taxable income summarizes information reflected in stock returns that is not captured by book income. Ayers, Jiang & Laplante (2009) show that the relative and incremental information content of estimated taxable income to book income is lower for high tax planning firms and higher for low earnings quality firms. However, there are still limited studies considering taxable income as an alternative performance measure. Especially, there is very little research on the information content of actual taxable income due to the difficult access to corporate tax information that is almost always not public. In Finland, corporate tax information came public in year 2011 making it possible to use actual tax figures in research. The objective of this research is to contribute to current taxation research assessing the information content of both estimated and actual taxable income using Finnish corporate data from 2011-2013.

There is an extensive literature on book-tax conformity dealing with the publicity of corporate tax information (Ayers, Jiang & Laplante, 2009). The supporters of mandatory book-tax conformity argue that the dual system of reporting book and taxable income is an area of creative decision making leading to that the taxable income does not reflect the actual performance of a firm (Desai, 2006: 8). They argue that aggressive tax planning may lead to significant book-tax differences making taxable income unable to reflect performance. Consequently, they argue that firms should either pay tax on the reported financial income or at least should disclose tax information to investors. These arguments have been an object for keen discussion by regulators, practitioners, and academics (Hanlon & Shevlin, 2003; Mills & Plesko, 2003). However, there is plenty of evidence suggesting that taxable income may reflect performance, especially for firms with lower earnings quality (Revsine, Collins & Johnson, 2002; Lev & Nissim, 2004; Hanlon, 2005; Ayers, Jiang & Laplante, 2009). Therefore, taxable income may be a useful measure of income when book income suffers from low quality of earnings.

There is only little evidence on relation between estimated taxable income and actual taxable income. Plesko (2000) and Plesko (2006) report that while commonly used average tax rate may introduce substantial bias into analyses of tax incidence, taxable income estimated from financial statement is highly correlated with actual taxable income indicating that estimated taxable income is a satisfactory proxy for actual taxable income. However, it is still an unanswered question whether actual taxable income contains useful relative and incremental information for investors to book income and estimated taxable income when the quality of financial statement information is low. The purpose of this study is to bring evidence of the potential relative and incremental information contained by estimated and actual taxable income to book income when explaining return to security for 100 Finnish firms traded in Helsinki Stock Exchange (Nasdaq Nordic) in year 2012 and 2013.

For year 2012, evidence shows that book income has higher explanation power of stock returns than other income concepts. However, estimated taxable income does not bring any incremental explanatory power to book income whereas actual taxable income contains more relative and incremental information. The explanation power of estimated taxable income in high earnings quality firms is comparable with that of book income but insignificant in low earnings quality firms. On the contrary, the explanation power of actual taxable income is lower in high earnings quality firms and higher in low earnings quality firms. For high earnings quality firms, neither of the taxable income concepts brings incremental information to book income. For low earnings quality firms, estimated taxable income does not bring any incremental information to book income whereas actual taxable income does. For these firms, actual taxable income brings significant incremental information also to estimated taxable income.

The study is organized in the following way. First, the background, the motivation, and the objective of the study are discussed in this introductory section. The second section shortly presents the framework for the analysis and discusses the information content of taxable income concepts. In this section, also the research hypotheses (for the information content in general and in low information quality firms) are extracted. The third section presents the data and statistical methods of the study. The study makes use of a similar approach than Ayers, Jiang & Laplante (2009) in assessing the relative and incremental information content of the tax concepts. The data are gathered from 100 public firms traded in the Helsinki Stock Exchange (HSE) from the Orbis data base of Bureau Van Dijk (BvD) (financial information) and from the tax authority (actual taxable income and taxes). Corporate tax information is public only in a couple of countries (Japan, Norway, Sweden, and Finland). Finland has the most robust corporate tax disclosure making available information on taxable income, capital income and total taxes payable which makes the study unique. The fourth section reports the empirical findings while the last section discusses these findings and concludes the study.

EXTRACTION OF RESEARCH HYPOTHESES

General hypotheses on the income concepts

Managers use book and tax income reporting for different purposes although these concepts can be related to each other. If financial performance is excellent, managers may report lower book income for political cost purposes or to increase possibilities to report also lower tax income to minimize taxes. If financial performance is not good, managers may have incentives to report higher book income for example due to bond covenants or compensation contracts. However, at the same time they can have motivation to report lower taxable income for tax purposes. Because managers have different incentives in reporting book and taxable income which both serve as a summary performance measure based on the set of rules of their own, each measure may include important information for the stakeholders of the firm (tax authorities and the users of financial statement analysis). These measures should be informative if the shocks to taxable income and book and their managed components are not identical (Lev & Nissim, 2004; Ayers, Jiang & Laplante, 2009). If the shocks are identical, they do not contain incremental information over each other. Thus, the relevant question from the perspective of this study is whether taxable income concepts contain this kind of incremental information reflecting stock returns and being therefore useful for the shareholders of the firm.

Hanlon (2005) and Lev and Nissim (2004) show that book-tax differences are useful measures in evaluating firm performance (earnings growth, future stock returns, and earnings persistence). Shevlin (2002) and Hanlon, Laplante, and Shevlin (2005), and Ayers, Jiang & Laplante (2009) find that while book income better explains annual stock returns than taxable income (estimated using financial statement disclosures), estimated taxable income has significant incremental explanatory power to book income. In practice, there are several problems in estimating tax liability for a firm and consequently taxable income from financial statements (Hanlon, 2003). These problems may weaken the relationship between the estimated taxable income and the actual taxable income. Plesko (2000) and Plesko (2006) report that the commonly used average tax rate may introduce substantial bias into analyses of tax incidence. However, taxable income estimated from financial statement is highly correlated with actual taxable income indicating that estimated taxable income is a satisfactory proxy for actual taxable income. This kind of close relationship can lead to similar findings for estimated and actual taxable income concepts. Therefore, the following general research hypotheses are presented:

Hypothesis 1a: Estimated taxable income has incremental explanatory power to book income.
Hypothesis 1b: Actual taxable income has incremental explanatory power to book income.
Hypothesis 2a: Actual taxable income does not have incremental explanatory power to estimated taxable income.
Hypothesis 2b: Estimated taxable income and actual taxable income have equal relative explanatory power to estimated taxable income.

Hypotheses on the effects of low information quality

The information content of estimated taxable income and actual taxable income may depend on the quality of earnings information. If deferred tax liability increases, it can indicate deteriorating information quality (Revsine, Collins & Johnson, 2002). The effects of low information quality on the information content of taxable income concepts depend on the source of lower earnings quality and the similarity of the effects (shocks) on book income and taxable income. If the low quality comes from transitory events (being value relevant with low persistence) reflected in book income but not in taxable income, then the relative ability of current year taxable income to explain returns can actually decrease. Thus, it is an empirical question whether taxable income enhances information content when earnings quality is lower (Ayers, Jiang & Laplante, 2009).

Hanlon, Laplante & Shevlin (2005) and Ayers, Jiang & Laplante (2009) find that book income explains annual stock returns better than the taxable profit, on average, and for firms with large abnormal accruals. Ayers, Jiang & Laplante (2009) find that the relative information content of estimated taxable income to book income for firms with large abnormal accruals is significantly larger compared to other firms. However, they report that the incremental information content of taxable income, on average, is moderate. Their conclusions from incremental information content tests for firms with lower information quality are similar than for the relative information content but the incremental information content of taxable income is quite modest. Thus, the following hypotheses are presented on the effect of information quality:
Hypothesis 3a: Estimated taxable income has higher relative explanatory power to book income for firms with lower earnings quality.
Hypothesis 3b: Actual taxable income has higher relative explanatory power to book income for firms with lower earnings quality.
Hypothesis 4a: Estimated taxable income has higher incremental explanatory power to book income for firms with lower earnings quality.
Hypothesis 4b: Actual taxable income has higher incremental explanatory power to book income for firms with lower earnings quality.
Hypothesis 4c: Actual taxable income does not have higher incremental explanatory to estimated taxable income for firms with lower earnings quality.

DATA AND STATISTICAL METHODS

Empirical data

The data of the study consists of firms which are traded in the Helsinki Stock Exchange (HSE) during the years 2011-2014. HSE was founded in 1912 as a nonprofit cooperative organization but today it is the part of NASDAQ OMX Exchanges. The number of listed firms in HSE was in the research period at year-end 122-124. The market value of HSE at the end of years 2013 and 2014 was 162 and 168 Billion Euro, respectively. Financial institutions were excluded from the data. Furthermore, all (new and delisted) firms with missing values of the research variables were excluded from the sample. Finally, the sample consisted of 100 listed companies with a skew size distribution. The average size of sample firms (n = 100) as measured by total assets at end of 2013 was 1683.1 Million Euro whereas the median was only 255.9 Million Euro. The data were gathered from three sources. Thus, stock price data were got from Kauppalehti (www.kauppalehti.fi), financial statement information from the Orbis data base of Bureau Van Dijk (BvD), and all actual tax data from the tax authority. Corporate income tax information has been publicly released beginning from 2011 making available information on taxable income, capital income and total taxes payable. Finnish companies also disclose reconciliations between book income and tax income.

The research period suffers from a high volatility due to the effects of global financial crisis beginning already in 2008 in Finland. The second contraction started after the financial crisis in the second quarter of 2012 resulting in a period of prolonged recession. In years 2012-2013 Finland's GDP declined by 1.0% and 1.4% respectively and confidence indicators fell sharply. The effects of the crisis were visible also in the market values of the firms traded in HSE. The change in Helsinki all-share index (%) was in years 2011-2014 respectively -30.1, 8.3, 26.5, and 5.7. Consequently, most firms traded at HSE suffered from financial distress during the period. The difficult economic situation has obviously had an influence on the income concepts and their relationships to stock returns, and to each other. In fact, 44 (46) out of 100 firms did not pay any income taxes for 2012 (2013) so that actual taxable income was zero for these firms. Therefore, the statistical tests are made also for the groups with non-zero income tax (n=56 or 54) for 2012 and 2013. The volatility of economic conditions in Finland and especially in HSE stock market during the research period should be taken into account when assessing the findings of this study.

The income concepts are defined as in most earlier studies to maintain comparability. Taxable income is in taxation research calculated or estimated in many different ways depending on available information (see Hanlon & Heitzman, 2010). In this study, estimated taxable income *ETI(j,t)* for firm *j* and year *t* is calculated as follows:

$$ETI(j,t) = \frac{CTE(j,t) + DTE(j,t)}{f} \tag{1}$$

where *CTE(j,t)* is current income tax expense (payable), *DTE(j,t)* is deferred income tax expense, and *f* is the corporate income tax rate in Finland. Book income *PTBI(j,t)* is calculated here as a pre-tax measure of book income to be consistent with estimated taxable income *ETI(j,t)*. Finally, actual taxable income *ATI(j,t)* is the income which the actual annual income tax is paid on. The corporate tax rate (*f*) in Finland has not been stable in years 2011-2014 being respectively 0.26, 0.245, 0.245, 0.20. The large decrease of tax rate in 2013-2014 was fully known to market participants in Autumn of 2013 which may have affected taxation behavior in that year.

Ayers, Jiang & Laplante (2009) used abnormal accruals estimated by the modified Jones model to reflect the quality of earnings information although it is subject to criticism (Dechow, Ge & Schrand, 2010). However, in this study earnings quality is measured by absolute total accruals partly due to exceptionally unstable economic conditions during the research period 2011-2013. The performance of this measure is based on the expectation that extreme accruals refer to low quality because they represent a less persistent component of earnings. Dechow, Ge & Schrand (2010) showed that absolute accruals are strongly positively correlated with other accrual measures and negatively with smoothness proxies. When analyzing deferred taxes in detecting earnings management, Phillips, Pincus & Rego (2003) reported that total accruals is incrementally useful in several settings, while the performance of abnormal accrual measures is mixed. Total accruals (*TACC*) are in this study calculated in the traditional way as the change in current assets, plus the change in short-term debt, less the change in current liabilities, the change in cash, and depreciation and amortization expense. Finally, total accruals are deflated by total assets. Ayers, Jiang & Laplante (2009) identify firms as low earnings quality by designating firms ranked in the highest 20% of absolute abnormal accruals as having low earnings quality. However, in this approach firms are in 2012 and 2013 classified in two equal groups using the median (50%) as cutoff because of the small number of firms (n=50+50). Ayers, Jiang & Laplante (2009) identified as low earnings quality firms which were ranked in the highest 20% of absolute abnormal accruals for each year.

Statistical methods: relative explanatory power

The statistical methods used in this study have similarities with those adopted by Ayers, Jiang & Laplante (2009) to ensure comparability of findings. However, the present data include observations of income concepts only from two years (2012 and 2013) which does not allow us to test hypotheses over time. A long-window tests are used for the information content of book income, estimated taxable income, and actual taxable income for all firms in *H1*-*H2* and low earnings quality firms in *H3*-*H4* relative to all other firms. As in Ayers, Jiang & Laplante (2009), information content is defined here as the ability of the income concepts to capture information that affects stock returns. Because the focus of the analysis is set on the ability of the concepts to capture all information that affects stock returns, and not on the causality, a long-window association tests are utilized. The different statistical association tests are used separately to test separately relative and incremental information content of income concepts in explaining stock returns. The present analyses are based on a 23-month long window testing ending 11 months after fiscal year to be sure that market participants have received all annual tax income numbers. In Finland, corporate tax information is released in the beginning of next November when the accounting year ends at the end of the year. The long window based on the long delay in receiving actual tax information obviously weakens the ability of the income concepts to explain returns. Therefore, it is expected that the explanation power will not be high.

Further, following Ayers, Jiang & Laplante (2009) two different tests are utilized to assess the research hypotheses. The first set of hypotheses on the relative explanatory power of income concepts (*H2b*, *H3a*, and *H3b*) are tested as the adjusted R^2 in regressions of stock returns on each concept. The following three equations are estimated for each group of firms (all firms, zero tax firms, low earnings quality firms, high earnings quality firms):

$$\begin{aligned}
rank(R(j,t)) &= \alpha_0 + \alpha_1 rank(\Delta PTBI(j,t)) + \varepsilon(j,t) \\
rank(R(j,t)) &= \alpha_0 + \alpha_1 rank(\Delta ETI(j,t)) + \varepsilon(j,t) \\
rank(R(j,t)) &= \alpha_0 + \alpha_1 rank(\Delta ATI(j,t)) + \varepsilon(j,t)
\end{aligned} \tag{2}$$

where *R(j,t)* the return to security *j* over the 23-month window (transformed to annual rate) starting at the beginning of fiscal year *t* and ending eleven months after the end of year *t*. The changes in income concepts *(ΔPTBI(j,t)*, *ΔETI(j,t)*, and *ΔATI(j,t*)) refer to the annual differences of the measures and are scaled by the market value of equity measured at the start of fiscal year *t*. The specification (2) based on changes of income concepts is used to mitigate concerns associated with levels regressions like omitted variables and heteroscedasticity (Kothari, 2001; Ayers, Jiang & Laplante, 2009). Finally, stock return and income concepts in (2) have transformed to their ranks to control for obvious changes in market volatility (cf. Ali & Whang, 2000). Therefore, R^2 in the regressions correspond to the squared Spearman coefficient of

correlation. This approach does not assume a linear relation between stock returns and income concepts and is useful in avoiding extreme values of variables.
The test statistics used in testing the relative explanatory power (*REP*) of income concepts are based on the adjusted R^2 from equations (2) calculated for each group of firms separately for years 2012 and 2013 in the following way:

$$REP(ETI/PTBI) = \frac{Adjusted\ R^2(\Delta ETI)}{Adjusted\ R^2(\Delta PTBI)} \quad (3)$$
$$REP(ATI/PTBI) = \frac{Adjusted\ R^2(\Delta ATI)}{Adjusted\ R^2(\Delta PTBI)}$$
$$REP(ATI/ETI) = \frac{Adjusted\ R^2(\Delta ATI)}{Adjusted\ R^2(\Delta ETI)}$$

The relative power indices *REP* are calculated separately for years 2012 and 2013 to assess the effect of high volatility in the market. The indices are useful when allowing us to compare the information content of two income concepts holding returns for the firm constant (Ayers, Jiang & Laplante, 2009). For *H2b*, it is expected that *REP(ETI/PTBI)* is equal to *REP(ATI/PTBI)*. It also implies that *REP(ATI/ETI)* is equal to unity. For *H3a* and *H3b*, it is predicted that respectively *REP(ETI/PTBI)* and *REP(ATI/PTBI)* are higher for firms with lower earnings quality. Furthermore, the equality of rank correlations of return to *ΔETI* and *ΔATI* in the same sample is evaluated by *t*-test for comparing two non-independent correlations with one variable in common (Williams, 1959) and in different sub-samples using the *z*-test based on the Fisher r-to-z transformation (Cohen & Cohen, 1983).

Statistical methods: incremental explanatory power
The second set of hypotheses on the incremental explanatory power of income concepts (*H1a*, *H1b*, *H2a*, *H4a*, and *H4b*) are also tested as the adjusted R^2 in regressions of stock returns. However, in these tests the incremental explanatory power of including another income concept in a regression of an income concept on stock returns is assessed. The following three regression equations are estimated for each group of firms (all firms, zero tax firms, low earnings quality firms, high earnings quality firms):

$$rank(R(j,t)) = \beta_0 + \beta_1 rank(\Delta PTBI(j,t)) + \beta_2 rank(\Delta ETI(j,t)) + \varepsilon(j,t)$$
$$rank(R(j,t)) = \beta_0 + \beta_1 rank(\Delta PTBI(j,t)) + \beta_2 rank(\Delta ATI(j,t)) + \varepsilon(j,t)$$
$$rank(R(j,t)) = \beta_0 + \beta_1 rank(\Delta ETI(j,t)) + \beta_2 rank(\Delta ATI(j,t)) + \varepsilon(j,t) \quad (4)$$

where all concepts are defined as earlier.
The incremental explanatory power (*IEP*) of income concepts is tested by the difference between the adjusted R^2 from equation (2) and the adjusted R^2 from equation (4) for the concepts in question. Thus, the incremental explanatory is measured by the following differences:

$$IEP(PTBI + ETI) = Adjusted\ R^2(\Delta PTBI + \Delta ETI) - Adjusted\ R^2(\Delta PTBI)$$
$$IEP(PTBI + ATI) = Adjusted\ R^2(\Delta PTBI + \Delta ATI) - Adjusted\ R^2(\Delta PTBI)$$
$$IEP(ETI + ATI) = Adjusted\ R^2(\Delta ETI + \Delta ATI) - Adjusted\ R^2(\Delta ETI) \quad (5)$$

where the former terms in the right hand side of equation refer to the regression equations in (4) whereas the latter terms refer to equation (2). For *H1a* and *H1b*, it is expected that *IEP(PTBI+ETI)* and *IEP(PTBI+ATI)* respectively are positive. For *H2a*, it is predicted that

IEP(ETI+ATI) equals zero. *H4a* and *H4b* assume that *IEP(PTBI+ETI)* and *IEP(PTBI+ATI)* respectively are higher for firms with lower earnings quality whereas *H4c* expects that *IEP(ETI+ATI)* is equal for both earnings quality groups of firms. The incremental information content is also assessed by the *t*-tests on the coefficients in Equation (4) following the traditional random-walk specification (Biddle, Seow & Siegel, 1995).

EMPIRICAL RESULTS

Descriptive statistics

Table 1 presents descriptive statistics for the research variables for the sample (n=100). The table shows that the average level of absolute accruals (*TACC*) has stayed stable over 2012-2013. The distributions of the return variables (*R*) and the differences in income variables (*PTBI*, *ETI*, and *ATI*) are strongly leptokurtic reflected by a high kurtosis. The return variables (*R*) follow a highly positively skewed distributions. Thus, the use of the rank variables in the regression equation is well justified due to the strong deviations from normality observed in the research variables. The mean and median values of the differences in pre-tax book income variables (*PTBI*) are negative reflecting conditions of financial distress. The mean values of the differences in estimated taxable income (*ETI*) are positive whereas median values are negative. The mean values of the differences in actual taxable income (*ATI*) are slightly negative but the median values are zero due to the large number of zero tax firms. The absolute differences in pre-tax book income (*PTBI*) are on average clearly higher than those in estimated taxable income (*ETI*) and actual taxable income (*ATI*). The average absolute differences in the actual taxable profit (*ATI*) are clearly smallest which may be at least partly due to the large number of zero tax firms.

Table 1. Descriptive statistics of the research variables.

	Mean	Std. Deviation	Median	Skewness	Kurtosis	Number of firms
TACC(2012)	0,076	0,110	0,044	4,029	20,185	100
TACC(2013)	0,083	0,107	0,044	2,412	6,110	100
R(2012)	12,494	62,209	6,250	4,751	32,416	100
R(2013)	10,526	67,532	3,275	5,731	44,189	100
ΔPTBI(2012)	-3,110	36,501	-0,068	-1,818	17,055	100
ΔPTBI(2013)	-1,982	35,843	-1,488	-1,292	13,484	100
ΔETI(2012)	0,315	24,402	-0,013	3,558	32,565	100
ΔETI(2013)	0,925	42,265	-0,373	-2,588	30,563	100
ΔATI(2012)	-0,260	6,899	0,000	-1,656	23,609	100
ΔATI(2013)	-0,258	3,219	0,000	0,717	12,779	100

Legend:

TACC(year) = Total absolute accruals deflated by total assets.

R(year) = Stock return over the 23-month return window transformed on annual basis.

ΔPTBI(year) = Difference in 100 · pre-tax book income deflated by market value.

ΔETI(year) = Difference in 100 · estimated taxable income deflated by market value.

ΔATI(year) = Difference in 100 · actual taxable income deflated by market value.

Relative explanatory power

Table 2 presents the regression estimates for the relative information content of pre-tax book income, estimated taxable income, and actual taxable income (Equation 2). The table also reports the *REP* measures for each pair of income concepts (Equation 3). The relative explanatory power of pre-tax book income (*PTBI*) is quite high in both years and significantly higher than that of other concepts. The power is clearly higher for year 2012 than for year 2013. The adjusted R^2 for the equation of actual taxable income (*ATI*) is in year 2012 higher than for the estimated taxable income (*ETI*). However, the power is negative in 2013 for both concepts. Practically, these concepts do not show for year 2013 explanation power at all. Estimated taxable income (*ETI*) explains 45.9% of the return variation explained by book income (*PTBI*) in 2012 whereas the percent is 57.7% for the actual taxable income (*ATI*). These results at least slightly contradict with *H2b* on the equality of the relative explanatory power of estimated taxable income (*ETI*) and actual taxable income (*ATI*) although the difference in their correlations to return is not statistically significant (p = 0.413). For year 2013, the results are inconclusive due to negative values of R^2.

Table 2. Relative information content of estimated and actual taxable income to book income for all sample firms.

Year	Number of firms	Coefficient of DPTBI§	p-value of coefficient	R^2(ΔPTBI)&	Coefficient of ΔETI§	p-value of coefficient	R^2(ΔETI)&	Coefficient of ΔATI§	p-value of coefficient	R^2(ΔATI)&
2012	100	0,353	0,000	0,111	0,250	0,014	0,051	0,271	0,006	0,064
2013	100	0,256	0,012	0,053	0,083	0,425	-0,004	0,047	0,650	-0,008

Year	Number of firms	R^2(ΔETI)/ R^2(ΔPTBI)	R^2(ΔATI)/ R^2(ΔPTBI)	R^2(ΔATI)/ R^2(ΔETII)
2012	100	0,459	0,577	1,255
2013	100	-0,075	-0,151	2,000

Legend:

§ = Coefficient from a regression of return (rank) on the change (rank) in pre-tax book income, estimated taxable income or actual taxable income (Equation 2).

& = Adjusted R^2 from a regression of return (rank) on the change (rank) in pre-tax book income, estimated taxable income or actual taxable income (Equation 2).

ΔPTBI = Difference in 100 · pre-tax book income deflated by market value.

ΔETI = Difference in 100 · estimated taxable income deflated by market value.

ΔATI= Difference in 100 · actual taxable income deflated by market value.

In years 2012 and 2013, the majority of firms (56 and 54 firms) report zero actual taxable income and do not pay income taxes at all. Table 3 shows the results on the relative explanation power only for the firms which have paid income taxes for these years (non-zero tax firms). For the non-zero tax firms, the explanation power in year 2012 has considerably increased for pre-tax book income (*PTBI*) and estimated taxable income (*ETI*) in comparison to all firms. However, for actual taxable income (*ATI*) the power has to some degree decreased. The relative explanation power (*REP*) for *ETI* is 57.7% but only 22.9% for *ATI*. Thus, *REP*s for *ETI* and *ATI* in this sub-sample are not equal which contradicts with *H2b*. However, the difference in their (rank) correlations to return is not statistically significant (p = 0.210). For this part of sample, all income concepts report negative adjusted R^2 for 2013. Therefore, any of the income concepts does not include any explanation power on stock returns in that year.

Table 3. Relative information content of estimated and actual taxable income to book income for non-zero tax firms.

Year	Number of firms	Coefficient of ΔPTBI§	p-value of coefficient	R^2(ΔPTBI) &	Coefficient of ΔETI§	p-value of coefficient	R^2(ΔETI) &	Coefficient of ΔATI§	p-value of coefficient	R^2(ΔATI) &
2012	56	0,476	0,000	0,201	0,374	0,006	0,116	0,258	0,062	0,046
2013	54	0,117	0,412	-0,006	0,071	0,618	-0,014	-0,013	0,927	-0,019

Year	Number of firms	R^2(ΔETI)/ R^2(ΔPTBI)	R^2(ΔATI) / R^2(ΔPTBI)	R^2(ΔATI)/ R^2(ΔETII)
2012	56	0,577	0,229	0,397
2013	54	2,333	3,167	1,357

Legend:

§ = Coefficient from a regression of return (rank) on the change (rank) in pre-tax book income, estimated taxable income or actual taxable income (Equation 2).

& = Adjusted R^2 from a regression of return (rank) on the change (rank) in pre-tax book income, estimated taxable income or actual taxable income (Equation 2).

ΔPTBI = Difference in 100 · pre-tax book income deflated by market value.

ΔETI = Difference in 100 · estimated taxable income deflated by market value.

ΔATI = Difference in 100 · actual taxable income deflated by market value.

Table 4 reports the relative explanation power of the income concepts separately for low accruals (50%) (high earnings information quality) and high accruals (50%) firms (low earnings information quality). For year 2012, the explanation power of pre-tax book income (*PTBI*) is quite comparable for low accruals firms and high accruals firms so that the correlations to return do not statistically differ (p = 0.429). The explanation power of estimated taxable income (*ETI*) is for low accruals firms high in 2012 making 91.8% of that of *PTBI*. However, *REP* is close to zero (1.1%) for high accruals firms contradicting with *H3a*. The difference in correlation to return between low and high accruals firms is almost statistically significant (p = 0.152). For actual taxable return (*ATI*), the results give support to *H3b*, since its *REP* is for high accruals firms 89.7% being for low accruals firms only 40.9%. The difference of the correlation of *ATI* to return between the groups is however not statistically significant (p = 0.382).

For year 2013, the explanation power of *PTBI* is for both groups lower than for year 2012. For *ETI*, the power is negative for both low and high accruals firms so that the findings are inconclusive for *H3a*. For *ATI*, the power in year 2013 is about zero for low accruals firms but positive for high accruals firms supporting *H3b*. In year 2013, its *REP* for high accruals firms is 46.7% clearly exceeding that for low accruals firms (-20.0%). The difference in its correlation to return between the accruals groups is statistically significant (p = 0.058) for year 2013.

Table 4. Relative information content of estimated and actual taxable income to book income for high and low accruals firms.

Panel 1. Low accrual firms.

Year	Number of firms	Coefficient of ΔPTBI§	p-value of coefficient	R^2(ΔPTBI) &	Coefficient of ΔETI§	p-value of coefficient	R^2(ΔETI) &	Coefficient of ΔATI§	p-value of coefficient	R^2(ΔATI)&
2012	50	0,378	0,011	0,110	0,366	0,014	0,101	0,271	0,075	0,045
2013	50	0,239	0,103	0,035	0,028	0,851	-0,020	-0,123	0,424	-0,007

Panel 2. High accural firms.

Year	Number of firms	Coefficient of ΔPTBI§	p-value of coefficient	R^2(ΔPTBI) &	Coefficient of ΔETI§	p-value of coefficient	R^2(ΔETI) &	Coefficient of ΔATI§	p-value of coefficient	R^2(ΔATI)&
2012	50	0,336	0,022	0,087	0,152	0,309	0,001	0,307	0,028	0,078
2013	50	0,274	0,075	0,045	0,135	0,387	-0,005	0,215	0,156	0,021

Panel 3. Low accruals firms.

Year	Number of firms	R^2(ΔETI)/ R^2(ΔPTBI)	R^2(ΔATI) / R^2(ΔPTBI)	R^2(ΔATI)/ R^2(ΔETII)
2012	50	0,918	0,409	0,446
2013	50	-0,571	-0,200	0,350

Panel 4. High accruals firms.

Year	Number of firms	R^2(ΔETI)/ R^2(ΔPTBI)	R^2(ΔATI) / R^2(ΔPTBI)	R^2(ΔATI)/ R^2(ΔETII)
2012	50	0,011	0,897	78,000
2013	50	-0,111	0,467	-4,200

Legend
:
§ = Coefficient from a regression of return (rank) on the change (rank) in pre-tax book income, estimated taxable income or actual taxable income (Equation 2).
& = Adjusted R^2 from a regression of return (rank) on the change (rank) in pre-tax book income, estimated taxable income or actual taxable income (Equation 2).
ΔPTBI = Difference in 100 · pre-tax book income deflated by market value.
ΔETI = Difference in 100 · estimated taxable income deflated by market value.
ΔATI = Difference in 100 · actual taxable income deflated by market value.

Incremental explanatory power

Table 5 presents the incremental information content for the income concepts. The results indicate that estimated taxable income (*ETI*) does not contain any incremental explanation power to pre-tax book income (*PTBI*) in either year. For both years, *IEP* of *ETI* is negative and its coefficient in mutual regression with *PTBI* (Equation 4) is statistically insignificant contradicting with *H1a*. However, for year 2012 IEP of ATI is positive (2%) and its regression coefficient is significant (p = 0.078) supporting *H1b*. For year 2013, *ATI* does not however contain any incremental explanation power to *PTBI* contradicting with *H1b*. For year 2012, ATI contains incremental information to *ETI* leading to positive *IEP* (3.2%) and statistically significant regression coefficients. Thus, for that year, the findings contradict with *H2a*. For 2013, however, neither *ETI* nor *ATI* has a significant coefficient in mutual regression (Equation 4) and *IEP* is negative which does not contradict with the hypothesis but being merely inconclusive.

Table 6 reports the results on incremental information for the non-zero tax firms. The findings show that neither *ETI* nor *ATI* includes any incremental information to *PTBI* in either year, since each *IEP* is negative. Thus, the results contradict with *H1a* and *H1b*. Similarly, *ATI* does not contain any incremental information to *ETI* conforming *H2a*. Thus, the incremental information contained by *ATI* to *PTBI* (in 2012) vanishes when only non-zero tax firms are considered.

Table 5. Incremental information content of estimated and actual taxable income to book income for all sample firms.

Panel 1. Incremental information of ΔETI over ΔPTBI.

Year	Number of firms	Coefficient of ΔPTBI§	p-value of coefficient	R^2(ΔPTBI) &	Coefficient of ΔPTBI#	p-value of coefficient	Coefficient of ΔETI#	p-value of coefficient	R^2(ΔPTBI + ΔETI)&
2012	100	0,353	0,000	0,111	0,318	0,010	0,050	0,625	0,105
2013	100	0,256	0,012	0,053	0,252	0,018	0,014	0,892	0,043

Panel 2. Incremental information of ΔATI over ΔPTBI.

Year	Number of firms	Coefficient of ΔPTBI§	p-value of coefficient	R^2(ΔPTBI) &	Coefficient of ΔPTBI#	p-value of coefficient	Coefficient of ΔATI#	p-value of coefficient	R^2(ΔPTBI + ΔATI)&
2012	100	0,353	0,000	0,111	0,295	0,004	0,177	0,078	0,131
2013	100	0,256	0,012	0,053	0,257	0,014	-0,006	0,952	0,043

Panel 3. Incremental information of ΔATI over ΔETI.

Year	Number of firms	Coefficient of ΔETI§	p-value of coefficient	R^2(ΔETI)&	Coefficient of ΔETI#	p-value of coefficient	Coefficient of ΔATI#	p-value of coefficient	R^2(ΔETI + ΔATI)&
2012	100	0,250	0,014	0,051	0,182	0,082	0,215	0,037	0,083
2013	100	0,083	0,425	-0,004	0,077	0,466	0,035	0,745	-0,013

Panel 4. Summary measures of incremental information.

Year	Number of firms	R^2(ΔPTBI + ΔETI) - R^2(ΔPTBI)	R^2(ΔPTBI + ΔATI) - R^2(ΔPTBI)	R^2(ΔETI + ΔATI) - R^2(ΔETI)
2012	100	-0,006	0,020	0,032
2013	100	-0,010	-0,010	-0,009

Legend:

§ = Coefficient from a regression of return (rank) on the change (rank) in pre-tax book income, estimated taxable income or actual taxable income (Equation 4).
# = Coefficient from a regression of return (rank) on the change (rank) in pre-tax book income and estimated taxable income or actual taxable income (Equation 4).
& = Adjusted R^2 from a regression of return (rank) on the change (rank) in pre-tax book income, estimated taxable income and/or actual taxable income (Equation 4).

ΔPTBI = Difference in 100 · pre-tax book income deflated by market value.

ΔETI = Difference in 100 · estimated taxable income deflated by market value.

ΔATI = Difference in 100 · actual taxable income deflated by market value.

Table 6. Incremental information content of estimated and actual taxable income to book income for non-zero tax firms.

Panel 1. Incremental information of ΔETI over ΔPTBI.

Year	Number of firms	Coefficient of ΔPTBI§	p-value of coefficient	R^2(ΔPTBI)&	Coefficient of ΔPTBI#	p-value of coefficient	Coefficient of ΔETI#	p-value of coefficient	R^2(ΔPTBI + ΔETI)&
2012	56	0,476	0,000	0,201	0,407	0,017	0,106	0,524	0,192
2013	54	0,117	0,412	-0,006	0,111	0,517	0,011	0,951	-0,026

Panel 2. Incremental information of ΔATI over ΔPTBI.

Year	Number of firms	Coefficient of ΔPTBI§	p-value of coefficient	R^2(ΔPTBI)&	Coefficient of ΔPTBI#	p-value of coefficient	Coefficient of ΔATI#	p-value of coefficient	R^2(ΔPTBI + ΔATI)&
2012	56	0,476	0,000	0,201	0,440	0,002	0,107	0,423	0,196
2013	54	0,117	0,412	-0,006	0,137	0,371	-0,059	0,698	-0,023

Panel 3. Incremental information of ΔATI over ΔETI.

Year	Number of firms	Coefficient of ΔETI§	p-value of coefficient	R^2(ΔETI)&	Coefficient of ΔETI#	p-value of coefficient	Coefficient of ΔATI#	p-value of coefficient	R^2(ΔETI + ΔATI)&
2012	56	0,374	0,006	0,116	0,322	0,028	0,126	0,883	0,113
2013	54	0,071	0,618	-0,014	0,088	0,572	-0,045	0,792	-0,033

Panel 4. Summary measures of incremental information.

Year	Number of firms	R^2(ΔPTBI + ΔETI) - R^2(ΔPTBI)	R^2(ΔPTBI + ΔATI) - R^2(ΔPTBI)	R^2(ΔETI + ΔATI) - R^2(ΔETI)
2012	56	-0,009	-0,005	-0,003
2013	54	-0,020	-0,017	-0,019

Legend:

§ = Coefficient from a regression of return (rank) on the change (rank) in pre-tax book income, estimated taxable income or actual taxable income (Equation 4).

= Coefficient from a regression of return (rank) on the change (rank) in pre-tax book income and estimated taxable income or actual taxable income (Equation 4).

& = Adjusted R^2 from a regression of return (rank) on the change (rank) in pre-tax book income, estimated taxable income and/or actual taxable income (Equation 4).

ΔPTBI = Difference in 100 · pre-tax book income deflated by market value.

ΔETI = Difference in 100 · estimated taxable income deflated by market value.

ΔATI = Difference in 100 · actual taxable income deflated by market value.

Table 7 presents the findings on the incremental information for the low accruals (high quality earnings information) firms whereas Table 8 reports the results for the high accruals (low quality earnings information) firms. Table 7 shows that neither *ETI* nor *ATI* includes incremental information to book income (*PTBI*) in both years. Although *IEP* is positive (1.1%) for *ETI*, its regression coefficient is not statistically significant (p = 0.209) in mutual regression (Equation 4). Furthermore, *ATI* does not include incremental information to *ETI*. Table 8 indicates that *ETI* does not contain any incremental information to *PTBI* in either year which does not support *H4a*. However, *IEP* of *ATI* on *PTBI* is positive for both years and for year 2012 its regression coefficient is significant (p = 0.081). Thus, these findings give support to *H4b*. Furthermore, *IEP*s of *ATI* on *ETI* are positive in both years and the regression coefficient of *ATI* is significant especially in year 2012 (o = 0.043). Therefore, empirical evidence contradicts with *H4c*.

Table 7. Incremental information content of estimated and actual taxable income to book income for low accruals

Panel 1. Incremental information of ΔETI over ΔPTBI.

Year	Number of firms	Coefficient of ΔPTBI§	p-value of coefficient	R^2(ΔPTBI)&	Coefficient of ΔPTBI#	p-value of coefficient	Coefficient of ΔETI#	p-value of coefficient	R^2(ΔPTBI + ΔETI)&
2012	50	0,378	0,011	0,110	0,250	0,157	0,221	0,209	0,121
2013	50	0,239	0,103	0,035	0,247	0,106	-0,032	0,834	0,015

Panel 2. Incremental information of ΔATI over ΔPTBI.

Year	Number of firms	Coefficient of ΔPTBI§	p-value of coefficient	R^2(ΔPTBI)&	Coefficient of ΔPTBI#	p-value of coefficient	Coefficient of ΔATI#	p-value of coefficient	R^2(ΔPTBI + ΔATI)&
2012	50	0,378	0,011	0,110	0,323	0,043	0,144	0,363	0,107
2013	50	0,239	0,103	0,035	0,279	0,064	-0,185	0,228	0,044

Panel 3. Incremental information of ΔATI over ΔETI.

Year	Number of firms	Coefficient of ΔETI§	p-value of coefficient	R^2(ΔETI)&	Coefficient of ΔETI#	p-value of coefficient	Coefficient of ΔATI#	p-value of coefficient	R^2(ΔETI + ΔATI)&
2012	50	0,366	0,014	0,101	0,368	0,056	0,146	0,364	0,098
2013	50	0,028	0,851	-0,020	0,076	0,633	-0,148	0,366	-0,024

Panel 4. Summary measures of incremental information.

Year	Number of firms	R^2(ΔPTBI + ΔETI) - R^2(ΔPTBI)	R^2(ΔPTBI + ΔATI) - R^2(ΔPTBI)	R^2(ΔETI + ΔATI) - R^2(ΔETI)
2012	50	0,011	-0,003	-0,003
2013	50	-0,020	0,009	-0,004

Legend
:

§ = Coefficient from a regression of return (rank) on the change (rank) in pre-tax book income, estimated taxable income or actual taxable income (Equation 4).

= Coefficient from a regression of return (rank) on the change (rank) in pre-tax book income and estimated taxable income or actual taxable income (Equation 4).

& = Adjusted R^2 from a regression of return (rank) on the change (rank) in pre-tax book income, estimated taxable income and/or actual taxable income (Equation).

ΔPTBI = Difference in 100 · pre-tax book income deflated by market value.

ΔETI = Difference in 100 · estimated taxable income deflated by market value.

ΔATI = Difference in 100 · actual taxable income deflated by market value.

Table 8. Incremental information content of estimated and actual taxable income to book income for high accruals firms

Panel 1. Incremental information of ΔETI over ΔPTBI.

Year	Number of firms	Coefficient of ΔPTBI§	p-value of coefficient	R^2(ΔPTBI)&	Coefficient of ΔPTBI#	p-value of coefficient	Coefficient of ΔETI#	p-value of coefficient	R^2(ΔPTBI + ΔETI)&
2012	50	0,336	0,022	0,087	0,378	0,038	0,072	0,688	0,070
2013	50	0,274	0,075	0,045	0,257	0,112	0,061	0,702	0,028

Panel 2. Incremental information of ΔATI over ΔPTBI.

Year	Number of firms	Coefficient of ΔPTBI§	p-value of coefficient	R^2(ΔPTBI)&	Coefficient of ΔPTBI#	p-value of coefficient	Coefficient of ΔATI#	p-value of coefficient	R^2(ΔPTBI + ΔATI)&
2012	50	0,336	0,022	0,087	0,272	0,062	0,242	0,081	0,126
2013	50	0,274	0,075	0,045	0,239	0,126	0,166	0,274	0,050

Panel 3. Incremental information of ΔATI over ΔETI.

Year	Number of firms	Coefficient of ΔETI§	p-value of coefficient	R^2(ΔETI)&	Coefficient of ΔETI#	p-value of coefficient	Coefficient of ΔATI#	p-value of coefficient	R^2(ΔETI + ΔATI)&
2012	50	0,152	0,309	0,001	0,089	0,546	0,289	0,043	0,066
2013	50	0,135	0,387	-0,005	0,128	0,407	0,211	0,166	0,015

Panel 4. Summary measures of incremental information.

Year	Number of firms	R^2(ΔPTBI + ΔETI) - R^2(ΔPTBI)	R^2(ΔPTBI + ΔATI) - R^2(ΔPTBI)	R^2(ΔETI + ΔATI) - R^2(ΔETI)
2012	50	-0,017	0,039	0,065
2013	50	-0,017	0,005	0,020

Legend:

§ = Coefficient from a regression of return (rank) on the change (rank) in pre-tax book income, estimated taxable income or actual taxable income (Equation 4).

= Coefficient from a regression of return (rank) on the change (rank) in pre-tax book income and estimated taxable income or actual taxable income (Equation 4).

& = Adjusted R^2 from a regression of return (rank) on the change (rank) in pre-tax book income, estimated taxable income and/or actual taxable income (Equation 4).

ΔPTBI = Difference in 100 · pre-tax book income deflated by market value.

ΔETI = Difference in 100 · estimated taxable income deflated by market value.

ΔATI = Difference in 100 · actual taxable income deflated by market value.

CONCLUDING DISCUSSION

There are several empirical studies indicating that book-tax differences are useful measures in evaluating firm performance (Hanlon, 2005; Lev & Nissim, 2004; Ayers, Jiang & Laplante, 2009). Many studies concentrate on the comparison of the information content of book income and taxable income to stock returns which is an important question to stakeholders. Shevlin (2002) and Hanlon, Laplante & Shevlin (2005) conclude that book income explains annual stock returns better than estimated taxable income that is calculated using financial statement disclosures. However, they also report that this estimated taxable income brings incremental explanatory power to book income indicating that taxable income summarizes information reflected in stock returns that is not captured by book income. The present study contributes to this discussion assessing the information content of both estimated and actual taxable income using Finnish corporate data from 2012-2013. However, only mainly the findings from year 2012 are considered below. The findings are consistent with Shevlin (2002) and Hanlon, Laplante & Shevlin (2005) in that book income has higher explanation power of stock returns than other income concepts. However, estimated taxable income does not bring any incremental explanatory power to book income whereas actual taxable income contains more relative information and also incremental information power to explain returns.

Ayers, Jiang & Laplante (2009) report that the relative and incremental information content of estimated taxable income to book income is higher for low earnings quality firms. However, the present study indicates that in low accruals firms (high earnings quality) the explanation power of estimated taxable income is comparable with that of book income. In the high accruals firms (low earnings quality) this power is insignificant. The explanation power of actual taxable income is lower for low accruals firms and higher for high accruals firms being comparable with that of book income. Its relative explanatory power is only less than half of that for estimated taxable income in low accruals firms. Thus, empirical evidence on relative information content is not consistent with Ayers, Jiang & Laplante (2009) when estimated taxable income is considered. For low accruals firms, neither of the taxable income concepts brings incremental information to book income. For high accruals firms, estimated taxable income does not bring any incremental information to book income whereas actual taxable income does. Thus, estimated taxable income does not enhance information content when earnings quality is lower. For high accrual firms, actual taxable income brings significant incremental information also to estimated taxable income.

The robustness of findings was assessed in many ways. Because of the unstable economic development in Finland during the research period the regression equations of return were estimated using the ranks of variables to control for extreme values of variables and for changes in market volatility (Ali & Whang, 2000). For regressions with original variables (without rank transformation), the explanatory power of variables was similar but significantly lower. In this study, a 23-month window was used in estimation since actual corporate tax information is released not before next November, almost eleven months after the year-end. When a 16-month window (typical for research on financial statement information releases) was used, the results were as expected. The explanatory power of book income was very strong for both year 2012 and 2013. However, the explanatory power of estimated taxable income was higher than for longer window in year 2012 but about zero in year 2013. Furthermore, actual taxable income consistently did not contain any explanatory power for such a short window ending before tax releases.

The most findings of the study for year 2013 are against expectations due to the very low or negligible explanatory power of taxable income concepts. Thus, something has happened in the stock markets in period 2013-2014 which had a strong influence on the relationship between stock returns and income concepts. In year 2012, the change in Helsinki all-share index was 8.3% but in year 2013 26.5% falling back in the next year (5.7%). In the same time, turnover rate decreased from 80.8 to 66.6. Furthermore, in autumn 2013 (September 16th) the Finnish government released the first version of the next year budget where the corporate tax rate was decreased from 0.245 in 2012-2013 to 0.20 in 2014. This information was fully known to market participants in 2013 which should have affected tax planning behavior in that year. Many empirical studies indicate that this kind of anticipated tax rate reduction provides incentives to manage both book income and taxable income downward (Roubi & Richardson, 1998; Lin, 2006; Wong, Lo & Firth, 2015). The effect of tax rate reduction is quite strong also for reported income in year 2014. Some researchers present as the semi-elasticity of the corporate tax base for reported profit shifting -0.6 (Huizinga & Leaven, 2008) or even -1.2 (de Mooij & Everdeen, 2008). Before ending of the 23-month window, three quarterly financial reports for year 2014 have already been released when actual tax information for year 2013 is disclosed.

In summary, the present study shows that actual taxable income brings incremental information to book income in explaining stock returns The explanation power of actual taxable income is higher for high accruals firms reflected by low earnings quality. Corporate tax information is nowadays public only in a couple of countries such as Finland although it would be important for stakeholders of the firm. Therefore, empirical evidence indicates that it would be recommendable to make it public also in other countries. In Finland, taxation information is released not until 10-11 months after the year-end. Thus, even if bringing still incremental information, it is quite old considerably diminishing the value of information. Therefore, it would be recommendable to expedite the time table of releasing tax information. The study also shows that anticipated tax reduction can due to earnings management strongly distort the detection of relevant relationships between returns and income concepts. Therefore, in tax research the forthcoming tax rate changes should be carefully taken into account when interpreting the results

References

Ali, A. &Hwang, L.S. (2000). Country-specific factors related to financial reporting and the value relevance of accounting data. Journal of Accounting Research. 38(1): 1-21.

Ayers, B., Jiang, X. & Laplante, S. (2009). Taxable income as a performance measure: the effects of tax planning and earnings quality. Contemporary Accounting Research. 26(1): 15–54.

Biddle, G.C., Seow, G.S. & Siegel, A.F. (1995). Relative Versus Incremental Information Content. Contemporary Accounting Research. 12(1): 1-23.

Cohen, J. & Cohen, P. (1983). Applied multiple regression/correlation analysis for the behavioral sciences. Hillsdale, NJ: Erlbaum.

de Mooij, R.A. & Everdeen, S. (2008) Corporate tax elasticities: a reader’s guide to empirical findings. Oxford review of economic policy. 24(4): 680-697.

Dechow, P., Ge, W. & Schrand, C. (2010). Understanding earnings quality: A review of the proxies, their determinants and their consequences. Journal of Accounting and Economics. 50(2-3): 344–401.

Desai, M. (2006). Testimony of Mihir Desai (Associate Professor of Harvard University) before the Subcommittee on Select Revenue Measures. Committee on Ways and Means, House of Representatives, May 9.

Hanlon, M. (2003). What can we infer about a firm’s taxable income from its financial statements? National Tax Journal 56(4): 831 -63.

Hanlon, M. (2005). The persistence and pricing of earnings, accruals and cash flows when firms have large book-tax differences. The Accounting Review. 80(I): 137-66.

Hanlon, M. & Heitzman, S. (2010). A review of tax research. Journal of Accounting and Economics 50(2-3): 127–178.

Hanlon, M., Laplante, S.K. & Shevlin, T. (2005). Evidence for the possible information loss of conforming book income and taxable income. Journal of Law and Economics. 48(2): 407-442.

Hanlon, M. & Shevlin, T. (2003). Book-tax conformity for corporate income: An introduction to the issues. NBER working paper no. 11067. Cambridge, MA: National Bureau for Economic Research.

Huizinga, H. & Laeven, L. (2008). International profit shifting within multinations: A multi-country perspective. Journal of Public Economics, 92(5-6): 1164-1182.

Kothari. S. P. (2001). Capital markets research in accounting. Journal of Accounting and Economics. 31(1-3): 105-231.

Lev, B. & Nissim, D. (2004). Taxable income, future earnings and equity values. The Accounting Review. 79(4): 1039-1074.

Lin, K. Z. (2006). The impact of tax holidays on earnings management: An empirical study of corporate reporting behavior in a developing economy framework. The International Journal of Accounting. 41(2):163-175.

Mills, L. & Plesko, G. (2003). Bridging the reporting gap: A proposal for more informative reconciling of book and tax income. National Tax Journal. 56(4): 865-93.

Phillips, J., Pincus, M. & Rego, S.O. (2003). Earnings management: New evidence based on deferred tax expense. The Accounting Review. 78(2): 491–521.

Plesko, G. (2000). Book-tax differences and the measurement of corporate income. NTA Proceedings 1999. 171-176. Washington, DC: National Tax Association.

Plesko, G. (2006). Estimates of the magnitude of financial and tax reporting conflicts. Working paper. University of Connecticut.

Revsine, L., Collins, D. & Johnson, B. (2002). Financial reporting and analysis. Upper Saddle River, NJ: Prentice Hall.

Roubi, R. & Richardson, A. (1998). Managing discretionary accruals in response to reductions in corporate tax rates in Canada, Malaysia and Singapore. The International Journal of Accounting 33 (4): 455–467.

Shevlin, T. (2002). Commentary on corporate tax shelters and book-tax differences. Tax Law Review. 55(3): 427-43.

Williams, E. J. (1959). The comparison of regression variables. Journal of the Royal Statistical Society (Series B). 21(2): 396-399.

Wong, R.M.K., Lo, A.W. & Firth, M. (2015). Managing Discretionary Accruals and Book-Tax Differences in Anticipation of Tax Rate Increases: Evidence from China. Journal of International Financial Management & Accounting. 26(2): 188-222.

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Riding the Waves of Technology: A Study into How SMEs Select Computerized Accounting Software (CAS) supplier in Developing Countries

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ABSTRACT

Many SMEs are foreseeing the immense benefits of implementing CAS to facilitate the processing of their financial reporting. This Phenomenon has led to the spread of many CAS products in the software market, making it difficult to select the best among them for implementation. The sub-optimality of CAS is as a result of functionalities such as Scalability ;Capacity; Ease of Data Input ; Security; Speed of Installation ; CAS Consultant/Vendor ; Reporting Capabilities ; Error Handling ; Audit Trail ;Data Validation which are neglected as part of the selection process. CAS is either classified as off-the-shelf package (customised) or bespoke (custom designed).However, this paper concentrates on how SMEs managers select their off-the-shelf CAS (customised) packages in the mist of proliferations of many accounting software in the market. It examined the depth of information which served as guides to SME managers/owners in selecting their currently implemented CAS system. The methodology adopted for the study was the development of a structured questionnaire related to the functionality criteria's above mailed to sample SMEs in the Kumasi Metropolis of Ghana to understand how SMEs choose their CAS packages. The results showed that SMEs desire CAS that are easy to use and vendor support.

Keywords: Small and Medium Enterprises, Computerised Accounting Software, Accountants, IT Vendor, Customized/Bespoke

INTRODUCTION

Deciding on the appropriate CAS package for an SME business has become a challenging topical issue among company managers and stakeholders currently. This is because the risks of selecting the wrong CAS package have led to, financial losses, bankruptcies, closures and disappointments on the part of SMEs and their accounting personnel. Ahmad, (2005) asserts that businesses have evolved from using manual method of keeping financial records to the use of CAS systems. Accounting software packages are now the common applications used in recording and processing accounting data and information in many business organisations such as SMEs. CAS packages have alleviated the stress accountants/bookkeepers go through during manual recording, processing and presentation of financial reports to government revenue collection agencies like the Ghana Revenue Authority and SME management. The adoption and implementation of CAS packages have smoothened the recording of financial data and information more easily, quickly and accurately with less overhead expenses argued Ahmad. (2005). Moreover, CAS packages have improved and enhance performance of most accounting functions of SME businesses by generating high quality management information (Collins, (1999); Fisher et al, (2001); (Abu-Musa et al, (2004). However, certain critical success factors in CAS selection process such as Scalability ;Capacity; Ease of Data Input ; Security; Speed of Installation ; CAS Consultant/Vendor ; Reporting Capabilities ; Error Handling ; Audit Trail ;Data Validation and Audit Trail have been overlooked leading to SMEs selecting sub-optimal CAS packages which does not meet business objectives and strategies. Alsaaty (2012) is of the view that the information age has necessitated the urgent need for every business organisation to implement automation technologies such as CAS packages. Mpofu et al (2011) posit that SME business owners/managers who fail to adopt Accounting Information Systems (AIS) technologies such as Computerised Accounting Software (CAS) into their regular business operations risk being disadvantaged competitively in terms of meeting deadlines and taking business opportunities. The current happenings in the software market in less developed economies calls for ways to guide SME managers desiring to implement CAS package select best fits to complement what the information age requires now.

For SME businesses, the acquisition of accounting information systems hardware and CAS package are huge capital expenditure. As such, failure to utilise it or unproductive use of that system as a result of incompatibilities are deemed as a costly waste of the SME's budget, time and resources – a potential reversal to the manual method of processing financial data and information with added negative consequences. Unsuccessful implementation and usage of CAS system resulting from sub-optimal selection can also lead to frustration and disappointments among SME owners and employees. It is imperative for SME manager desiring to implement a CAS package be informed of the potential risks exposures and benefits involved selecting both compatible and inharmonious accounting system. SMEs do not have the budget to have a management information department or an IT consultant to lead in the purchase of the CAS system tailored specifically to their needs which are either off-the-shelf or bespoke. As a result, most SME managers have resorted to purchasing off-the-shelf software packages. However, with this method, there is an inherent risk of choosing the wrong CAS package as a result of insufficient and reliable information of the basic functionalities of the accounting package. Usually it is expected that an independent chartered accounting firm would assist in this direction with their own accounting software packages to process accounting data, but most of them do not have the CAS selection and implementation skills in less developed countries such as Ghana. This is due to the fact that as CAS has evolved in advanced countries, it is now evolving in developing countries where most the accounting firms are now learning the packages.

Some SME owners also complained that they do not understand how CAS works because of little or no training provide to them by vendors of CAS packages. Some CAS comes with no supporting training package and materials. However, manuals do accompany CAS software bought with confusing tutorial (Michael et al 2016). Nevertheless, some CAS vendors do offer implementation and training on selected packages from their employees but most of them are IT vested without bookkeeping and accounting skills so don't train on the core aspect of using the CAS package to pass the double entry bookkeeping to generate trial balance and other statement of returns. The challenged has always been that there is little study in the selection of CAS to the benefit of SME business owners/managers in less developed countries. These risks and challenges faced by SMEs are gradually militating against the rapid adoption and implementation of CAS packages in Ghana. This research study is to understand the processes SME managers adopt to select CAS packages. It study seek to understand how they were assisted in the software if any to select the optimal CAS among the lots and to understand the depth of training provided them. The study also seeks to evaluate the main functional requirements features of CAS most favoured by SMEs in their quest to select the optimal CAS packages for implementation.

LITERATURE REVIEW

Small and Medium Enterprises (SMEs) and CAS

Businesses are regarded as Small and Medium Seized (SME), if it fulfils certain requirement ceilings for staff numbers, sales turnover value reflecting in its periodic statement of comprehensive income and financial position (European Union, 2003). The Ghana Statistical Service, 2012 (GSS), defines firms with more than 10 workers as SMEs. It could be seen from the definition and scope in table 1 that SMEs could have many workforces when it's operational activities expands according to Kayanula et al, (2000). The expansion of business activities in SMEs necessitates the need to have appropriate CAS package to process its large data set with ease and on time. The reason being that, it is now a requirement that SMEs business files periodic financial statements, Value Added Tax (VAT) returns, Employee Pay as You Earn (PAYE), Employee Pension Insurance (SNNIT) etc with the appropriate sub-agencies under the umbrella of the Ghana Revenue Agencies (GRA). Table 1 depicts different definitions for SMEs in different countries and this process has made the definition of SME incompatible and uniform as it does not have a uniform criterion across countries (Ayyagari et al. 2007). As a result of a non-convergence criteria and definition, SMEs definition in Ghana is largely based on the number of employees in the business set up as shown in table 1.

Table 1: Employee sizes used in defining micro, small, medium enterprises by a sample of IT researchers.

AUTHORS	COUNTRY	MICRO	SMALL	MEDIUM	SME
Burgess (2002)	Australia	1-5	1-20		
Igbaria et al. (1998)	New Zealand		20-100		
Chau (1995)	Hong Kong		1-49		
Ismail & King (2007)					Malaysia
Mathews (2007)	UK				1-200
Wynn (2009)	European Countries				1-249
Duxbury et al. (2002)	Canada	2-9	10-100	100-500	
BharatBharati & Chaudhury (2006)	USA	1-10	11-100	101-500	1-500
(Kayanula et al, 2000	Ghana		1-10		>10

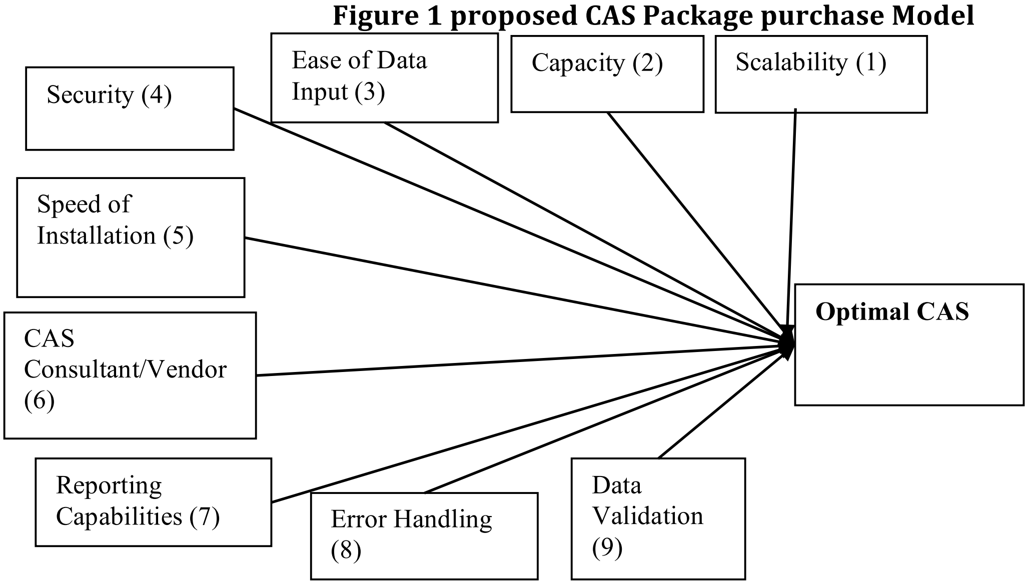
Accounting Software Proliferation and selection

Choosing CAS application has turned out to be amongst the largely critical choices for SMEs within the quick-shifting business sphere. Accordingly, the CAS package SMEs choose must best serve its existing problems and may directly be standardized to meet its upcoming requirements in favour of information, monetary, and also non-monetary statements. Choosing the correct CAS package is not easy. If a wrong CAS is chosen, the corporation will spend much time plus funds to purchase and put into practice an updated one. Choosing the inappropriate CAS will be an absolute catastrophe for SMEs, it may result in huge loss of money, and perhaps even insolvency. Hence, it's suggested that organizations must invest more in researching every aspect of CAS prior to decoding to buy it. Investing in CAS package is a critical entity's decision amid its lifespan considered to be the major important strategic choices (Venkateswarlu, 2010).

According to Matzler (2007), looking for CAS package in the software market from the perspective of the SME owner / managers are like looking for a needle in a hay stack because they are overwhelmed with choice and information which disrupt accurate decisions to selecting the optimal CAS package among the best in the market. This phenomenon may be somewhat similar to what is expressed as 'consumer confusion' in marketing literature posited by Venkateswarlu et al. (2010). Heikkila et al, (2013) argues that SMEs managers have often been disappointed with their selected CAS application packages because they are either difficult to use or do not meet the needs of their company's financial accounts processing requirements. The other issue is that consultants/vendors also do not understand clients SMEs business processes so do recommend CAS products, even though costly, does not meet requirements specifications. Hence, Bernard, (2012), suggests that entities must have time to research more into every aspect of CAS prior to making a decision purchase. This he believes will mitigate the risks of selecting sub-optimal CAS packages. He again is of the view that acquiring CAS package is an essential aspect of IT projects and so must be given the needed attention necessary to enable successful critical strategic choices to be made regarding CAS selection (Bernard, 2006).

A phenomena known as condition known as 'resource poverty' has caused many SMEs to to objectively evaluate their operational environments to see they in practice need a CAS package and if so, what specific accounting software package should they purchase and how it can be installed and run on their computerised systems. Compare with larger business entities, SMEs don't benefit from objective advice from third parties (consultants) on selection and installation of CAS package. The lack of such useful and independent suggestions adds up to the risks of selecting wrong CAS package with increase cost overruns and installation failures. These can be a barrier to the implementation of IS/IT in SMEs In the nutshell, we realised that the absolute absence of advice and support activities in the selection and implementation of CAS application is a major challenge for SMEs in Ghana. We believe the National Board for Small Scale Enterprises (NBSSE) in conjunction with the Association of Ghana Industries can collaborate with Technical Universities in the Ghana to offer training and awareness for their member businesses to serve as a wakeup call in the selection of CAS packages and who to call should the need arises for implementation.

Figure 1 proposed CAS Package purchase Model



This framework serves as a basic guide to the selection of optimal CAS package to enable successful implementation and usage and accurate, timely and reliable financial reporting. The model may also be suitable to bigger business entities in their quest to selecting an appropriate and bigger CAS application such as ERP packages as it covers the basic functionalities expected of any AIS/CAS before a decision to buy. This does not guarantee an optimal performance of the package as the CAS originates from designers, programmers and vendors with varying skills and competencies in the software industry. Some CAS products may have all the qualities as demonstrated by the consultant/ vendor, yet may be generating error reporting's. Test running is recommended with dummy data to provide assurance before going live with real time data set. Configuration of the CAS package must begin with the SME's financial year. For example, the financial year may be twelve months from 1st January to 31st December each year. These requirements should be part of the installation and implementation process to enable statutory financial reports to be generated within this period (12 moths) for management to enable assessment of corporate performance and regulatory agencies for compliance evaluations.

Scalability as a product

The capacity of the CAS package to manage a growing number of users and higher loads of transactions is measured in software application. The CAS package must be embedded to process various accounting transactions depending on the degree of expansion of the entity. There are two variables of CAS product's scalability. A case point is that if the SME in say Haulage and Distribution now decides to run an abattoir service, the CAS package must be able to process accounts for each of the activities and then present an individual segment's accounts and finally a consolidated group accounts for the entire the SME as a corporate entity. It summary the CAS must have scalability function to accommodate more business activities as and when the need arises. There are two variables involved when considering scalability of CAS packages. The first variable is known as scaling up to determine if the software developer has varieties of CAS packages in varying capacities so that when the need arises for expansion, an entity can upgrade its existing accounting software to a more advanced version in a consistent, easy, and within budgets. The other aspect of scalability deals with series of queries such as: how flexible and quickly will the existing data will convert to the new CAS version from the other legacy platform; will the interface of the new software package remain the same after upgrade and fixing of bugs as the same interface significantly reduces the depth of training needed; the price incentives, if any, that are given to current SME customers who opt to upgrade; will reports and other customized features run when the old CAS package is upgraded or installed, or feature and data will be overwritten?,

Capacity

This module functionality determines the maximum number of customers, vendors, inventory and line items the CAS package can handle at a given time. Included in a single expenditure invoice, sales order, or purchase order it can handle at a given period within the financial year of business processing. The capacity functionality ensures that the CAS system components perform as efficiently as possible handle many business documents, both segmental and corporate processing's. Capacity enables description of system requirements and applications needed for any level of activity the entity is embarking on to ensure proper selection to meet processing specifications. The functionality make known the infrastructure components such as the operating systems and capacity required to be able to install and run the CAS package to deliver as required for the reporting business. The module Identifies and mitigate the risks of inefficiencies associated with under-utilized resources. It serves as a technical reference for CAS selection team members in their selection process to ensure that CAS selected functions satisfactorily in a cost-efficient manner. If CAS package selected is below capability, an SME manager would have to use other software applications, such as Excel spreadsheet and Access database management systems, to perform additional processing tasks the selected accounting software is incapacitated to handle (Randolph, 2003). This would come with additional cost of configuration and overhead expenses to the reporting entity.

Ease of Data Input

The reality is that even though reporting entity's managers may not need to have full understanding of their day-to-day routines, knowledge of how data interrelate amongst the modules of their processing activities boosts their capability to link data and information, performance, and strategy more successfully. Knowing how business processes at operations level integrate with data can assist them convert data into information for decision making purposes live and quickly. Accordingly, the worth of the data and information is only as good as its point of entry into the CAS application system. This implies that when managers across the company are examining diverse numbers to make decisions that will impact the business and the information and data does not add up, the responsibility for why these numbers are unacceptable lies at the point of entry of the data set and information into the operational CAS system. Data entry with errors and processing discrepancies are but some of the causes of error data which end up to drive an entity's decisions. As such SMEs would want to select CAS package which allows data and information to be entered quickly and correctly. The CAS should have the capacity to allow data set to be recorded at its rightfully defined filed according to the rules of the design view. A case in point, a field defined and programmed as salary with currency should not accept data as date of birth. This is because the data type for salary is different from salary. Any computerised system that accepts data anyhow is prone to reporting information with errors. The CAS must have the capacity to provide error prompt such as "Please this field is for Salary only" to enable the data entry person switch to the appropriate field. Full-screen editing must be provided as part of the CAS design so that errors could be corrected and resubmitted to overwrite previous data set. A help button must be seen on screen to support the data entry data entry user should he/she gets lost.

Security

This functionality in CAS measures the degree of protecting sensitive data and information reporting's. Security in computerised accounting systems have many levels such as the application level security, row-level (or multi-tenant) security, single sign-on security, user privilege parameters, Application level security is very clear-cut: enables the systems administrator to control the software package access on a per-user role, or per-user basis. It normally consists of a role-based menu system displaying different options to different users based on their assigned roles. It is important that every employee in a reporting entity be granted access to every application to enable accountability of activities performed on the CAS platform at any given time, For example, the SME manager might be granted access rights to all applications, while the accounting department can only access applications related to the accounting functions. The CAS application must be embedded with password functionality to protect data held on each module and sub-module. A CAS package with strong security may for example, allow a user to specify that the accounts payable clerk may only print cheques on Thursday afternoons beginning June 1 and ending August 30. CAS package with robust security feature must provide reporting trail to verify when a cheque run was performed and by whom. According to Eduardo et al, (2004), a weakness in a selected CAS package in terms of security vulnerabilities may have serious threats to the data and information held in the organisation.

Speed of Installation

Installation of new CAS package is a major implementation project. A key issue that must be considered is quickly the new software package can be installed. As part of the installation, the CAS must be seen to producing the following:

1. Setting up the company, include the
2. Setting up your Customers & Suppliers records (including opening balances)
3. Setting up your Nominal Ledger, (including opening balances)
4. Selling to customers on credit
5. Buying from suppliers on credit;
6. Customer & supplier payments;
7. Cash receipts & payments;
8. Bank account, petty cash & recurring entries;
9. Reports & routines;
10. 9) Corrections & adjustments

The next stage of the installation process is to request the selected CAS supplier to demonstrate his of his corporate such as may be accounts receivable and payable system. The SME manager/owner should present lists of definite coverage areas expected to be demonstrated by the vendor covering the following installation (Julie et al (2009):

1. Issuing and Managing Charges
2. Cash Receipting and payments
3. Other Reporting's such as VAT. SNNIT, PAYE, NHIS
4. Processing Transactions
5. Inquiry Options

The chosen CAS supplier is expected to take his time before the demonstration to query the entity about series of extensive questions regarding the SMEs needs. As part of the installation, team members must insist that the CAS supplier uses live software to prove the package functionalities and not some selected presentation software application or a "canned" demo that promote or raises just the CAS package generally. This is because the team want to see the software package performing in real action as part of the installation process to justify how it handles your specific activity needs (Randolph, 2003).

Since the installation is the heart core of the selection process, the CAS supplier should demonstrate the method of installation as part of its track record of implementing CAS system to run successfully on the operating system of the client. A list of SMEs the vendor has successfully installed same package should be requested for a call reference as customers are normally willing to share experiences valid tips to mitigate the risks of making similar errors they made. From a practitioner point of view, a customer who has implemented the CAS package for at least 13 months is appropriate as the selection team would want to see a yearlong usage to authenticate report generation within an accounting period.

CAS Consultant/Vendor

A software consultant can help considerably in selecting the appropriate CAS package for the SME business processing needs. CAS consultants may have special expertise in the purchasing through to the implementation process for many years. Although they charge fees, they can assist an SME organisation in ways such as: Evaluate and select the best CAS package for the SME business; save time and money during CAS system installing and subsequent training; Get the most out of the SME client's new system based on the system's capabilities and the SME business requirements. The presence of a reliable resident vendor is of strategic significance to the SME owner/manager as he or she will fall on him/her in times of technical help. In circumstances where the vendor does not reside within the community, there must be an arranged strategic contractual agreement to provide alternative service training and other technical support to the SME clients. Despite the compatibility of the CAS package to users' needs, SME users of the computerized accounting software still need the continued support from the consultant/ vendor (Ahmad.2005). Due to this, in deciding on CAS packages, an SME owner/manager should assure himself or herself that the vendor can be relied upon in times of disaster during real time usage of the CAS application; that he/she has got the skills necessary to meet the firm's (user) critical needs such as restoring data and information to its present state should there to any systems crashes either from the application's or the operating systems hardware end. These requirements are necessary to enable an SME manager/owner put in place an alternative mitigating circumstances to reduce the impact of the risks should in case the catastrophe is made known. The caveat is to be certain that the CAS consultant is not linked to any specific application vendor to also reduce the risks of getting into unfairness sales arena instead of an independent package evaluation.

Reporting capabilities

Information is useful in the current challenging business landscape. It is for this reason that any desiring accounting software being evaluated for purchasing is embedded with robust capabilities regarding reporting and analysis. Apart from helping users gain knowledge into critical financial transactions, reporting and analysis capabilities assist reporting entities comply with government regulation and business practices and requirements. The Ghana Revenue Authority for example mandates each reporting entity to file monthly (VAT) returns, (PAYE), (SSNIT) and end of year financial reports to enable corporate tax liability assessments by the Ghana Revenue Agency. Other stringent regulatory procedures are mounting responsibilities on business entities to ensure the accuracy and timeliness of published financial statements. Accounting is numbers in transactions. However, graphics display charts and other illustrative formats and forms, will be a useful means that can assist in generating trends analysis to management in a way that numbers alone cannot communicate to users. Using outmoded CAS package is like eating food that has passed its Selby dates; a risky idea that may end up giving severe nausea to patients. Tax laws and regulations relating to financial management practices keeps changing every moment, so it's imperative to select CAS application that can automatically updates itself as the directives come into full effect. There is also the probability that not all CAS application will perform exactly to match up with SME's business processing specifications. As a result, it is important that as part of the reporting, selected CAS package allows for easy modification of statements, forms, reports, help systems and other application features. The business world has moved to the Internet connectivity for dissemination and access to information as such, it is logical that CAS package selected follow the crowd. So in relation to reporting capabilities, the accounting software package selected should have a functionality and ability to send and receive digital documents and manage electronic fund transfers to suppliers and from customers etc. According to Heikkilä et.al, (1991), it must be embedded with query capabilities to identify for example, customers who have not made payments within a permissible credit period, using query language like SQL to support database technology in the CAS application.

Error handling

CAS application run-time errors could crop up as a result of errors in the design process, coding unawares, hardware failures, and many other events which may affect the processing performance of the accounting software package. Although you cannot anticipate all possible errors, the accounting software can be programmed to handle certain kinds of errors meaningful to the CAS application. The software selected must embed with a mechanism known as exception handling to enable SMEs "bulletproof" the selected CAS application so that it can continue operating in the presence of errors.

This error functionality in CAS determines ability to prevent unbalanced transactions. It is also able to stop and prompt users from deleting or otherwise losing important data which is previously held in the CAS package. The CAS application must provide detail audit trail for all transactions auctioned during a period from initiation to completion to provide error reports for the CAS running errors to enables traces to be made to fix and patch bugs by the vendor consultant should the need arise However, computers do lack capability to judge, as they cannot detect unanticipated errors users commit. This is because the software to detect and check errors is a set of programmes for known and anticipated errors only. (Accountancy, 2013)

Data validation

This determines how good the selected CAS is at preventing mistakes from being recorded into the system. The CAS program should check for errors such as duplicate customers and vendors details, inaccurate item numbers, and unreasonable amounts or dates formats. The data validation capability ensures the accurate and authorised data allowed to enter the CAS system. This is known as input controls to ensure only valid data within certain authorised threshold and limits are allowed to be process by the computerised accounting to assure of information reliability. Validation capacity in the CAS application quickly identifies and classifies exceptional data for further investigation prior to resubmitting for processing. This validation is made by the 'Error Detection' and 'Error Correction' procedures embedded within the CAS software and so must be seen to operational with a test of wrong data to evaluate the selected CAS integrity. This function is a controlled process, whereby live input data is compared with a predetermined standard to detect and eliminate errors before data move into the transaction processing stage. A powerful CAS package embedded with error correction message and procedures do offer suggestions on-screen as a prompt on how to enter the correct data input by directing the user to see his or her systems administrator for assistance on that data input (Mpofu, 2011). A CAS validation capability function should be able to notify the data input user of unusually high number of unit prices for certain types of inventory items and then offer a valid choice of actions along with the warning note.

Audit Trail

The computerized accounting software package must be seen to be embedded with a capability to hold documents in the computer files, and other records that are needed for examination during a computerized audit, to determine how transactions are handled by an SME business owner or manager. An audit trail in a strictest sense can either be a paper or automated based trail that supports documented history of a transaction within a company. The audit trail embedded as a module in the CAS will enable an IS/IT auditor to trace the financial data from the general ledger to the source documents such as invoices, receipts, voucher etc view the full process of a given transaction from input through to output generation. The presence of a reliable, non-complicated workable audit trail function in a computerized works environment is an indicating of solid internal controls compliance instituted by a business entity, which can form the basis of objectivity in the CAS system. Alternatively, an audit journal with missing documentation is a clear indication that an enity system is not adhering to proper and laid down accounting practices. The audit trail should be seen to include the chronological list of steps that are taken to initiate a transaction processing on the CAS system to its completion. An audit trail must be activated by default and the recorded trails must not allow for deletion and modifications during storage at any one time. Any CAS package whose audit trail functions could be modified is a recipe for fraud and should not be selected. The integrity of the audit trail must be part of the demonstration process by the vendor supplier during the installation process.

THE RESEARCH METHODOLOGY

This research study adopts the quantitative method to understand how SMEs select their CAS packages. As a result, a structured questionnaire was prepared to aid in data collection for the study. The questionnaire covered the following areas as proposed in figure 1: scalability, capacity, ease of data input, security, speed of installation, consultant/vendor availability, reporting capabilities, error handling abilities and data validation and Audit trail. The questionnaires were made up 20 to employees of the sampled SME entities. The survey instruments were sent to 150 selected SMEs in the Kumasi Metropolis of Ghana who were willing to part of the study. The need and importance SMEs attached to the study by the Association of Small and Medium Enterprises (ASMEs) chapter in Kumasi prompted all their selected member businesses to all respond to the questionnaire sent to them. It was also successful because we went to each SME business with a letter of introduction from their association's head office. Demographic data were not collected as the researchers assumed that respondents including managers, owners and staff are of legal age of majority (18years) before being allowed to engage in business establishments and also being employed by these SME businesses. The researchers rather concentrated on the issues confronting SMEs in the selection and implementation of CAS packages instead.

The selected member SMEs are in varied business set ups from wholesale to retailing, dealing in Auto Parts Imports, A shopping Mall, Haulage and Distribution Distributor of Building Hardware, Abattoir Services , Poultry Farming located within the strategic clustered locations in the Kumasi metropolis of Ghana . The research instrument was actually tested on a pilot basis to ensure consistency and reliability by occasional adjustments to fit the purpose for which it was intended. In the course of analysing the data, descriptive analysis, Excel was used in the preparation of the data and analysis. The distribution of the sampled SMEs according to their respective numbers and merchandise are depicted in table 3.1 below:

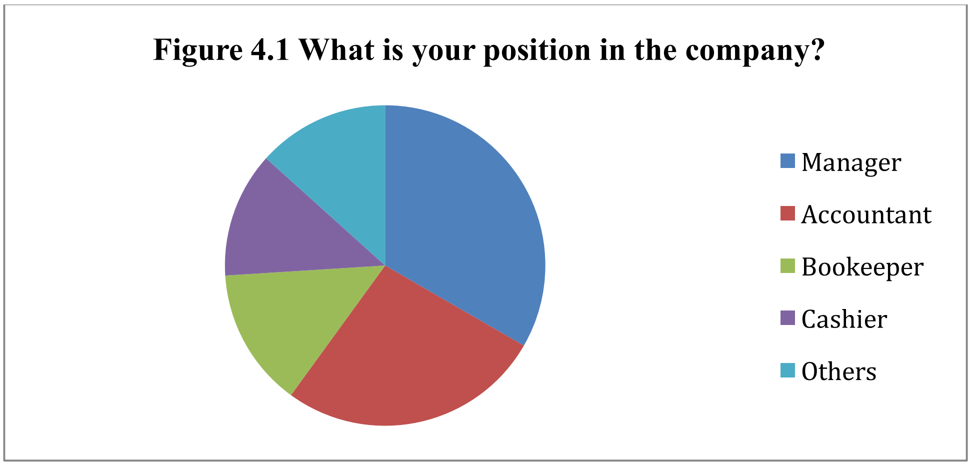
Table 3.1 Distribution of SMEs

Type	No	Relative (%)
Auto Parts Imports	21	14
A shopping Mall	15	10
Haulage and Distribution	23	15.33
Distributor of Building Hardware	44	29.33
Abattoir Services	12	8.00
Poultry Farming	35	23.33
Total	150	100.00

Approximately 30% of the participating SMEs are found in the distribution of construction and building hardware. While approximately 24%, 16%, 14% , 10% and 8% in poultry farming, haulage and distribution, auto parts distribution, shopping marts, and butchery and abattoir services respectively are operating in the sampled SME sector.

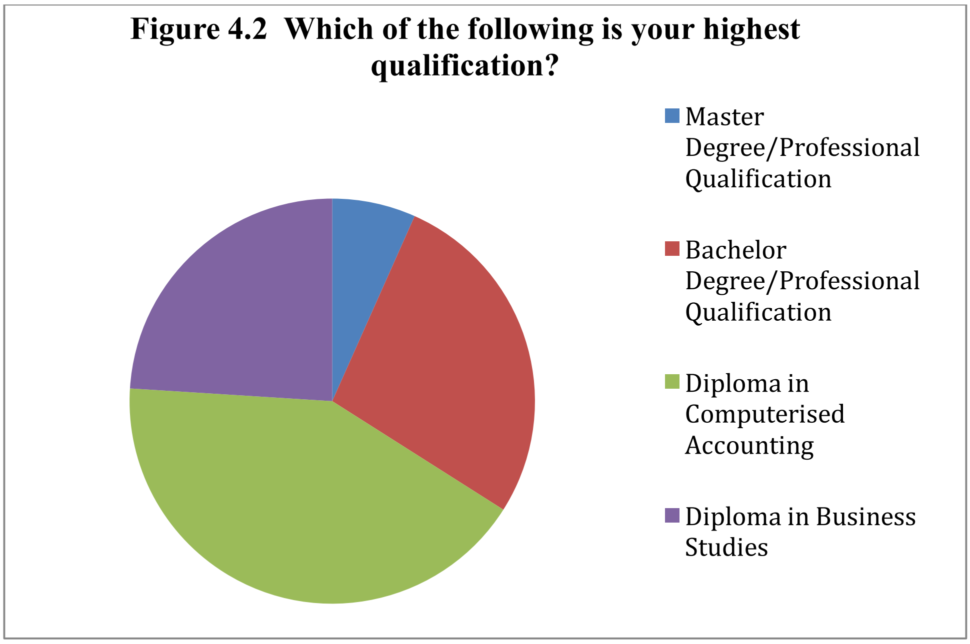
DATA ANALYSIS AND DISCUSSION

Figure 4.1 seek to understand the position of sampled staff within the selected SME business so as to determine the level of relativity in terms urgent need to implement CAS package as the information age requires. The nearer the personnel are found in financial data set position determines his or her awareness of the need to speed up the generation of financial returns to management and statutory agencies for their decision makings on a timely basis.



(Source: authors own field work, 2017)

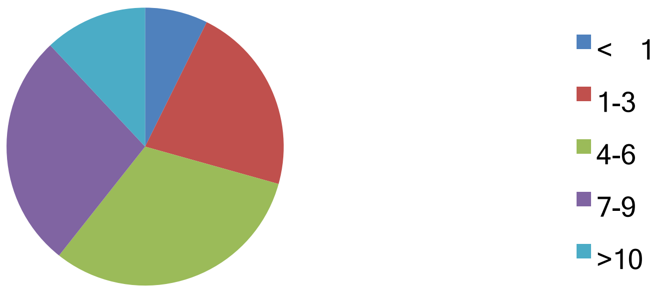
From the report above it could be seen that managers within the sampled SMEs in Ghana takes a chunk of the position (33.33%). This is followed by Accountants (26.67%), bookkeepers (14%), and cashiers (12.67%) respectively. It implies that these personnel's are aware of the need to implement CAS due to the need to meet time lines in the submission of reports to relevant authorities like the Ghana Revenue Authority for tax assessments on time to avoid penalties and blacklisting.



(Source: authors own field work, 2017)

Figure 4.2 portrays the level of education of staff personnel within the sampled SMEs entities. The aim is to determine their level of training so far as education in recording, processing and the generation of financial reports are concerned. The results showed that Diploma in computerised accounting personnel rank high with 42% followed by Bachelor Degree with professional qualification (27.33%), Diploma in Business Studies (24%) respectively. MBA with professional qualification rank low (6.67%) because most of them are hired in bigger organisation. Some of these high academic and professional qualifications holders we understand were owners and managers of some of the SME organisations under study. Diploma in computerised accounting holders were high because the Kumasi Technical University in collaboration with Sage university in Canada have developed a training centre to offer training programme in accounting with computing to help SMEs keep Proper books of accounts using computerised accounting software packages.

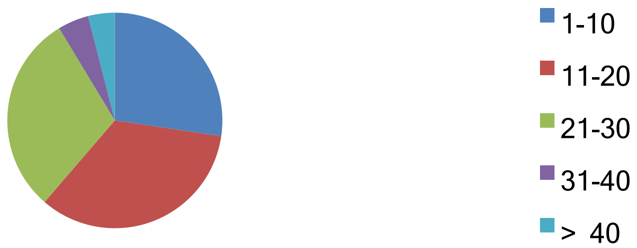
Figure 4.3 How long have you been working with this company (Years)



(Source: authors own field work, 2017)

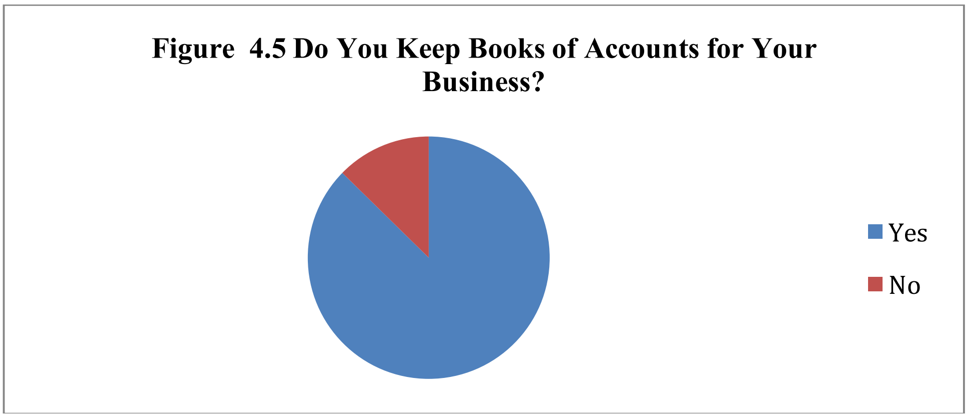
Figure 4.3 depicts the length of experience staff personnel have had in their respective SME entities. The objective is to understand the years of involvement in the preparation of financial statements and the inherent challenges confronted with. The chart shows that most staff have worked in their respective SME organisations ranging between the ages of 4-6 years (33.33%) followed by 7-9 years (27.33%). The higher the level of experience in working with organisation coupled with the academic and professional depicts the competency and efficiency of the staff so far the selection and implementation of CAS package is concerned.

Figure 4.4 Number of Employees



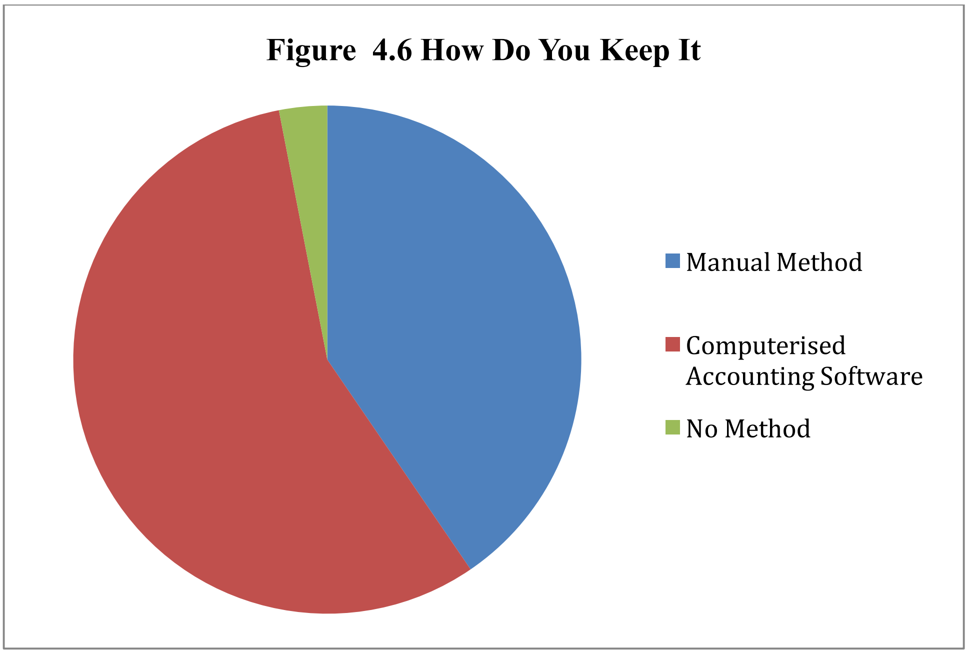
(Source: authors own field work, 2017)

Figure 4.4 depicts the number employees in the sampled SME entities. The aim is to identify the level of activities in these organisations. The higher the employees means bigger level of operations which warrants the implementation of CAS packages for payroll, Social Security and National Insurance Trust (SNNIT) Employee Pay as You Earn (PAYE), VAT returns and other management and statutory returns. It could be seen that employees with the rages of 11-20 dominated employment in SMEs followed by 1-10 and then 21-30 respectively. This also confirms Kayanula et al, 2000 assertion that SMEs in Ghana by definition ranges from 10 and above.



(Source: authors own field work, 2017)

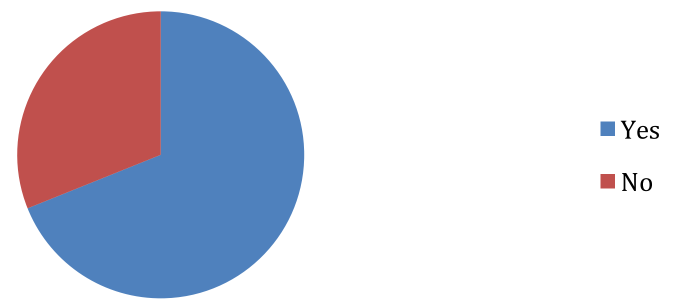
The above shows the results of those SMEs that keep proper books of accounts as against those who don't keep it in Kumasi metropolis of Ghana. The massive increase in keeping of accounts is the adherence of government's invoking of section 123 of Ghana's Companies Code (1963), Act179 which makes it mandatory for all reporting entities such as SMEs to ensure that proper books of accounts are kept in the ordinary course of business transactions with regard to their statement of comprehensive income and financial positions and any changes that have occurred. The ministry of finance issued a directive through the Ghana Revenue authority to enforce compliance on the part of SMEs. This is a clear indication that indeed SMEs are complying with the directives.



(Source: authors own field work, 2017)

Figure 4.6 portrays how SMEs who responded to keeping accounts prepare their financial statement. 56.49% representing 74 SMEs responded using CAS in recording, processing and generating of financial statement. This is followed by 40.46% representing 53 SMEs who don't use CAS in the preparation of financial data. The growth in the use of CAS is stemmed from the fact that Kumasi Technical University in collaboration with the Association of Small Scale Business in Ghana (ASBG) supported by Sage University Canada are training students at the Diploma level about the use of Sage products to keep accounts for SMEs within the Kumasi Metropolis. A further investigation into why SMEs still use the manual method to keep accounts revealed the frustration SMEs goes through in selecting an appropriate CAS packages for their respective businesses. This also confirms Jones (2002) assertion that choosing a CAS package in many ways is like choosing a life partner (man or woman) which comes with benefits such as affordability and high functionality but with potential complexities such as risks, uncertainties and dependency posits Venkateswarlu, (2010).

Figure 4.7 Have you ever had any experience in CAS implementation?



(Source: authors own field work, 2017)

Figure 4.7 depicts the level of experience staffs who use CAS to process financial data have gained in the implementation of the package. The more the person has been involved in the implementation the lower the risks of selecting the wrong CAS package in the software market. 68.92% representing 51 employees confirmed being part of the implementation process and 31.08% representing 23 employees responded in negative. Pressed further those who responded to No said they are not call upon to part of the selection and implementation team when their SME managers desire the implementation CAS Packages. They only become aware when it has been installed and running with little or no training forcing them to study CAS package them using confusion manual provided by the CAS vendor. This confirms a statement from the introductory part of this research that some SME owners complained that they do not understand how CAS works because of little or no training provided to them by vendors of CAS packages. Some CAS comes with no supporting training package and materials. However, manuals that do accompany CAS software purchased are confusing in tutorial.

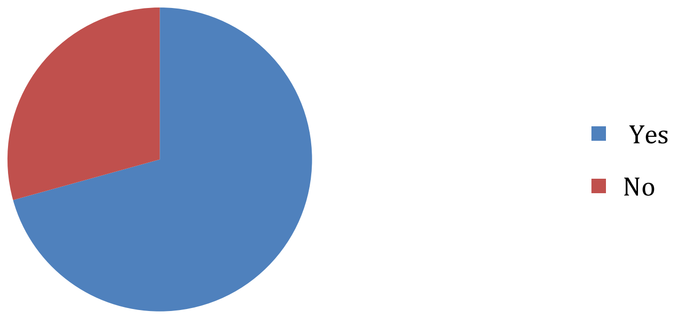
Figure 4.8 shows the results when respondents who have involved in the implementation of CAS package were asked if they had any software package for selection when they went to the software market. 66.67% representing 34 responded in a negative that they had no idea which CAS package to purchase while 33.33% representing 17 said they were aware of the software they were going to look for in the software market. The lack of information on CAS packages in Ghana has contributed to the lack knowledge of specific CAS packages in the market. Pressed further, those who knew of the package prior to selection had the chance to see a demonstration from rival SMEs in the same industry and their performance. This confirms Michael (2015), suggestion that "it is worth noting is to seek information from similar neighbour SME firm, who has made a successful implementation of an AIS/CAS package and usage. If an SME manager is able to receive a network of information of this nature, then decision making becomes much easier so far as selection of CAS package is concerned".

Figure 4.8 Did you have any CAS package in mind when you were going to the software market?

(Source: authors own field work, 2017)

Figure 4.9 aimed to understand if the personnel in the implementation process of CAS indeed were confronted with many CAS packages such as Sage Pastel, Sage Peachtree, Sage Line 50, Sage Line 300 ERP, Mine Your Own Business (MYOB), Quick books, Tally, Money works, Quickens, SAP, PeopleSoft, and Oracle, ADP, Great Plains, JD Edwards, and other locally developed ones in the market. The overwhelmed response signifying yes (70.69%) confirms the proliferation of CAS packages in the software market in Ghana with varied information. Those in the negative response indicated that the CAS packages were brought to attention at the work place for installation and evaluation over a certain trial period for either acceptance or decline. They realised it was good for them at the end of the trial period and so did not bother to go to the software market.

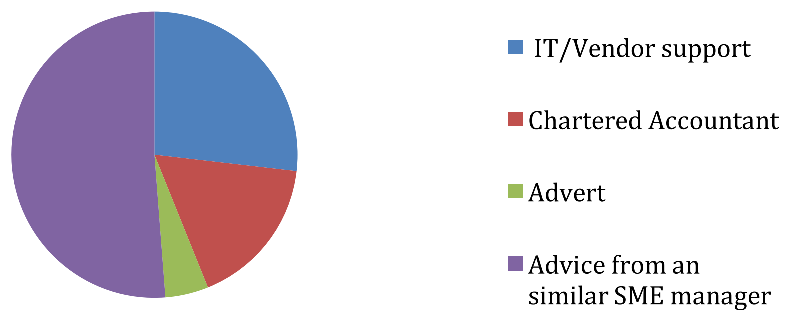
Figure 4.9 In the software market, were you overwhelmed with many CAS packages?



(Source: authors own field work, 2017)

Figure 4.10 shows the results of respondents who were overwhelmed with many CAS packages in the software market. The aim is to understand the personalities which assisted them make the best selection of their choice among the lots. The results showed that advice from similar SMEs enabled them make the rightful decision in the selection process (51.22%) followed by IT Vendor support through to advert. IT vendors from years of experience are able to tell which software best fits a particular reporting entity. Chartered accountants are able to provide the needed software selection as results of working for many client SMEs. However according to Michael, (2015) is of the view that an accounting firm should not be used as a consultant to the small businessperson seeking a software package as they may connive with the software vendor to sell at a commission certain quantities of CAS packages so may force an SME client to buy a package which may not business processing needs. The low level of adverts shows that software developers don't advertise the presence of CAS packages in the market. This goes to confirm 4.8 that most of the respondents are ignorant of any CAS package availability in the country.

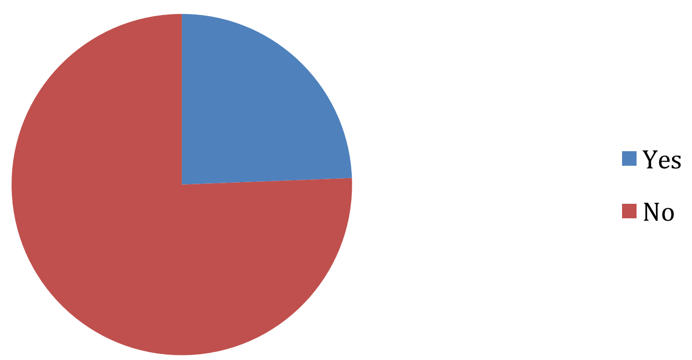
Figure 4.10 which of the following personalities assisted you to select your CAS package



(Source: authors own field work, 2017)

Figure 4.11 is aimed at understanding if respondents in figure 4.10 have some basic functionalities of CAS in mind prior to going to the market to buy the package from software vendor suppliers. The result indicates that there was no aforementioned knowledge about the functionalities to look for in the selection of CAS package which constituted about 71.61% of respondents. Those who responded to yes made mention of Functionality, Consumer needs, Present needs, Future needs, CAS needs, Pricing & Financing option, Maintenance/Upgrades/Patches, Flexibility, Implementation, IT Environment/ Security and Vendor credentials which were way above the basic fundamental features that have to be met on any selected CAS before proceeding to purchase it. All these thoughts are brilliant yet, until some basic determinants are met one may choose the wrong CAS package.

Figure 4.11 Did you have in mind any feature/functionalities of CAS to aide you to select the best in the market?



(Source: authors own field work, 2017)

Figure 4.1 which of the following basic features/functionalities did you consider before selecting CAS package

SMEs	Scalability	Capacity	Ease of data Input	Security	Speed of Installation	CAS Consultant	Reporting Capabilities	Error Handling	Data Validation	Audit Trail
Auto Parts Imports	7.00	5.00	8.00	7.00	**11.00**	4.00	7.00	7.00	9.00	6.00
A shopping Mall	6.00	4.00	7.00	9.00	7.00	**12.00**	**13.00**	5.00	5.00	6.00
Haulage and Distribution	9.00	7.00	5.00	6.00	8.00	9.00	8.00	5.00	4.00	**11.00**
Distributor of Building Hardware	**16.00**	**15.00**	**14.00**	**13.00**	6.00	7.00	5.00	9.00	**13.00**	6.00
Abattoir Services	0.00	5.00	3.00	4.00	5.00	5.00	4.00	3.00	6.00	7.00
Poultry Farming	3.00	5.00	4.00	2.00	4.00	4.00	4.00	**12.00**	4.00	5.00
Total	**41.00**	**41.00**	**41.00**	**150.00**	**41.00**	**41.00**	**41.00**	**41.00**	**41.00**	**41.00**

(Source: authors own field work, 2017)

Regarding table 4.1 we surveyed SMEs according to their type of business using this approach to establish their staff personnel's insights into the basic functionalities of CAS application and their features that are perceived to be most optimal in the selection their CAS application packages. The high frequency of occurrence indicates the importance they attached to the CAS feature in their selection of CAS software supplier which highlighted in bold. Our next area of the investigation was to ascertain the main factor categories considered to be the most significant to SMEs in their desire to implement CAS application package. The outcome of this study is showed in Table 4.2. As depicted in Table 2, SMEs rated Ease of Data Input as the optimally significant general factor category in their CAS software selection process The next essential basic feature for SMEs CAS selection was the support expected from the vendor consultant of the CAS package in terms of training, upgrade and other maintenance into the foreseeable future of the CAS usage. SMEs are very interested in audit trail to track down activities performed on the CAS platform during and after working hours for authentication and fraud deterrence as well as prevention. Users are concern with speed of installation of the CAS package with all the related modules needed to execute the financial data processing and the generation of the needed reports. This confirms reports from SMEs that some of the locally produced CAS packages are difficult to run on the operating systems hardware. The ranking goes down to error handling which was least selected. However, any CAS package that does not have this capabilities embedded will accept any data format such as date of birth as salary field. The results will be a disaster for SMEs in their report generation as there will errors. Although it's been low, many of the CAS packages examined seemed to contain this basic feature.

Table 4.2 Most Essential CAS Attributes

Ranking Scale: 1 = Most important; 6 = least important	To Users in Selecting Software Packages		Mean comparison T-Statistic *** p<.001 ** p< .01 * p< .05
	Mean(n=25)	Ranking	
Scalability	2.386	8	3.661***
Data Validation	2.070	7	3.179***
Ease of Data Input	1.298	1	2.676**
Security	1.961	6	3.009**
Speed of Installation CAS	1.672	4	0.734
Consultant/Vendor	1.312	2	-0.438
Reporting Capabilities	2.415	9	3.446**
Error Handling	2.561	10	
Capacity	1.801	5	3.597***
Audit Trail	1.331	3	-3.074**
Source: Elikai, F., D.M. Ivancevich, and S.H. Ivancevich (2007)			

Figure 4.12 was aimed at determining if training was given to SMEs after they have selected a best-fit CAS supplier. The results depict less training offered to those who selected no representing 63.41% and yes representing 36.59%. This confirms Michaels, (2015) position that "some SME owners complained that they do not understand how CAS works because of little or no training provide to them by vendors of CAS packages. Some CAS comes with no supporting training package and materials. However, manuals do accompany CAS software bought with confusing tutorial"

Figure 4.12 Were you given training during and after the CAS implementation process by the supplier?

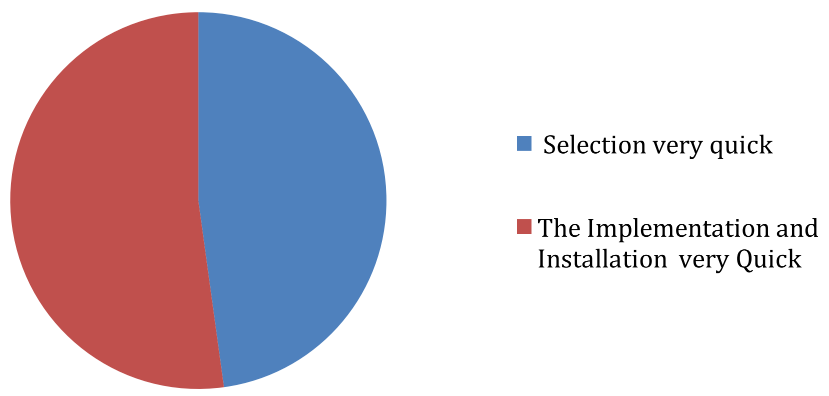
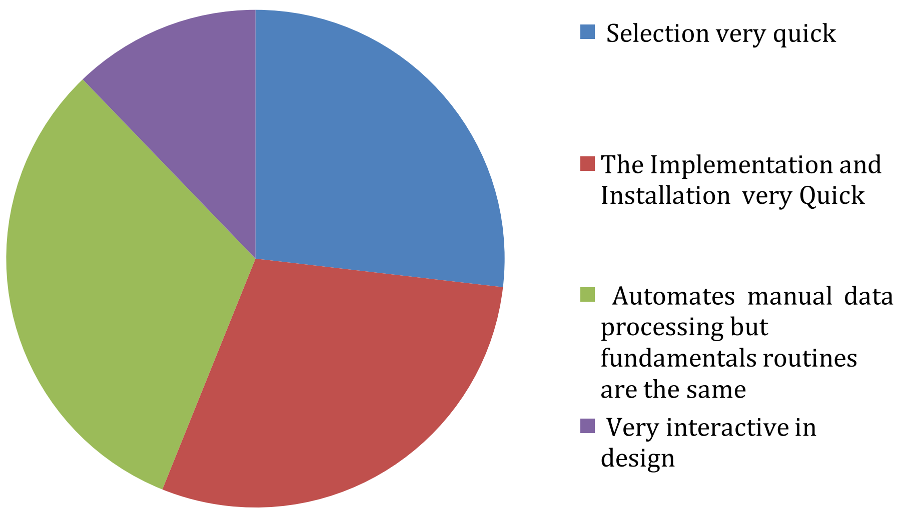


Figure 4.13 was to the awareness of participants regarding the automation of CAS packages prior to implementation. The results are depicted below with varying insights.

Figure 4.13 What did you perceive of CAS after the selection and implementation you business organisationf



Finally figure 4.14 was used to assess participant's awareness of the CAS packages selection and implementation. The outcome is showed below:

Figure 4.14 What is your level of insight so far as CAS package implementation is concerned now?

On the whole it could be seen that the level of awareness has increased among SMEs in Ghana which could be attributed to government policy of directing all SMEs to computerize their financial data processing. The other responses although not significant so far as the investigation is concerned could be significant in general sense.

CONCLUSION AND RECOMMENDATIONS

To put into operation a CAS application successfully, it is imperative to select a CAS application which can be compatible with the special requirements needs and demands of the SME organization. The purpose of this research study was to understand how SMEs select their CAS packages amongst the lots in the software market and also understand the sort of supports received from vendors in terms of trainings and other after sales services. It was also explain theoretically our proposed model which may assist SMEs selects an appropriate CAS vendor supplier. We looked into Scalability, Data Validation, Ease of Data Input, Security issues surrounding the CAS package, Speed of Installation of the CAS package on the organization's operating systems, Consultant/Vendor support with training and periodic upgrade and maintenance, Reporting Capabilities of the CAS package to meet statutory and management need, Error Handling abilities of the CAS to enable the rightful data to be entered in its required fields etc, Capacity of the CAS to enable other trading activities to be configured and to enable consolidated accounts to be prepared for operational activity and Audit Trail capabilities to track down and monitor activities of each assigned staff on the systems for effective internal control purposes. The study has revealed that SMEs of our sampled companies are more interested in CAS packages which are easy to use so far as data input and vendor support are concerned which is typical among our framework's proposed criteria's in selecting a CAS supplier. They are of the view that CAS packages that have many interfaces are difficult to use so far as speed is concerned. The Association of SMEs in could in collaboration with the Ghana Revenue Authority come out with a policy relating to the specifications that meets industry standards to the software industry for onwards design and development. The contributions of our research is not only to formalize knowledge related to our model on CAS selection criteria for SMEs but it can be applied in practice as a guide to both the SMEs and big reporting entities desiring to select an optimal CAS supplier for implementation among developed through to other developing countries as well. Academic institutions across the world could also collaborate with software developers and SME associations to develop curricula to train students in accountancy and information systems and technologies to enable smooth selection of computerised accounting vendors and implementation.

APPENDIX A

1 Background Information

1. **What is your position in the company**
    a. Owner
    b. Manager
    c. Accountant
    d. Cashier
    e. Bookkeeper

2. **How long have you been working with this company?**
    a. less than 1 year
    b. 1-3 years
    c. 4-6 years
    d. 7-9 years
    e. more than 10 years

3. **Please provide an estimate of the number of employees in your company__________**

4. **Do You Keep Books of Accounts for Your Business?**
    a. Yes
    b. No

5. **How Do You Keep It?**
    a. Manual Method
    b. Computerised Software Method
    c. No Method

2 CAS Implementation Experience

6. **If you have selected "b" in "question 4" have you ever had any experience in CAS implementation?**
    a. No
    b. Yes,

7. **Did you have any CAS package in mind when you were going to the software market**?
    a. Yes
    b. No

8. **In the software market, were you overwhelmed with many CAS packages?**
    a. Yes
    b. No

9. **If you answered yes in question 8 above, which of the following personalities assisted you to select your CAS package? please tick one:**
    a. IT/Vendor support
    b. Chartered Accountant
    c. Advert
    d. Advice from an similar SME manager

3 CAS Functionalities

10. **Did you have in mind any feature/functionalities of CAS to aide you to select the best in the market?**
    a. Yes
    b. No

11. **If answered yes to question 10 above, which of the following basic features/functionalities did you consider before selecting CAS package? Please select as appropriate**
    a. Scalability
    b. Capacity
    c. Ease of data Input
    d. Security
    e. Speed of Installation
    f. CAS Consultant
    g. Reporting Capabilities
    h. Error Handling
    i. Data Validation
    j. Audit Trail

12. **If you selected "All" in question 11 did you encounter any challenges in your selected CAS Implementation and usage?**
    a. Yes
    b. No

13. **If you select "None" and "Some" in question 11 did you encounter difficulties in your CAS usage?**
    a. Yes
    b. No

4 CAS Training and Usage

14. **Were you given training during and after the CAS implementation process by the supplier?**
    a. Yes
    b. No

15. If answered Yes to question 14, was the training related to how to use the CAS package to pass double entries using the necessary modules embedded in the application?

a. Yes
b. No

Reference

Abu-Musa., Ahmad A., (2001), "Evaluating the Security of Computerized Accounting Information Systems: An Empirical Study on Egyptian Banking Industry" PhD Thesis, Aberdeen University, Scotland, UK.

Ahmad A. Abu-Musa (2005) "The Criteria For Selecting Accounting Software: A Theoretical Framework" Department of Accounting & Management Information Systems King Fahd University of Petroleum & Minerals Dhahran, Saudi Arabia

Accountancy (2013) "Computer and Computerised Accounting System" www.download.nos.org/srsec320newE/320EL12.pdf

Ayyagari, M., Beck, T. & Demirguc-Kunt, A. (2007) Small and medium enterprises across the globe. Small Business Economics, [J], 29(4), pp.415–434

Bernard, H.R. (2012). Social research methods: Qualitative and quantitative approaches. Thousand Oaks, CA: Sage. Biswas, P. K., & Baptista, A. (2012). Institutions and micro-enterprises demography: A study of selected EU countries, 1997-2006. Journal of Small Business and Entrepreneurship, 25(3), 283-306. doi:10.1080/08276331.2012.10593574

Collins J. Carlton, (1999)"How to select the right accounting software", Journal of Accountancy; New York; Vol. 188, Issue 2, PP. 61-69

Collins, J.C (2006). "Small Business Software Grows Up," Journal of Accountancy, 201:3, , pp.50-56.

European Union, Commission Recommendation of (2003) concerning the definition of micro, small and medium-sized enterprises. Official Journal of the European Union, pp.36–41 2003 (J)

Fisher, Dorothy M.; Steven A. Fisher.,(2001) "For rent: Are you considering an ASP for your accounting functions?", The National Public Accountant; Washington; Vol. 46, Issue 6, Aug, PP. 16-18.

Ghana Statistical Service (GSS) (2012), pp.31-40 "Population and Housing Census: Summary Report of Final Results

Heikkilä, T. S. & Sääksjärvi, M. (1991) "Success of Software Packages in Small Businesses: An Exploratory Study," European Journal of Information Systems, 1:3, pp.159-169.

Matzler. K., Sauerwein, E. and Heischmidt, K.A. (2003) "Importance-performance analysis revisited: the role of the factor structure of customer satisfaction", The Service Industries [J] Journal, , Vol. 23, No. 2, pp. 112 – 129

Michael. B., Dainese. F.,(2015)The Status of Computerized Accounting Software in Small American Businesses Miami University (Ohio)

Mpofu K, Watkins-Mathys L (2011) Understanding ICT adoption in the small firm sector in Southern Africa. J Syst Inf Technol 13(2):179–199

Randolph P. J.,"A Strategy for Finding the Right Accounting SoftwareA better understanding of your business operation"(2003) http://www.journalofaccountancy.com/issues/2003/sep/astrategyforfindingtherightaccountingsoftware.html (accessed 11/08/2017)

Venkateswarlu P., (2010) "Implementing Accounting Software In Small Businesses In New Zealand: An Exploratory Investigation" [J] Accountancy Business and the Public Interest, pp.100. Vol. 9

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Impact Of International Public Sector Accounting Standards Adoption On Accountability In Public Sector Financial Reporting In Nigeria

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ABSTRACT

This study examined the effect of adopting International Public Sector Accounting Standards (IPSAS) on accountability in public sector financial reporting in Nigeria, using the perceptions of accounting personnel (AP), academics (AA, and auditors (AU). A sample of 130 respondents was drawn from a population of 193 AU, AP, and AA within Benue State. The Chi- Square goodness of fit test, Kruskal Wallis H test, Mann-Whitney U test, and Cohen effect size were used in data analysis. The study found that IPSAS adoption in Nigeria would improve accountability and decision making in the public sector. The study also found that significant differences existed between AP, AA and AU on the effect of IPSAS adoption on Nigeria's public sector financial accountability. The study, therefore, recommended that the Federal Government should not relent towards IPSAS implementation in Nigeria since they would enhance accountability and decision making. Furthermore, concerted efforts should be made by the federal, state and local governments to educate the populace on what IPSAS entails in terms of financial accountability in the public sector.

Key words: Accountability, International Public Sector Financial Reporting Standards, P public sector, financial reporting, Benue State, Nigeria.

INTRODUCTION

The return of Nigeria to democratic governance in 1999 has been associated with various reforms aimed at facilitating transparency and accountability in the management of government business and improving the quality of financial information produced in public sector financial reports. The decision by the Federal Executive Council to adopt International Public Sector Accounting Standards (IPSAS) by the three tiers of government in Nigeria by 1st January, 2016 is one significant initiative that is expected to improve, amongst others, accountability in financial reporting in the Nigerian public sector. IPSAS has become the focal point of global revolution in government accounting in response to calls for greater government financial accountability and transparency [1]. IPSAS deals with issues related to the presentation of annual General Purpose Financial Statements (GPFSs) of public sector reporting entities other than Government Business Enterprises (GBEs). Barrett [2] has described accountability as a relationship based on obligations to demonstrate, review, and take responsibility for performance, both in the results achieved in the light of agreed expectations, and the means used. In other words, the government is accountable when it conducts its business in an open, transparent and responsive manner [2].

IPSAS have two bases of accounting which are the cash basis and the accrual basis. The accrual basis of accounting is practiced in the private sector but the introduction of New Public Management (NPM) initiative has made it part of financial management improvement programme in the public sector [3]. NPM advocates for the application of private sector management approaches and techniques to the public sector.

The adoption of IPSAS, involving accrual accounting by government, is expected to serve a number of useful purposes, such as (1) improving the assessment of financial performance as the financial statements will reflect all expenses, whether paid or unpaid, and all incomes, whether received or not; (2) providing information on whether income streams are adequate to meet short and long term liabilities; (3) making available comprehensive information on expenses which will help in knowing the cost implications of policies and enabling comparison with alternative policies; (4) ascertainment of the future sustainability of programmes, liquidity position and comprehensive information on the financial position or assets and liabilities of government at the end of the financial year; and (5) improving good governance [4] and [5].

The achievement of the above stated objectives is, however, doubtful due to the failure of several attempts made in the past to improve on the financial reporting system in the Nigerian public sector. Prominent among such attempts were the efforts made by the Federal Government to standardise the financial statements produced by the federal, state and local governments where a committee was set up in 1984 to harmonise the manner of presentation of financial statements in the public sector. The committee discovered that disparity exists between the accounts of federal, state and local governments in terms of statements and presentation formats and recommended sixteen statements to be adopted by the three tiers of government. The key recommendations were accepted and implemented but the standard reporting formats were not uniformly adopted [6].

There has also been series of arguments as to the desirability of IPSAS accrual adoption by the Nigerian public sector. The arguments emanate from the point that IPSAS adoption in Nigeria is perceived to be initiated as a result of pressures from international organisations and institutions like the International Monetary Fund (IMF), World Bank (WB), African Development Bank (ADB), United Nations Development Programme (UNDP), Organisation for Economic Co-operation and Development (OECD), and International Federation of Accountants (IFAC) who are also financial donors to the country and not as a result of the envisaged usefulness and benefits associated with their adoption.

The focus of adoption and implementation of IPSAS in Nigeria is more emphasised at the federal level as sensitization, training and education of accounting professionals and the public at large on the subject matter is poor at the state and local government levels. Furthermore, the implementation and operation of IPSAS are difficult and very expensive and need sophisticated accounting systems and technologies, which developing countries, including Nigeria, lack accounting professionals who can manage the system [7]. In consequence, there is uncertainty as to the attainment of the goals of the program at other levels of the public sector.

The main objective of this study is to provide evidence which would be used to resolve the lingering problem of whether IPSAS adoption will improve accountability in public sector financial reporting in Nigeria, based on expert opinion of key players in the IPSAS implementation project namely: accounting personnel (AP), accounting academics (AA), and auditors (AU). The specific objectives of the study are to: (1) ascertain whether the adoption of IPSAS will improve accountability in the Nigerian public sector financial reporting; and (2) determine whether differences exist between the perceptions of AP, AA and AU on the effect of IPSAS adoption on accountability in public sector financial reporting in Nigeria. An assessment of the views of the key stakeholders in the IPSAS project is essential if the project is to be successfully implemented. Accordingly, two null hypotheses, which emanate from the preceding objectives, are tested in this study. The first hypothesis (H_{01}), states that IPSAS adoption will not significantly improve the level of accountability in the Nigerian public sector financial reporting. The second hypothesis (H_{02}) states that no significant differences exist between the perceptions of AP, AA and AU on the effect of IPSAS adoption on accountability in the Nigerian public sector.

This paper is organized into five sections, including this section one. A review of related literature is presented in section two, while section three articulates the methodology used to collect and analyze the data. Section four presents and discusses the results obtained from data analyses. Section five concludes the paper and makes recommendations.

REVIEW OF RELATED LITERATURE

This section reviews extant literature related to the phenomenon of interest which is, International Public Sector Accounting Standards (IPSAS) adoption and accountability in the public sector. It is organized into three sub-sections, namely conceptual framework, theoretical framework, and empirical review.

Conceptual Framework

Two concepts are germane to this study namely, International Public Sector Accounting Standards (IPSAS) and accountability. The IPSAS were developed and issued by International Public Sector Accounting Standards Board (IPSASB) for use by public sector entities (PSE) around the world in the preparation of General Purpose Financial Reports (GPFR). The primary objective of IPSAS is to improve accountability of public sector financial reporting by providing better information for public sector financial management and decision making.

Benito *et al*. [19] have linked IPSAS adoption to a number of strategies used by the public sector to improve the level of confidence in the quality and reliability of financial reports and also to enhance the provision of information for accountability. The IPSASB recognized the benefits of achieving consistent and comparable financial information across jurisdictions and believed that IPSAS will play a key role in enabling these benefits to be realized. The IPSASB has issued IPSAS dealing with financial reporting under the cash basis of accounting and the accrual basis of accounting. The accrual IPSAS bear semblance to International Financial Reporting Standards (IFRS) in some respect.

IPSAS underscore accounting for funds provided under World Bank Programs and other international funding organizations such as the IMF and the International Finance Corporation (IFC). These international funding agencies have encouraged developing countries, regardless of their political and economic systems, to harmonize their accounting standards with IPSAS. It is thus accepted that IPSAS have become the international benchmarks for evaluating government accounting practices worldwide, since the standards (IPSAS) seek to improve the quality of general purpose financial reporting by public sector entities, leading to better informed assessments of resource allocation decisions made by governments, thereby increasing transparency and accountability [5].

IPSAS are based on two systems of accounting -cash and accrual systems. The cash basis of accounting is the system of recording receipt or income when actual cash is been received, and recording expenditure when actual payment is made irrespective of the accounting period in which the services are rendered or benefits received [20]. The accrual basis of accounting states that revenue/ income should be recorded and recognized in the accounts when earned and not when money is received. Similarly, expenses should be recorded and recognised in the books of account when incurred and not when money is paid [21]. Emanating from the IPSAS accrual basis of accounting are (1) the statement of financial position;(2) the statement of financial performance; (3) the statement of changes in net assets/equity; (4) the cash flow statement; and (5) accounting policies and notes to the financial statements.

The arguments supporting the adoption of IPSAS are legion and revolve around: (1) the successful use of accrual accounting, which is the bedrock of IPSAS, in the private sector [22]; (2) the provision of better financial information for the basis of government accountability since IPSAS are believed to be more comprehensive, thus meeting the various needs of the users [23] and [24]; (3) promotion of consistent and comparable financial reports produced at different times by the same entity or by two different entities in different jurisdictions, making understanding of financial reports prepared all over the world easier [25]; (4) IPSAS are considered to be less prone to manipulations and thereby reducing significantly, fraudulent practices in financial reporting [26]; and (5) IPSAS allow for the full disclosure of all assets and liabilities, thereby facilitating better management of assets, including better maintenance, more appropriate replacement policies, identification and disposal of surplus assets, and better management of risks such as loss due to theft or damage [27].

IFAC [5] in the IFAC policy position 4, has maintained that the movement to IPSAS accrual does not mean the abandonment of cash accounting. IPSAS require the production of a full statement of cash flows in order to separately identify cash receipts and payments associated with operating, investing, and financing activities. IPSAS accrual systems have functionalities to support cash based accounting.

Notwithstanding the affirmative arguments for IPSAS adoption stated above, a number of contrarian arguments have been advanced and these could be categorized into 2 levels: theoretical level, and implementation level. Heralding the opposing arguments at the theoretical level, Newberry [28] has posited that the nature of public sector is different from the private sector and since the public sector is not intended to make profit, the style of accounting which is mainly intended to measure profit is not appropriately applicable in the public sector. Barton [29] has, in particular, argued that the principle to match revenues against costs is not applicable in the public sector. This is because most transactions in the public sector are non-exchange transactions which means that revenues received (e.g. from taxes) do not provide equal value in return for the services provided (e.g. for building infrastructures) and do not, therefore, receive equal value in return. Barton [23] has also argued that assets in government are diverse and sometimes different from those in the private sector. These assets, including infrastructures, military, and heritage assets, are mainly not used to generate revenues. Pallot [30] further asserted that since the nature of these assets is unique compared to those in the private sector, the valuation and methods used to depreciate assets are debatable.

In relation to implementation level, one of the arguments presented is that the implementation and operation of IPSAS are difficult and very expensive and need sophisticated accounting systems and technologies. So often governments, in especially developing economies, lack accounting professionals who can manage the system [7]. Newberry [28] has also argued that unlike the promoted benefit of reduced manipulation, IPSAS are, like other accounting systems, prone to manipulation. This argument negates the claim that financial reporting under IPSAS provides greater transparency than the traditional cash accounting. Carlin [31] has also noted that in the context of the private sector, there exists a burgeoning literature on the susceptibility of accrual accounting and financial reporting to obfuscation and diminished transparency. Jones and Puglisi [32] have also argued that due to the expensive nature of IPSAS implementation, the cost of their implementation may outweigh the benefits associated with them.

Despite all these criticisms IPSASB, under the auspices of IFAC, argues strongly that all governments should adopt the accrual basis of accounting. Even in the introduction to its cash basis of accounting standard in 2003, it stated that the committee encourages governments to progress to the accrual basis of accounting. The IFAC Policy Position 4 maintains that provision of accurate and complete information on expenditures and transactions is the only way to create trust between the government and its constituents, demonstrate accountability and stewardship, and reinforce their own credibility.

Hines [33] has stated that accountability involves an obligation to answer for one's decisions and actions when authority to act on behalf of one party (the principal) is transferred to another (the agent).The responsibility for accountability in the public sector exists where there is a direct authority relationship within which one party accounts to a person or body for the performance of tasks or functions conferred by that person or body (33). Democratic governments are elected by citizens to act in the best interests of the nation on their behalf and citizens have a right to know what their governments are doing on their behalf. Funnell and Cooper [34] have averred that there is an implicit requirement for public trust in the operations of government and this is embodied in the responsibility for accountability. The provision of appropriate information by government to parliament and the people is critical to the accountability obligation, and hence to democracy.

According to United Nations Development Programme (UNDP [35]), accountability is the obligation to demonstrate that work has been conducted in accordance with agreed rules and standards; it is also the process by which reliable, timely information about existing conditions, decisions and actions relating to the activities of the organisation is made accessible, visible and understandable. Accountability includes financial, administrative, social, and political stewardship [35]. Four important criteria, enunciated by UNDP as being fundamental to public service accountability include: fiscal accountability, managerial accountability, program accountability, and individual accountability [37]. The basic conclusion drawn from the concept of accountability as presented above is that IPSAS adoption could lead to enhanced accountability in public sector financial reporting, despite contrarian arguments advanced in extant literature.

Theoretical Framework

Two theories, namely institutional and agency theories, underlie extant studies on IPSAS adoption and their impact on accountability in financial reporting in the public sector. As asserted by Herbert, Tsegba, Ene and Onyilo [8], a theory has a trichotomy of purposes, namely: (1) provision of a coherent explanation or rationale for observed practice in the phenomenon or phenomena of interest; (2) predicting and understanding unobserved phenomena, which Watts and Zimmerman [9] aver are not necessarily future phenomena but phenomena that have occurred but on which systematic evidence has not yet been collected; and (3) challenging and extending existing knowledge of the phenomena.

The institutional theory, propounded by DiMaggio and Powell [10], considers organisations as operating within a social framework of norms, values and assumptions about what constitutes appropriate or acceptable economic behaviour [11]. The basic assumptions about institutional theory include: (1) adoption of structures and management practices that are considered legitimate by other organisations in their fields, regardless of their actual usefulness: (2) organisations responding to pressures from their institutional environments and adopting structures/or procedures that are socially acceptable and appropriate organisational choice; and (3) organisations conforming to predominant norms, traditions and social influences in their internal and external environments which will promote governments that gain support and legitimacy by conforming to social pressures [12], [10] and [13]. From the perspective of the public sector, legitimacy might be pursued from other national governments, international organisations and groups of interest [14].

The institutional theory states that changes in management practice or culture of an institution to new ones (e.g. from the traditional cash accounting to accrual based IPSAS) do not occur primarily because of the efficiency or usefulness of the new style adopted but as a result of some institutional pressure. Three mechanisms through which institutional isomorphic change takes place have been identified: (1) coercive isomorphism which stems from external factors like international organisations dictating the use of certain style of management to governments; (2) mimetic isomorphism which is standard response to uncertainty and following the actions of perceived more successful organisations; and (3) normative isomorphism which is associated with professionalization and is concerned with cultural innovations to adopt new styles that are considered superior to the one being used [10]. The relevance of the institutional theory in this study is that changes in organisational structures or style (such as accounting rule choice) do not occur because of the benefits associated with the new style but such changes do occur as a result of the three mechanisms posited above, that is coercive, mimetic, and normative isomorphism.

The agency theory which emerged in the 1970s following the seminal works of Jensen and Meckling [15] is also used to provide a coherent explanation or rationale for IPSAS adoption in any governance jurisdiction. The agency perspective resonates from the separation of ownership and control in a modern corporation and the fears that the interest of the owners (the principal) and agent (the managers) may not cohere. Accordingly, the theory presumes tension between the principal and the agent, thereby creating the demand for tension diffusion mechanisms. The use of published financial statements, is one of such mechanisms [16].

Baiman [17] has, however, provided a view of the agency theory from the public sector perspective, arguing that, a government official is elected or appointed to act on behalf of the public as an agent, performing the work of directing and controlling resources on behalf of the public (principal). The agency theory, therefore, calls for strong public accountability between the agent and his principal which can be done through the use of a comprehensive financial statement exemplified by IPSAS. Lenz [18] has construed public accountability as a function of the capabilities of principals to judge the performance of their agents. The agency theory has proven to be a flexible and useful approach for interpreting the effects of institutional arrangements on accountability of public decision makers and public policy; it is also presented in this study as core to the understanding of how IPSAS could improve on accountability in public sector financial reporting.

Related Prior Empirical Studies

The empirical literature related to the impact of IPSAS adoption on financial accountability in the public sector in Nigeria is sparse. However, three exemplar cases have been identified and presented below. The main purpose of this review is to appraising the extent of the research in terms of the methodologies adopted and the results obtained.

The first study is by Okaro and Okoye [38], who gathered the various perceptions of preparers of financial statements (accounting practitioners), accounting academics, and auditors in Anambra State on the intention of Nigeria to adopt IPSAS and whether the proposed benefit of improved accountability would be achieved. A survey research design approach was adopted for their cross sectional study which used a three point likert scale questionnaire to generate data for analysis. The population of the study was 100, made up of staff of Anambra State Auditor-General, Accountant General, Federal Auditor General's Office in Awka, Nnamdi Azikiwe University, and accounting staff of Anambra State Universal Basic Education Commission. The study made use of a purposively selected sample of 80 respondents cutting across the 3 groups of accounting practitioners, accounting lecturers, and auditors. Descriptive statistics, including percentages, mean and standard deviation were used in presenting the data. The Chi- square test and one-way ANOVA test statistics were used for data analysis. The study found that the introduction of IPSAS in the public sector would usher in an era of improved accountability and decision making in the Nigerian public sector.

The second study is by Shakirat [39], who also investigated the effects of adoption of IPSAS on accountability in the Nigerian public sector through the perspectives of public servants and legislators. The study adopted the survey design via the use of questionnaire. The population of the study consisted of senior personnel in the accounting cadre under the Accountant General and Public Accounts Committee (PAC) members in four states representing three out of the six geo-political zones of Nigeria, which totalled 1,065. The sample for the study was 295 respondents. The study employed Karl Pearson coefficient of correlation "r" statistics for analysis. The study evidenced, amongst others, that accountability in the Nigerian public sector would improve through the adoption of IPSAS.

The third study was carried out by Ofoegbu [40], who sought to ascertain whether the adoption and implementation of IPSAS would improve accountability in the Nigerian public sector financial reporting. A survey design method was adopted for the study through the use of a five point Likert scale questionnaire. The population for the study consisted of auditors, accountants in the public sector, and those in academics from Enugu State of Nigeria who possess adequate knowledge of IPSAS and totalled 146. The sample for the study was 107 respondents. The descriptive and inferential statistics, Friedman's test statistics, and Chi-square test were used for data analysis. The findings of the study revealed that the adoption and implementation of IPSAS in Nigeria would significantly improve accountability in the public sector.

The reviewed studies have common methodological features. First, they used the views of persons they perceived, would have an in-depth knowledge of what would be the possible impact of IPSAS on accountability in the Nigerian public sector financial reporting. This is expected since the IPSAS project was yet to take off. Second, they all used the questionnaire as the main instrument for data collection. Third, two used the Chi-square [38] and [40], and one used Chi-square in conjunction with one-way ANOVA test statistics [38], and the third used correlation analysis [39]. Fourth, their results suggested that IPSAS would create room for greater accountability in the Nigerian public sector financial reporting. The areas of divergence are in the location of the studies, the two of the previous studies were in Awka and

Enugu, which are in one geopolitical zone of Nigeria. The remaining study captured four states in one geopolitical zone of Nigeria.

In addition to providing evidence on whether IPSAS adoption would improve accountability in the Nigerian public sector financial reporting, this present study also seeks to establish whether significant differences exist between the perceptions of the three key stakeholder groups (accounting practitioners, accounting academics, and auditors) under investigation. This evidence is desirable since the existence of significant differences on the phenomena of interest by these key stakeholders would have perverse effect on the implementation of the IPSAS project in Nigeria. Furthermore, the IPSAS project was to start on January 1, 2016 but as of date, the 2016 financial statements are yet to be made public by any tier of government. This development underscores the continued use of the views of the key stakeholders to gauge the impact of IPSAS adoption on public sector financial reporting in Nigeria. The principal argument in this study, which supports the continued use of stakeholder perceptions about IPSAS adoption and accountability, is that these stakeholders are already involved in the preparation of IPSAS based financial statements and could, therefore, offer more honest opinion about them in 2017 than in prior studies mentioned in the preceding paragraphs.

METHODOLOGY

The population for this cross sectional survey is 193, comprising of accounting personnel (AP), accounting academics (AA), and auditors (AU) from Ministry of Finance, Makurdi, Office of the Accountant General of Benue State, Office of the Auditor General of Benue State, Bureau for Local Government and Chieftaincy Affairs, University of Agriculture, Makurdi, Benue State University, Makurdi and University of Mkar. The minimum sample size of 130 was derived through Taro Yamane formula for sample size determination at a 5% error margin. However, to maintain the required minimum sample of 130 respondents, a total of 160 copies of the questionnaire were administered to the respondents. The distribution of the sample among the three respondent's groups, based on Bourley's population allocation procedure, is presented in Table 1.

Table 1: Population and Sample Distribution

Population Group	Total Population	Sample Distribution	Percentage
AP	140	116	72.5
AA	33	27	17.1
AU	20	17	10.4
Total	**193**	**160**	**100**

Source: Field Survey (2017)

The questionnaire used for data collection consisted of a five-point likert scale which was designed to capture all vital answers for the research questions. The scales used in the questionnaire are strongly agree (5), agree (4), undecided (3), disagree (2), and strongly disagree (1). The questionnaire contained a set of questions classified into sections A and B. Section A addressed demographic concerns while Section B sought to obtain information related to the investigation. The specific issues addressed in this study, which are proxies for accountability, are contained in Table 2. The research instrument was subjected to content validation to ensure that the content of the instrument used measures the variables investigated in the study. The data obtained were subjected to statistical analysis to test for the internal consistency of items on the instrument and the result revealed a Cronbach Alpha coefficient of 0.708 which suggests that the instrument was reliable enough to be used.

The choice of variables for this study is based on prior studies that have investigated the effect of IPSAS adoption on accountability in public sector financial reporting. Accordingly, the variables used by [40] and [1] are adopted in this study; they are presented in Table 2.

Table 2: Proxies for Accountability

S/No	Proxy	Code
1	Comprehensive Financial Disclosure	B_1
2	Meeting the needs of various users	B_2
3	Improved decision making	B_3
4	Credible means of evaluating government performance	B_4
5	Faithful representation of economic events	B_5

Source: Modified versions of Ofoegbu [40], and Ijeoma and Oghoghomeh [1].

The conceptual model used in this study consists of the variables that measure various benefits of IPSAS adoption that are construed to promote accountability. As presented in Table 2, comprehensive financial disclosure, meeting the needs of various users, improved decision making, creditable means of evaluating government performance, and faithful representation of economic events are accountability promoting activities.

The Kruskal-Wallis H test, which is suited for ascertaining differences that exist between more than two groups is used for data analysis. The model for Kruskal - Wallis H test is shown below.

$$\mathrm{H} = \frac{12}{a(\alpha+1)} \sum_{i=1}^{k} \frac{\mathrm{R}_\mathrm{i}^2}{\beta_\mathrm{i}} - 3(\alpha+1)$$

where: H= Kruskal - Wallis H test

$\beta_i = B_1+B_2+B_3 \ldots +B_k$(the proxies for the benefits of adoption of IPSAS).

R_i^2 = sum of the ranks assigned to $\beta_i$observations in the dataset.

α= total number of observations in all K groups.

When a difference is found among more than two groups, Mann-Whitney U-test (Eq. 2) is used to determine the between difference between two groups, in which case Bonferroni correction is applied to avoid Type 2 error. The Mann-Whitney U-test is determined as follows:

$$U = n_1\, n_2 + \frac{N_1(N_1+1)}{2} R_1 \ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

where; U = Mann-Whitney U-test, n_1 and n_2 are the sample sizes of the groups, R_1 is the sum of ranks for group 1 and N_1 the population in group 1.

The Cohen effect size was computed to determine the magnitude of the differences between the two groups using Eq. 3.

$$r = \frac{z}{\sqrt{N}} \ldots\ldots\ldots\ldots\ldots\ldots\ldots (3)$$

where; r = effect size, N = population, Z = Z-score in Mann-Whitney result output.

In order to analyse the primary data obtained from the administered questionnaire, both descriptive and inferential statistics are applied. The data are presented in tables, frequency and simple percentages. The Chi-square test is also used in conjunction with the Kruskal - Wallis H test with the aid of Statistical Package for Social Sciences (SPSS) version 21. The test variable for the study is accountability.

RESULTS AND DISCUSSION

This section presents the details on respondent's demographics, and the results of data analysis. The results are also discussed in this section.

Respondents Demographic Details

As can be seen in Table 3, 83(59.7%) of the total respondents were accounting personnel (AP), 21(15.1%) were auditors (AU), while 35(25.2%) were accounting academics (AA). These data indicate that majority of the respondents were AP who work in the capacity of accountants in various establishments. Next in number to AP are AA who teach accounting courses in higher institutions of learning while AU constitute the least in number among the categories of the sampled workers.

Table 3: Distribution of Respondents According to Type of Work

Group	Returned Copies	Percentage of returned copies
AP	83	59.7
AA	35	25.2
AU	21	15.1
Total	139	100

Source: Field Survey (2017)

Results

The first objective of this study is to ascertain whether the adoption of IPSAS will improve accountability in the Nigerian public sector financial reporting. Data on this objective were collected on items B1-B5 on the research questionnaire and the results obtained from analysis of data are presented in Table 4.

Table 4: Respondents' Perception on Effect of IPSAS Adoption on Accountability in the Nigerian Public Sector Financial Reporting

Question	SA	(%)	A	(%)	UD	(%)	D	(%)	SD	(%)
B1	91	(65.5)	43	(30.9)	3	(2.2)	2	(1.4)	-	-
B2	47	(33.8)	78	(56.1)	10	(7.2)	4	(2.9)	-	-
B3	58	(41.7)	77	(55.4)	2	(1.4)	1	(.7)	1	(.7)
B4	35	(25.2)	83	(59.7)	13	(9.4)	7	(5.0)	1	(.7)
B5	81	(58.3)	55	(39.6)	2	(1.4)	1	(.7)	-	-

Source: Field Survey (2017)

From Table 4, when respondents were asked whether the multiple sets of financial statements presented under IPSAS give room for more financial disclosure in the public sector, 91(65.5%) of the respondents strongly agreed, 43(30.9%) agreed, 3(2.2%) were undecided while 2(1.4%) disagreed and 1.4% disagreed. This affirms that the multiple sets of financial statements presented under IPSAS give room for more financial disclosure and accountability in the public sector. This is due to the fact that the system provides more available information necessary for assessment by all concerned stakeholders.

On whether the information provided by IPSAS will serve better the needs of a wider variety of user groups, 47(33.8%) of the respondents strongly agreed, 78(56.1%) agreed, 10(7.2%) were undecided, while 4(2.9%) disagreed with the statement. None of the respondents strongly disagreed. The small number of those that disagreed to this statement and none that strongly disagreed imply that the information made available by IPSAS serves the needs of a wider variety of user groups better. This may be due to the fact that the system provides a wider range of information and can be easily accessed and assessed.

Considering whether IPSAS adoption in the public sector will lead to improved decision making by users of financial statements, 58(41.7%) of the respondents strongly agreed, 77(55.4%) agreed, 2(1.4%) were undecided, 1(.7%) disagreed while 1(.7%) strongly disagreed. Since majority of the respondents agreed and strongly agreed, it could be inferred that IPSAS adoption in the public sector could lead to improved decision making by users of financial statements. This is because, it can lead to accountability and fair reporting which will make available facts that can be used for decision making and planning.

On whether the financial statements prepared under IPSAS will serve as a more credible means of evaluating the financial performance of government, 35(25.2%) respondents strongly agreed, 83(59.7%) agreed, 13(9.4%) undecided, 7(5.0%) disagreed while only 1(.7%) strongly disagreed. Based on the responses, it can be seen that an overwhelming majority of the respondents agreed to the fact that financial statements prepared under the IPSAS serve as a more credible means of evaluating the financial performance of government. This is because, they system allows more information to be made available and easily accessible by all.

When asked if IPSAS adoption will bring about more faithful representation of economic events, 81(58.3%) of the respondents strongly agreed to the question, 55(39.6%) agreed, 2(1.4%) were undecided while just 1(.7%) disagreed and none of the respondents strongly disagreed. This indicates that the majority of the respondents are in agreement that the adoption of IPSAS will bring about more faithful representation of economic events. This is because, the system will allow fairness to thrive in reporting of financial and economic events and will, therefore, build the confidence of the people in the economic and financial activities of the public sector.

In order to achieve objective one, hypothesis one (H_{01}),which states that IPSAS adoption will not significantly improve the level of accountability in the Nigerian public sector financial reporting was tested using Cross Tabulation and Chi-square test. The results of this test are presented in Table 5.

Table 5: Effect of IPSAS Adoption on Accountability in the Nigerian Public Sector Financial Reporting

	Cross-tabulation					**Statistics**				
Response Scale	**SA 5**	**A 4**	**UD 3**	**D 2**	**SD 1**	$\bar{X}$	**SDV.**	χ^2	***Sig.***	**df**
						4.6	0.61	17.25	0.008	3
AP	64	18	1	-	-					
AA	15	18	1	1	-					
AU	12	7	1	1	-					
Total	91	43	3	2	-					

Source: Compiled from SPSS Version 21 Output

The result of Chi-square (χ^2) test on the proposition on whether IPSAS adoption will improve accountability in the public sector is presented in Table 5. The table revealed that 91 respondents comprising 64 accounting practitioners, 15 academic accountants and 12 auditors strongly agreed to the proposition, 43 respondents, comprising; 18 accounting practitioners, 18 academic accountants and 7 auditors agreed, 3 (one each from the group) were undecided while 2 persons disagreed with the proposition. The mean score of this proposition is 4.6, with a standard deviation of 0.61. This means that respondents strongly agree that IPSAS adoption will improve accountability in the public sector. The χ^2 (*17.5, p = .01*) is significant at 1% level which suggests that the null hypothesis (H_{01}) should not be accepted. In other words, IPSAS adoption has a significant effect on improving the level of accountability in the Nigerian public sector financial reporting.

The second objective of the study seeks to establish whether significant differences exist between the views of the trio of accounting personnel, auditors and academics regarding the effect of IPSAS adoption on accountability in the Nigerian public sector financial reporting. The null hypothesis (H_{02}) which states that no significant differences exist between the perceptions of AP, AA and AU on the effect of IPSAS adoption on financial reporting in the Nigerian public sector was tested using Kruskal - Wallis H test for three sample groups. The results of this test are presented in Table 6 and the Figure 1.

Table 6 - Results of Krsukal Wallis H Test

Respondents	N	Mean Rank	Df	H	P	99% CI Boundary Lower	99% CI Boundary Upper
AP	83	78.70	2	14.98	.001	0.000	0.001
AA	35	53.86					
AU	21	62.256					

Source: Compiled from SPSS Version 21 Output

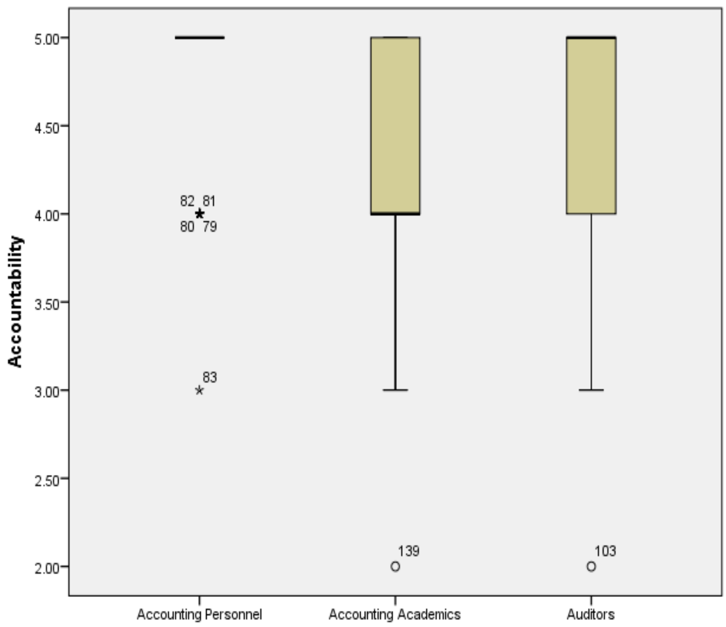

Figure 1: Box Plot of the Views of Respondents.

The result presented on Table 6 revealed that the views of AP, AA and AU on the effect of IPSAS adoption on public sector financial reporting accountability were significantly different at the 1% level (H = 14.98, p= .01). The box plots (Figure 1) were examined to see which group differs among the groups, it was noticed that AP have smaller low scores as compared to AA and AU and the median scores of AP were clustered at a point indicating a low interquartile range and less variability in the median scores as compared to AA and AU. The upper quartile scores of AP were also slightly higher than the other groups. The median and upper quartile scores of AA and AU seem quite similar. However, these conclusions are subjective and a post-hoc analysis was carried out. Mann-Whitney U tests were used to follow-up this finding, a Bonferroni correction was applied and all views reported at 0.0167 level of significance.

The results presented on Table 7 suggest that the views of AA were not significantly different from AU (U = 326.00, p = 0.432). This result was subjected to cohen effect size which revealed an rAA-AU value of -0.11. This value (-0.11) is less than 0.2 and could be categorised as small and trivial. However, the views of AP were significantly different from AA at the 1% level (U = 929.00, p = 0.01). The cohen effect size, rAP-AA = -0.35)(Table 8), suggests that the magnitude of the differences in the sizes of the samples fall in the medium term and could be ignored. Furthermore, the views of AP were significantly different from those of AU at the 5% level (U = 673, p = 0.035) with a cohen effect size of r = -0.21)(Table 9). It can be concluded that AP have a more optimistic view about the effect of IPSAS adoption on accountability in the Nigerian public sector financial reporting, followed by AU and then AA.

Table 7: Result of Mann-Whitney Rank Test between AA and AU

RANK	N	Mean Rank	Sum of Ranks
AA	35	27.31	956.00
AU	21	30.48	640.00
Total	56		
Mann-Whitney U	326.000		
Z	-0.786		
Asymp. Sig. (2-tailed)	0.432		
rAA-AU	-0.11		

Source: Compiled from SPSS Version 21 Output

Table 8: Result of Mann-Whitney Rank Test between AP and AA

RANK	N	Mean Rank	Sum of Ranks
AP	98	65.81	5462.00
AA	35	44.54	1559.00
Total	116		
Mann-Whitney U	929.000		
Z	-3.790		
Asymp. Sig. (2-tailed)	0.000		
rAP-AA	-0.35		

Source: Compiled from SPSS Version 21 Output

Table 9: Result of Mann-Whitney rank test between AP and AU

RANK	N	Mean Rank	Sum of Ranks
AP	83	54.89	4556.00
AU	21	43.05	904.00
Total	104		
Mann-Whitney U	673.000		
Z	-2.107		
Asymp. Sig. (2-tailed)	0.035		
rAP-AU	-0.21		

Source: Compiled from SPSS Version 21 Output

Discussion

The first objective of this study is to ascertain whether the adoption of IPSAS will improve accountability in Nigerian public sector financial reporting, using the views of the key stakeholders in the project. The results of data analysis have revealed that IPSAS adoption will significantly improve the level of accountability in Nigeria's public sector financial reporting. This finding is consistent with that of Okaro and Okoye [38] who found out that the introduction of IPSAS will usher in an era of improved accountability and decision making in the Nigerian public sector. The result is also in line with the study of Ijeoma and Oghoghomeh [1] who also found that the adoption of IPSAS is expected to increase the level of accountability in Nigerian public sector. This is because, IPSAS will improve availability of timely, relevant and reliable financial information that can enhance decision making.

The second objective is to determine whether significant differences exist in the perceptions of the three respondent groups on the phenomenon of interest. The results obtained for hypothesis two suggest that significant differences exist (at 1% level of significance) in the views of the three categories of workers (AP, AU, and AA) regarding the effect of IPSAS on accountability in public financial reporting in Nigeria. Using Cohen's Tables of interpreting effect sizes [43], the views of AP exceeded those of AU by 58%, it also implies that the probability that the view of a person from AP will be higher than a person from AU is 0.56, if both are chosen at random [42]. Furthermore, the views of AP also exceeded those of AA by 62% and the probability that the view of a person from AP will be higher than a person from AA is 0.58, if both are chosen at random as well.

This study upholds the agency theory which calls for strong public accountability by the agent to the principal by producing a set of comprehensive financial statement as to the management of entrusted scarce resources and these comprehensive financial statements will be enabled via the use of accrual accounting exemplified by IPSAS. This study, however, does not uphold the claim of institutional theory which states that changes in management practice or structure of an organisation comes as a result of three types of influence and not as a result of the efficiency or usefulness of the newly adopted management style. This study has proved that changing from the traditional cash accounting to IPSAS accrual will bring about more efficiency and will be more useful in the public sector and not as a result of certain influence or pressure.

CONCLUSIONS AND RECOMMENDATIONS

This study has provided evidence which suggest that IPSAS adoption in Nigeria will significantly improve accountability in Nigerian public sector financial reporting. These comprehensive financial statements will enhance decision making, meet the various needs of different groups, and also serve as an evaluating criteria for government performance. The study equally established that there exist significant differences between the perceptions of AP, AA and AU towards the effect of IPSAS adoption on financial reporting in Nigeria. This difference can be traced to the divergence in knowledge of the respondent groups about IPSAS. These differences are wider between AP and AA but smaller between AA and AU. The differences also narrower between AA and AU.

Furthermore, AP have more optimistic view about IPSAS and improvement in accountability than the other groups. This is understood since AP are the ones involved in the preparation of IPSAS based financial reports. Also lack of significant differences between AP and AU on the effect of IPSAS adoption on accountability suggests that the project's implementation would face little resistance since the dyad constitute the principal parties in the IPSAS project.

In line with the findings of this study and conclusions arrived at, the study, therefore, recommends that government should not relent towards the full implementation IPSAS in Nigerian public sector financial reporting. Also, in order to mitigate the perceived confusion at the implementation stage of IPSAS, the study also recommends that the government should embark on more sensitization and training of all stakeholder groups on IPSAS and ensure their adequate possession of knowledge about them. The results of this study should, however, be interpreted with caution due to its limited scope to AP, AA and AU in Benue State. A wider coverage would provide more tenable results.

References

Ijeoma, N. B. & Oghoghomeh. T. (2014). Adoption of International Public Sector Accounting Standards in Nigeria: Expectations, Benefits and Challenges. *Journal of Investment and Management.* 3(1): 21-29.

Barrett, P. (2004). Financial Management in the Public Sector: How Accrual Accounting and Budgeting Enhances Governance and Accountability. Retrieved 13th February, 2012 from http://www.AustralianNationalAuditOffice.htm.

Shaw, P. R. (1999). New Trends in Public Management in Health Applications in Developed and Developing Countries, Washington DC, USA, World Bank Institute.

Iweala, N. (2011), 2011 Budget Not Good for Development. Retrieved on 12 January, 2012 from http://www.nairaland.com

IFAC, (2012). Public Sector Financial Management Transparency and Accountability: The use of International Public Sector Accounting Standards (IFAC Policy Position 4), New York: IFAC.

Nyong, C. E. (2011). Nigeria's Adoption of International Public Sector Accounting Standards: Issues and challenges. Lagos, ICAN Public Finance Management Faculty Seminar, May 2011.

Webster, C. & Hoque, Z. (2005). Cost Information in the New Public-Sector Environment: Cost Accounting Change in a State-Owned Hospital. *Journal of Australian Accounting Review,* 15(3): 47-54.

Herbert, W. E., Tsegba, I. N., Ene, E. E., & Onyilo, F. (2017). The Rise of Fraud Examination and Forensic Accounting in Africa: The Nigerian Experience. *Archives of Business Research*, 5(4): 1-18.

Watts, R. L. & Zimmerman, J. L. (1986). Positive Accounting Theory. Englewood Cliffs, New Jersey: Prentice-Hall. USA.

DiMaggio, P. & Powell, W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organisational Fields. *Journal of American Sociological Review,* 48(1): 146-160.

Oliver, C. (1997). Sustainable Competitive Advantage: Combining Institutional and Resource- Based Views. *Journal of Strategic Management,* 18(9): 697-713.

Meyer, J. & Rowan, B. (1977). Institutional Organizations: Formal Structure as Myth and Ceremony. *American Journal of Sociology,* 83(2): 310-363.

Scott, W.R. (1987). The Adolescence of Institutional Theory. *Quarterly Journal of Administrative Science,* 32(1): 493-511.

Baker, R, & Morina, D. R. (2006). Forces Leading to the Adoption of Accrual Accounting by the Canadian Federal Government: An Institutional Perspective. *Journal of Canadian Accounting Perspective*. 5(1): 83-112.

Jensen, M.C. & Meckling, W.H. (1976). Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure. *Journal of Financial Economics,* 3(4): 305–360

Lucian, B. & Jesse, F. (2004). *Pay Without Performance*. Harvard University Press.

Baiman, S. (1982). Agency Research in Managerial Accounting: A Survey. *Journal of Accounting Literature*, l(1): 154-213.

Lenz, G. (2012). *Follow the Leader: How Voters Respond to Politicians Performance and Policies*. Chicago: University of Chicago Press.

Benito, B., Brusca, I., & Montesinos, V. (2007). The harmonization of government financial information systems: the role of the IPSASs. *International Review of Administrative Sciences*, *73*(2): 293-317.

Daniel, G.I. (2009). *Public Sector Accounting*. Zaria: Ahamdu Bello University Press.

Ishola, K. (2009). *Public Sector Accounting and Finance.* Ilorin: Indemac Publications.

Guthrie, J.(1998). Application of Accrual Accounting in the Australian Public Sector: Rhetoric or Reality? *Journal of Financial Accountability and Management,* 14(1): 1-19.

Barton, A. D. (2000). Accounting For Public Heritage Facilities: Assets or Liabilities of the Government? *Journal of*

Accounting, Auditing & Accountability, 13(2): 219-236.

Athukorola, S.L. & Reid, B. (2003). *Accrual Budgeting and Accounting in Government and its relevance for developing member countries.* Manila, Philippines. Asian Development Bank.

Carnegie, G. & West, B. (2003), How well does accrual accounting fit the public sector. *Australian Journal of Public Administration,* 62(2): 83-86.

Van Der Hoek, M. (2005). From Cash to Accrual Budgeting and Accounting in the Public Sector: The Dutch Experience. *Journal of Public Budgeting & Finance,* 25(1): 32–45.

Langendijik, T.O. (1990). Cash Accounting and International Control in Government Parastatals: The Australian Perspective. *Journal of Accounting Review,* 4(3): 34-38.

Newberry, S. (2002). The Conceptual Framework Sham. *Journal of Australian Accounting Review,* 12(3): 47-59.

Barton, A. D. (1999). Public and Private Sector Accounting: The Non-Identical Twins. *Journal of Australian Accounting Review,* 9(2): 22-31.

Pallot, J. (1992). Elements of a Theoretical Framework for Public Sector Accounting. *Journal of Accounting, Auditing & Accountability,* 5(1): 38-43.

Carlin, T. M. (2004). Output-Based Management and the Management of Performance: Insights from the Victorian Experience. *Journal of Management Accounting Research,* 15(3): 267-283.

Jones, S. & Puglishi, N. (1997). The Relevance of Accrual Accounting to the Australian Public Sector: A Cause for Doubt? *Journal of ABACUS,* 33(1): 115-132.

Hines, R. D. (1989). Financial Accounting Knowledge, Conceptual Framework and the Social Construction of the Accounting Profession. *Journal of Accounting, Auditing and Accountability,* 2(2): 72-91.

Funnell, W. & Cooper, K. (1998). *Public Sector Accounting and Accountability in Australia.* Sydney: UNSW Press.

UNDP (2008). *The UNDP accountability system: Accountability framework and oversight policy*. Retrieved on 12th January, 2011 from http://www.undp.org/governance/ contact_2001.htm

Ula- Lisa, E.T. (2005), Transparency and Accountability. Retrieved on 12th September, 2011 from http://www.nigeriavillagesquare.com

United Nations Development Programme, UNDP (1996). Aid Management Programme, *Modular Training/Learning Package: Financial Management (Module 3),Nigeria.*

Okaro, S. & Okoye, E. (2012). Introduction of Accrual Accounting in Nigeria's Public Sector: The Perception of Auditors, Preparers of Financial Statements and Accounting Academics. Retrieved on 2nd October, 2015 from http://www.researchgate.net/publication/255726716

Shakirat, A. B. (2013). The Effects of Adoption of Accrual-Based Budgeting on Transparency and Accountability in the Nigerian Public Sector. *International Journal of Governmental Financial Management,* 13(1): 1-20.

Ofoegbu, G. N. (2014). New Public Management and Accrual Accounting Basis for Transparency and Accountability in the Nigerian Public Sector*. IOSR Journal of Business and Management,* 16(7): 104-113.

Monari, N. K. (2015), The Effect of Adoption of International Public Sector Accounting Standards on Financial Reporting in the Public Sector of Kenya. (Master's project, university of Nairobi, Kenya). Retrieved from http://www.scribd.com

Wright, D. B. & London, K. (2008). *First Steps in Statistics* (2nd ed.). London: Sage.

Coe, R. (2002). It's the Effect Size, Stupid What Effect Size is and Why is it Important? Paper Presented at the Annual Conference of the British Educational Research Association, University of Exeter, England, 12-14 September.

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SOCIETY FOR SCIENCE AND EDUCATION

The Relationship between Servant Leadership, Perceived Organizational Support, Performance, and Turnover among Business to Business Salespeople

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ABSTRACT

The purpose of this study, using a sample of 382 business-to-business salespeople in the United States, was to investigate how servant leadership influences salespersons' perceived organizational support (POS), outcome performance, turnover intentions, and turnover. The results showed that servant leadership had a direct influence on POS and performance, but was related only indirectly to both turnover intentions and turnover through POS and performance.

Key Words – Servant leadership, perceived organizational support, performance, turnover intentions, turnover

INTRODUCTION

Leadership has been an important area of research in professional sales because of its relationship to important job attitudes and behaviors [40]. While sales researchers have investigated various leadership theories such as ethical leadership [19, 79], participative and instrumental leadership [57]; transformational/transactional leadership [6, 55, 60, 81, 83], supportive leadership [41, 61], and leader-member exchange [17, 64], in recent years increased attention has been devoted to servant leadership involving employees in a variety of occupations [50, 51, 87] including professional selling [42, 43, 44, 77].

The concept of servant leadership was developed many years ago [30, 31]. But, since only the early 2000s has it drawn the interest of scholars. Servant leaders emphasize the followers' development and growth [41, 51] directly through mentoring or indirectly by providing a supportive work environment [51]. Servant leaders view their role as developing followers' responsibility and autonomy [87]. They place followers' needs and interests above their own needs and interests [4, 51]. Servant leaders act the same in all aspects of their lives [51]. The key aspect of servant leadership is to serve others [31].

Servant leadership is related to a variety of job attitudes and behaviors such as organizational commitment [51], organizational justice [25, 78, 90], organizational citizenship behavior [49, 62], and psychological contract fulfillment [63]. While these studies have provided insights into understanding servant leadership's influence on employees' attitudes and behavior, several questions remain. First, what is the relationship between servant leadership and performance? The issue of performance is particularly relevant in professional selling because the firm's revenue is partially dependent upon the performance of the sales force [12].

The results of prior research are inconclusive regarding the relationship between the two variables. For example, some research indicates a direct relationship between servant leadership and performance [42, 49, 77] while other research indicates that the relationship is mediated by other variables [3, 13, 44]. Thus, does the sales manager who is viewed as a servant leader directly influence salespersons' performance? This study will attempt to provide further clarification into the relationship between servant leadership and salespersons' performance.

Second, what is the relationship between servant leadership and perceived organizational support (POS)? POS, "the extent to which employees perceive that their contributions are valued by their organization and that the firm cares about their well-being" [23, p. 501], has been the focus of many studies during the last 30 years and has been linked to a variety of job attitudes and behaviors [71]. A few studies have reported that POS is related positively to several leadership theories such as transformational leadership [24] and leader-member exchange [85, 92]. However, a search of the literature found only one study that analyzed the relationship between servant leadership and POS [95]. This study, which involved Chinese public-sector employees, reported a positive relationship between POS and servant leadership. Intuitively, salespeople who think their sales manager cares about their well-being and places their needs and interests above his/her own needs and interests should perceive a higher level of perceived organizational support. Given the important relationship of POS to both other leadership theories and various job attitudes and behaviors, a need exists within a sales environment to understand its relationship to servant leadership.

A third important purpose of this study is to examine the relationship between turnover and servant leadership. Much research has been devoted to understanding variables related to turnover (see the meta-analyses by Griffeth et al. and Holtom et al. 2008, 32, 37]. Turnover is especially important in professional selling where the turnover rate can be double the rate for other jobs [72]. While the direct costs of salesforce of turnover is high, the indirect costs (customer retention and the time needed to train a new salesperson) also can be substantial [9].

Previous research investigating the influence of servant leadership among salespeople has used turnover intentions as a surrogate for turnover (e.g. 43, 44, 47, 75, 91]. However, an employee stating a desire to leave is not the same as actually leaving. The meta-analysis by Griffeth, Hom, and Gaertner [32] found that the correlation between turnover intentions and turnover is only .38. Thus, a need exists to examine if the presence of a servant leader in a sales environment actually is related to turnover rather than just the intent to leave.

LITERATURE REVIEW

Servant Leadership

Robert Greenleaf [31] developed the concept of servant leadership as defined below:

> *The Servant Leader is servant first…It begins with the natural feeling that one wants to serve, to serve first. Then conscious choice brings ne to aspire to lead…The best test, and difficult to administer is this: Do those served grow as persons? Do they, while being served, become healthier, wiser, freer, more autonomous, and more likely themselves to become servants? And, what is the effect on her least privileged in society? Will they benefit, or at least not further be harmed? p. 7).*

Servant leadership shares similarities to other leadership theories (see reviews by Stone, Russell, and Patterson and van Dierendonck, 84, 87). For example, servant leadership overlaps with ethical leadership in three areas: people, humility and development, and empowering people [87]. In contrast to ethical leadership whose main focus is on creating role models who communicate ethical values and rewarding and punishing employees for ethical or unethical behavior, servant leadership emphasizes other dimensions of a leader's behavior [48]. Both servant leadership and transformational leadership emphasize similar leadership attributes: articulating a vision, trust, honesty, integrity, role modeling, and empowerment [84]. However, the major difference between servant leadership and other leadership theories is the leader's focus. The primary focus of servant leaders is on the needs of the follower while transformational leaders focus on organizational effectiveness [65, 87]. While relationships are important to other leadership theories, it is a central component of servant leadership [48]. The servant leader attempts to help followers grow, prosper, and develop [31] and motivates followers by focusing on their needs and behaviors [48]. A servant leader's primary motivation is to serve others [48].

Grisaffe, VanMeter, and Chonko [33] reported that while facets of servant leadership do overlap with other forms of leadership (i.e. transformational and transactional), it does provide incremental increases in salespersons' attitudes and behaviors beyond that of transformational and transactional leadership styles at higher levels of the sales hierarchy. In addition, Liden et al. [51], reported that servant leadership was related positively to organizational commitment and in-role performance, after controlling for the effects of transformational leadership and leader-member exchange. Thus, while servant leadership is similar to other leadership theories, it contains distinct characteristics from them.

During the last ten years, increased attention has been given to servant leadership in the professional selling area. For example, research has reported that servant leadership is related to a caring ethical work climate and performance [42, 77], organizational commitment [44], satisfaction and organizational citizenship behavior [33], organizational justice [78], and turnover intentions [43]. The next section of the paper presents a discussion of variables hypothesized to be outcomes of servant leadership. The hypothesized model appears in the appendix.

Perceived Organizational Support

Both the norm of reciprocity and social exchange theory is the basis for POS [8]. Blau [8] defined social exchange as "the voluntary actions of individuals that are motivated by the returns they are expected to bring and typically do in fact bring from others" (p. 91). Economic exchanges differ from social exchanges. Economic exchanges involve getting paid for performance at a specified time while social exchanges involve non-specified rewards in the future and involve high levels of trust [29]. Employees who perceive that the organization treats them fairly and cares about their well-being will feel obligated to reciprocate that behavior through increased loyalty, commitment, and performance [22].

Surprisingly, only one study could be located that has examined the relationship between servant leadership and POS [95]. However, a few studies have reported that POS is highly correlated with both leader-member exchange [21, 85, 92] and transformational leadership [2, 24]. In their meta-analysis of POS Rhoades and Eisenberger [71] reported that perceived supervisor support is correlated highly with POS. However, their study did not report the correlation between any specific leadership theory and POS. Liden et al. [51] theorized that by caring for employees' interests and creating a relationship built on trust, servant leaders display support for followers that extends outside the formal employment relationship. In addition, the interactions between servant leaders and subordinates may increase subordinates' perceptions that the organization supports them.

Servant leadership contains similar attributes as those characteristics found in transformational leadership and leader-member exchange. Since both transformational leadership and leader-member exchange theory are correlated highly with POS, intuitively servant leadership also should be related to POS.

H1: Servant leadership is related positively to POS.

Servant Leadership and Performance

Researchers have been particularly interested in studying leadership and its relationship to performance. Salespeople have the direct responsibility to increase the firm's revenue. Generally, research has shown that various leadership styles can influence performance indirectly through increased job satisfaction, effort, and motivation [43].

While servant leadership has been shown to be related to a variety of employees' job attitudes and behaviors, its relationship to performance is somewhat unclear. For example, both Liden et al. [49] and Chiniara and Bentein [13] found that the relationship between servant leadership and employee task performance was mediated by other variables. Regarding salespeople some research indicates that the relationship between servant leadership and performance is both direct and indirect through other variables [33, 42, 77]. However, Jaramillo et al. [44] reported that servant leadership was related to outcome performance only indirectly through other variables (job satisfaction, organizational commitment, and job stress).

One purpose of this study is to analyze if servant leadership influences salespersons' performance directly or indirectly through other variables. The preponderance of research involving salespeople appears to indicate that servant leadership is related to performance directly. Thus, the following hypothesis will be tested.

H2: Servant leadership is related positively to salespersons' performance.

Antecedents of Turnover

While turnover is important for all businesses, it especially is important for sales organizations because of the direct and indirect costs. Direct costs include hiring and training new salespeople and lost sales. Turnover rates can reach 50 percent in some industries [10]. Indirect costs include customer retention [75]. A relationship of trust that has developed between the salesperson and the client may be lost when a new salesperson takes over the territory. Another indirect cost is the "ramp-up" time needed to get the new salesperson familiar with the territory [20]. Given these high costs, the number of studies devoted to sales force turnover is not surprising [16].

In order to reduce the costs of turnover organizations need to understand factors related to increased turnover. Prior research has indicated many variables associated with sales force turnover including job satisfaction and organizational commitment [74, 91], leadership style [57], organizational justice [20], ethical climate [45, 82], supervisory trust [59], and performance [20, 57].

Intuitively, when organizations provide help to employees and values their contributions, the employees should reciprocate with positive work-related behavior such as increased effort and performance. Several studies [15, 68, 73] including the meta-analysis by Rhoades and Eisenberger [71] have shown a positive relationship between POS and job performance. In addition, research has shown that POS is related to turnover intentions [18] and performance is related negatively to turnover intentions/turnover [32, 93, 96] while turnover intentions are related to turnover [32, 38].

H3: POS is related positively to performance.
H4: POS is related negatively to turnover intentions.
H5: Performance is related negatively to turnover intentions.
H6: Performance is related negatively to turnover.
H7: Turnover intentions are related negatively to turnover.

While prior research has indicted a significant correlation between the various leadership theories and turnover intentions [7, 35, 59], most research has reported that other variables mediate or moderate the relationship [11, 19, 17,36, 57].

However, few studies have examined the relationship between servant leadership and turnover intentions. Three studies reported that other variables mediate the relationship [1, 43, 95] while one study reported that servant leadership was related directly to turnover intentions [39]. Since controlling turnover is very important in professional selling, understanding the relationship between servant leadership and turnover is important.

Although a few studies involving salespeople have used actual turnover [20, 46, 53, 55, 76], most sales force research has used turnover intentions as a surrogate for turnover [e.g. 26, 45, 47, 58, 67]. However, only 14 percent of the variance in turnover is accounted for with quit intentions [32]. Two recent studies have reported similar results [66, 69]. Thus, just because a salesperson states an intention to quit, does not mean that he or she will actually leave. Therefore, two important purposes of this study are to (1) investigate if servant leadership is related directly to turnover intentions and (2) if servant leadership is related directly to turnover or if these relationships are mediated by other variables.

R1: What is the relationship between servant leadership and turnover intentions/turnover?

METHODOLOGY

This study employed a cross-sectional group of business-to-business salespeople. A list of 600 sales managers located in the United States was purchased from a commercial broker. Each sales manager was sent a letter explaining the purpose of the study and a copy of the survey. The sales managers who agreed to participate in the study were asked to encourage their salespeople to access a link so that they could complete the survey. The salespeople were assured that only the researchers would have access to their responses. The survey was coded in order to match the salespeople with their sales manager. This situation was necessary since the sales managers provided performance data for each of their salespeople, to track non-response bias and evaluate turnover. In order to ensure confidentiality demographic and performance data were obtained prior to the salespeople having access to the survey. Thus, the sales managers were not able to ascertain which of their salespeople chose to complete or not complete the survey.

A total of 38 letters were returned as undeliverable. Of the remaining sales managers, 153 supplied performance and demographic data for their sales force. Completed surveys were received from 382 salespeople (59.4 percent). One year later each sales manager was contacted to obtain turnover information. The names of the salespeople who completed the survey one year earlier were compared to the names who had left the company. After one year, 15 salespeople had been promoted and 86 had left the company. The salespeople who were promoted were not counted as turnover.

All of the salespeople were employed in business to business sales position working in both manufacturing and services industries. The salespeople had worked in sales an average of 11.2 years; their average age was 37.7; 281were male (73.6 percent); and a majority had at least an undergraduate degree (234 – 61.3 percent). Respondents were compensated via salary (32.7%), commission (19.1%), or a combination of salary, commission, and bonus (48.2%). According to information provided by the sales manager, no statistical difference in demographics was found between the salespeople who stayed and those salespeople who left or between the salespeople who completed a survey and those salespeople who did not.

Measures

The survey items appear in the appendix. *Servant Leadership* was measured using the 7 – item short form for the 28 – item scale developed by Liden et al. [51]. Liden et al. [51], using six samples of employees in three independent studies, found the short form of the scale was highly correlated with the longer version. *Perceived Organizational Support* was measured using five items from the Survey of Perceived Organizational Support developed by Eisenberger et al. [23]. Performance was measured using three items from the scale used by Low, Cravens, and Moncrief [52]. *Turnover Intentions* were measured with five items used by Wayne, Shore, and Liden [92]. *Turnover* was measured as a dichotomous variable and coded as 1 for salespeople still employed after one year and 2 for those salespeople who left.

Measure Assessment

Common method bias can be a serious problem in survey research ([70]. Several steps were taken to alleviate the problem of common method bias. First, the salespeople responded to questionnaire items related to servant leadership, POS, and turnover intentions while the sales managers rated the salesperson's performance. Second, the items were randomly dispersed in the questionnaire. Third, Harmon's one factor test was used as a statistical measure for common method variance. The one factor explained 27 percent of the variance, which is less than the recommended 50 percent level. While some concern exists for the use of Harmon's one factor test in its ability to detect common method bias [70], a recent study concluded that it "can detect biasing levels of CMV under conditions commonly found in survey-based marketing research" [27, p. 3197]. These results indicate that common method bias is probably not a serious problem.

ANALYSIS AND RESULTS

The results were analyzed using LISREL version 8. The means, standard deviations and correlation among the variables appear in the table.

Correlation Matrix, Means, and Standard Deviations

Servant leader					
POS	.31				
Turnover Intentions	-.22	-.35			
Performance	.27	.33	-.29		
Turnover	-.19	-.26	.38	-.30	
Means	24.8	18.4	11.9	11.6	1.27
Standard Deviations	5.1	4.2	5.3	2.3	.45

The measurement model indicated a good fit ($\chi 2$ = 301.09, *df* = 180, *p* = .00, GFI = .92, AGFI = .89, NFI = .97, RMSEA = .046). Based on the results of the confirmatory factor analysis, the hypothesized model was tested. The results for the hypothesized model also indicated a good fit ($\chi 2$ = 305.95, *df* = 183, *p* = .00, GFI = .92, AGFI = .89, NFI = .96, RMSEA = .046).

Support was found for each of the hypotheses. Servant leadership is related positively to POS (*Hypothesis 1)* (β = .32, *t* = 5.18); servant leadership is related positively to performance (*Hypothesis 2)* (β = .32, *t* = 5.18); POS was related positively to performance (*Hypothesis 3)* (β = .20, *t* = 3.11); POS is related negatively to turnover intentions (*Hypothesis 4)* (β = -.28, *t* = 4.63); performance was related negatively to turnover intentions (*Hypothesis 5)* (β = -.22, *t* = 3.51); performance is related negatively to turnover (*Hypothesis 6)* (β = -.23, *t* = 3.84); and turnover intentions were related negatively to turnover (*Hypothesis 7)* (β = .31, *t* = 5.48).

A second model tested the relationship between servant leadership and turnover intentions/turnover (R1). The results indicated that this model did not fit the data better than did the hypothesized model ($\Delta\chi 2$ = 3.07, *NS*). The paths from servant leadership to turnover intentions (β = .08, *t* = 1.41) and servant leadership to turnover β = .07, *t* = 1.26) were insignificant.

CONCLUSIONS

Leadership has been an important focus of research for many years among a variety of employees. But, the study of leadership has been especially important in the area of professional selling because of the unique nature of a salesperson's job and its link to various outcomes, especially performance [e.g., 5, 40, 55, 57, 77].

The major purpose of this study was to examine outcomes of servant leadership, which recently has become an important area of research in professional selling [33]. Specifically, this study examined the relationship between servant leadership and performance, perceived organizational support, turnover intentions, and turnover. The results of this study have important theoretical and practical implications for managing the sales force.

Theoretical Implications

An important implication of these results is the relationship between servant leadership and performance. Research has analyzed variables related to sales force performance for more than thirty years [14]. Four studies have examined the relationship between servant leadership and outcome performance with samples of salespeople. This study confirmed the results of prior research [33, 42, 77] indicating that servant leadership influences performance both directly and indirectly. In this study POS partially mediated the relationship between servant leadership and performance. An important aspect of this study is that it used actual performance data from the sales manager rather than relying on self-reported data. Thus, the salesperson's performance evaluation was separate from their opinion of their sales manager as a servant leader.

An important implication of these results is that servant leadership has a direct relationship with salespersons' level of POS. Many studies have shown the influence POS has on a variety of employees' behavior and organizational consequences. However, only a few studies have investigated POS within a sales context. This study expands on prior sales force research by showing that POS directly influences performance and turnover intentions. Sales managers who care about their salespeople's career development and puts the salesperson's best interests above their own development will instill a perception that the organization also cares about them. The type of behavior by the sales manager will lead to higher sales force performance and a lower intention to leave the organization.

An interesting theoretical implication of this study's results is that the lack of a direct, significant relationship between servant leadership and either turnover intentions or turnover. Few studies have examined the relationship between servant leadership and turnover intentions and only one study involved salespeople [43]. No study has looked at actual turnover data. The results indicated that sales managers perceived as servant leaders did not have a direct influence on either turnover intentions or turnover among this sample of salespeople.

Managerial Implications

Leadership has been the focus of much research in the sales area because of its relationship to various behaviors and outcomes (e.g., 42, 81]. But, as noted by Grisaffe, VanMeter, and Chonko [33], servant leadership has the potential of creating gains in outcomes beyond what is achieved by either transformational or transactional leadership. Thus, implementing a servant leadership approach can assist sales organizations to achieve desired goals.

The results presented here have several practical implications for sales organizations. Although not a construct in this study, research has indicated that servant leadership is related to ethical behavior of employees [42, 77]. One of the items in the Liden et al. [50] measure of servant leadership, which was used in this study and the Schwepker and Schultz [77] study, asks about whether the sales manager would compromise his/her ethical principles in order to achieve success. The recent ethical scandal involving the sales practices at Wells Fargo emphasizes the importance of ethical leadership. Since serving others is a central component of servant leadership, hiring and/or promoting sales managers and executives who possess the traits of servant leadership may be a way to reduce unethical behavior in sales organizations.
Another important practical implication is that sales managers who are viewed as servant leaders have a direct influence on the performance of their salespeople. Much research for many years has been devoted to understanding factors related to increasing salespersons' performance [e.g., 14, 28, 56, 88] including how leadership influences job performance [54, 57, 79, 83]. The sales manager who makes a salesperson's career development a priority, give the sales force freedom to make difficult decisions, and who has the ability to see when something is going wrong is viewed as being a servant leader. That type of sales manager can have a positive influence on a salesperson's performance.

The inclusion of POS in this study also has important implications for sales managers. The sales manager, acting as a servant leader, creates a perception among the sales force that the organization cares about them, takes great pride in their accomplishments, and is willing to help them when they have a problem. This perception that the organization supports their efforts will lead to higher performance and indirectly to lower turnover. Clearly, creating an environment where higher performance is achieved while reducing turnover, especially among the best performers, are goals that every organization wants to achieve with regard to their sales force. This study indicates that the sales manager plays a vital role in ascertaining and relaying the needs of the sales force to higher levels of management, which helps achieve these goals. However, failure to provide adequate support to the sales force can lead to lower performance and higher turnover.

LIMITATIONS AND FUTURE RESEARCH OPPORTUNITIES

This study, like all research, has some limitations. First, the data are cross-sectional. Future research can test the model within a single organization. Second, this study was limited to examining the relationship between servant leadership and certain outcome variables. Future studies may include other outcome variables such as organizational identification, psychological contract fulfillment, and organizational justice.

An important area of future research is to determine why and how sales managers who are viewed as servant leaders influence positive outcomes for the sales force. Have these sales managers received training that is different from other sales managers? If so, what training can organizations undertake to influence sales managers or salespeople who will become sales managers to become servant leaders? What role does upper management play in the development of servant leaders? What makes someone want to become a servant leader?

While the purpose of this study was to examine certain outcomes of servant leaders, future research should address antecedents of servant leadership. In addition, this study was the first one involving salespeople that examined the influence of servant leadership on POS. Future research needs to be undertaken to confirm these results.

In conclusion, this study has shown the importance of servant leadership on salespersons' POS and performance. Indirectly, through these two variables, servant leaders can influence the turnover process in the sales force. Hopefully, these results can show organizations the benefits of hiring and or promoting sales managers who can act as servant leaders to their salespeople.

References

Babakus, E., Yavas, U. and Ashill, N. J. (2011), "The Service Worker Burnout and Turnover Intentions: Roles of Person-Job Fit, Servant Leadership, and Customer Orientation," Services Marketing Quarterly, Vol 32 No.1, pp. 17-31.

Bai, Y., Li, P., and Xi, Y. (2012), "The Distinctive Effects of Dual-Level Leadership Behaviors on Employees' Trust in Leadership: An Empirical Study from China." Asia Pacific Journal of Management, Vol 29 No. 2, pp. 213-237.

Bande, B., Pilar, F.F., Concepción, V.N.N. and Carmen, O.N. (2016), "Exploring the Relationship among Servant Leadership, Intrinsic Motivation and Performance in an Industrial Sales Setting." Journal of Business & Industrial Marketing, Vol 31 No. 2, pp. 219-231.

Barbuto, J.E., and Wheeler, D.W. (2006), "Scale Development and Construct Clarification of Servant Leadership." Group & Organization Management, Vol 31 No. 3, pp. 300-326.

Bass, B.M. (1997), "Personal Selling and Transactional/Transformational Leadership." Journal of Personal Selling & Sales Management," Vol 17 No. 3, pp. 19-28.

Bass, B.M. (1985), *Leadership and performance beyond expectations*. New York: Free Press.

Bauer, T.N., Erdogan, B., Liden, R.C., and Wayne, S.J. (2006). "A Longitudinal Study of the Moderating Role of Extraversion: Leader-Member Exchange, Performance, and Turnover during New Executive Development." Journal of Applied Psychology, Vol 91 No. 2, pp. 298-310.

Blau, P. (1964), *Exchange and Power in Social Life.* New York: Wiley.

Boles, J.S., Dudley, G.W., Onyemah,V., Rouziès, D. and Weeks, W.W., (2012). "Sales Force Turnover and Retention: A Research Agenda." Journal of Personal Selling & Sales Management, Vol 32 No. 1, pp. 131.140.

Brashear, T.G., Manolis, C., and Brooks, C.M. (2005), "The Effects of Control, Trust, and Justice on Salesperson Turnover." Journal of Business Research, Vol 58 No. 3, pp. 241-249.

Burch, T.C. and Guarana, C. (2014), "The Comparative Influences of Transformational leadership and Leader-Member Exchange." Journal of Leadership Studies, Vol 8 No. 3, pp. 6-25.

Chakrabrty, S., Widing, R.E., and Brown, G. (2014), "Selling Behaviours and Sales Performance: The Moderating and Mediating Effects of Interpersonal Mentalizing." Journal of Personal Selling & Sales Management, Vol 34 No. 2, pp. 112-122.

Chiniara, M. and Bentein, K. (2016), "Linking Servant Leadership to Individual Performance: Differentiating the Mediating Role of Autonomy, Competence and Relatedness Need Satisfaction." Leadership Quarterly, Vol 27 No. 1, pp. 124-141.

Churchill, Jr., G.A., Ford, N.M., Hartley, S.W., and Walker, Jr. O.C. (1985), "The Determinants of Salesperson Performance: A Meta-analysis." Journal of Marketing Research, Vol 22 No. 2, pp. 103–118.

Cullen, K., Edwards, B., Casper, W., and Gue. K. (2014), "Employees' Adaptability and Perceptions of Change-Related Uncertainty: Implications for Perceived Organizational Support, Job Satisfaction, and Performance." Journal of Business & Psychology, Vol 29 No. 2, pp. 269-280.

Darmon, R.Y. (2008), "The Concept of Salesperson Replacement Value: A Sales Force Turnover Management Tool." Journal of Personal Selling & Sales Management, Vol 28 No. 3, pp. 211–232.

Darrat, M., Atinc, G. and Babin, B.J. (2016), "On the Dysfunctional Consequences of Salesperson Exhaustion." Journal of Marketing Theory & Practice, Vol 24 No. 2, pp. 236-245.

Dawley, D., Houghton, J.D., and Bucklew, N.S. (2010), "Perceived Organizational Support and Turnover Intention: The Mediating Effects of Personal Sacrifice and Job Fit." Journal of Psychology, Vol 150 No. 3, pp. 238-257.

DeConinck, J.B. 2015. (2015), "Outcomes of Ethical Leadership among Salespeople." Journal of Business Research, Vol 68 No. 5, 1086-1093.

DeConinck, J.B. and Johnson, J.T. (2009), "The Effects of Perceived Supervisor Support, Perceived Organizational Support, and Organizational Justice on Turnover among Salespeople." Journal of Personal Selling & Sales Management, Vol 29 No. 4, pp. 333-350.

Dulac, T., Coyle-Shapiro, J.A.M., Henderson, D.J., and Wayne, S.J. (2008), "Not All Responses to Breach are the Same: The Interconnection of Social Exchange and Psychological Contract Processes in Organizations." Academy of Management Journal, Vol 51 No. 6, pp. 1079-1098.

Eisenberger, R., Armeli, S., Rexwinkel, B., Lynch, P.D., and Rhoades, L. (2001), "Reciprocation of Perceived Organizational Support." Journal of Applied Psychology, Vol 86 No. 1, pp. 42-51.

Eisenberger, R., Huntington, R., Hutchison, S., and Sowa, D. (1986), "Perceived Organizational Support." Journal of Applied Psychology, Vol 71 No. 3, pp. 500-507.

Epitropaki, O. and Martin, R. (2013), "Transformational-Transactional Leadership and Upward Influence: The Role of Relative Leader-Member Exchanges (RLMX) and Perceived Organizational Support." Leadership Quarterly, Vol 24 No. 2, pp. 299-315.

Ehrhart, M.G. (2004), "Leadership and Procedural Justice Climate as Antecedents of Unit-Level Organizational Citizenship Behavior." Personnel Psychology, Vol 57 No. 1, pp. 61-94.

Fournier, C., Tanner Jr., J.F., Chonko, L.B., and Manoli, C. (2010), "The Moderating Role of Ethical Climate Salesperson Propensity to Leave." Journal of Personal Selling & Sales Management, Vol 30 No. 1, pp. 7-22.

Fuller, C.M., Simmering, M.J., Atinc, G., Atinc, Y., and Babin, B.J. (2016), "Common Methods Variance Detection in Business Research." Journal of Business Research, Vol 69 No. 8, pp. 3192-3198.

Goad, E.A. and Jaramillo, F. (2014), "The Good, the Bad and the Effective: A Meta-Analytic Examination of Selling Orientation and Customer Orientation on Sales Performance." Journal of Personal Selling & Sales Management, Vol. 34 No. 4, pp. 285-301.

Gouldner, A.W. (1960), "The Norm of Reciprocity: A Preliminary Statement." American Sociological Review, Vol 25 No. 2, pp. 161-178.

Greenleaf, R.K. (1970), *The Servant as a Leader.* Indianapolis, IN: Greenleaf Center.

Greenleaf, R.K. (1977), *Servant Leadership: A Journey into the Nature of Legitimate Power and Greatness*. New York: Paulist Press.

Griffeth, R.W., Hom, P.W., and Gaertner. S. (2000), "A Meta-Analysis of Antecedents and Correlates of Employee Turnover: Update, Moderator Tests, and Research Implications for the Next Millennium." Journal of Management, Vol 26 No. 3, pp. 463–488.

Grisaffe, D.B., VanMeter, R., and Chonko, L.B. (2016), "Serving First for the Benefit of Others: Preliminary Evidence of a Hierarchical Conceptualizations of Servant Leadership." Journal of Personal Selling & Sales Management, Vol 36 No. 1, pp. 40-58.

Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., and Tatham, R.L. (2009), Multivariate Data Analysis, 6th ed. Upper Saddle, NJ.: Prentice Hall.

Harris, K.J., Kacmar, M.K., and Witt, L.A. (2005), "An Examination of the Curvilinear Relationship between Leader-Member Exchange and Intent to Turnover." Journal of Organizational Behavior, Vol 26 No. 4, pp. 363-378.

Harris, K.J., Wheeler, A.R., and Kacmar, M.K. (2009), "Leader-Member Exchange and Empowerment: Direct and Interactive Effects on Job Satisfaction, Turnover Intentions, and Performance." Leadership Quarterly, Vol 20 No. 3, pp. 371-382.

Holtom, B.C., Mitchell, T.R., Lee, T.W., and Eberly. M.B. (2008), "Turnover and Retention Research: A Glance at the Past, a Closer Review of the Present, and a Venture into the Future." Academy of Management Annals, Vol 2 No. 1, pp. 231-274.

Hom, P.W., Carranikas, F., Prussia, G.E., and Griffeth, R.W. (1992), "A Meta-Analytical Structural Equations Analysis of a Model of Employee Behavior." Journal of Applied Psychology, Vol 77 No. 6, pp. 890-909.

Hunter, E., Neubert, M.J., Perry, S.J., Witt, L.A., Penney, L.M., and Weinberger, E. (2013), "Servant Leaders Inspire Servant Followers: Antecedents and Outcomes for Employees and the Organization." Leadership Quarterly, Vol 24 No. 2, pp. 316-331.

Ingram, T.N., LaForge, R.W., Locander, W.B., McKenzie, S.B. and Podsakoff, P.M. (2005), "New Directions in Sales Leadership Research." Journal of Personal Selling & Sales Management, Vol 25 No. 2, pp. 251-273.

Jaramillo, F. and Mulki, J.P. (2008), "Sales Effort: The Intertwined Roles of the Leader, Customers, and the Salesperson." Journal of Personal Selling & Sales Management, Vol 28 No. 1, pp. 37-51.

Jaramillo, F., Bande, B. and Varela, J. (2015), "Servant Leadership and Ethics: A Dyadic Examination of Supervisor Behaviors and Salesperson Perceptions." Journal of Personal Selling & Sales Management, Vol 35 No. 2, pp. 108-124.

Jaramillo, F., Grisafe, D.B., Chonko, L.B. and Roberts, J.A. (2009a), "Examining the Impact of Servant Leadership on Salesperson's Turnover Intentions. Journal of Personal Selling & Sales Management, Vol 29 No. 4, pp. 351-366.

Jaramillo, F., Grisafe, D.B., Chonko, L.B., and Roberts, J.A. (2009b), "Examining the Impact of Servant Leadership on Sales Force Performance." Journal of Personal Selling & Sales Management, Vol 29 No. 3, pp. 257-276.

Jaramillo, F., Mulki, J.P. and Solomon, P. (2006), "The Role of Ethical Climate on Salesperson's Role Stress. Job Attitudes, Turnover Intention, and Job Performance." Journal of Personal Selling & Sales Management, Vol 26 No. 3, pp. 271-282.

Johnston, M.W., Futrell, C.W., Parasuraman, A. and Sager, J. (1988), "Performance and Job Satisfaction Effects on Salesperson Turnover." Journal of Business Research, Vol 16 No. 1, pp. 67–83.

Lewin, J.E. and Sager, J.K. (2010), "The Influence of Personal Characteristics and Coping Strategies on Salespersons' Turnover." Journal of Personal Selling & Sales Management, Vol 30 No. 4, pp. 257-276.

Liden, R.C., Panaccio, A. Meusr, J.D., Hu, J. and Wayne, S.J. (2014a), "Servant Leadership: Antecedents, Processes, and Outcomes." In *The Oxford Handbook of Leadership and Organization,* edited by David V. Day, 357-379. New York: Oxford University Press.

Liden, R.C., Wayne, S.J., Liao, C. and Mauser, J.D. (2014b), "Servant Leadership and Serving Culture: Influence on Individual and Unit Performance." Academy of Management Journal, Vol 57 No. 3, pp. 1434-1452.

Liden, R.C., Wayne, S.J., and Meuser, J.D. (2015), "Servant Leadership: Validation of a Short Form." The Leadership Quarterly, Vol 26 No. 2, pp. 254-269.

Liden R.C., Wayne, S.J., Zhao, H., and Henderson, D. (2008), "Servant Leadership: Development of a Multidimensional Measure and Multi-Level Assessment." The Leadership Quarterly, Vol 19 No. 2, pp. 161-172.

Low, G.S., Cravens, D.W. and Moncrief, W.C. (2001), "Antecedents and Consequences of Salesperson Burnout." European Journal of Marketing, Vol 35 No. 5–6, pp. 587–611.

Lucas, Jr. G.H., Parasuraman, A., Davis, R.A., and Enis, B.A. (1987), "An Empirical Study of Salesforce Turnover." Journal of Marketing, Vol 51 No. 3, pp. 34-59.

MacKenzie, S.B., Podsakoff, P.M., and Ahearne, M. (1998), "Some Possible Antecedents and Consequences of In-Role and Extra-Role Salesperson Performance." Journal of Marketing, Vol 62 No. 3, pp. 87-98.

MacKenzie, S.B., Podsakoff, P.M., and Rich, G.A. (2001), "Transformational and Transactional Leadership and Salesperson Performance." Journal of the Academy of Marketing Science, Vol 29 No. 2, pp. 115-134.

Miao, C.F., and Evans, K. R. (2007), "The Impact of Salesperson Motivation on Role Perceptions and Job Performance – A Cognitive and Affective Perspective." Journal of Personal Selling & Sales Management, Vol. 27 No.

1, pp. 89-101.

Mulki, J.P., Caemmerer, B. and Heggde, G.S. (2015), "Leadership Style, Salesperson's Work Effort and Job Performance: The Influence of Power Distance." Journal of Personal Selling & Sales Management, Vol 35 No. 1, pp. 3-22.

Mulki, J.P., Jaramillo, F. and Marshall, G.W. (2007), "Lone Wolf Tendencies and Salesperson Performance." Journal of Personal Selling & Sales Management, Vol 27 No. 1, pp. 25-38.

Mulki, J.P., Jaramillo, F. and Locander, W.B. (2006), "Effects of Ethical Climate and Supervisory Trust on Salesperson's Job Attitudes and Intentions to Quit." Journal of Personal Selling & Sales Management, Vol 26 No. 1, pp. 19-26.

Mullins, R. and Syam, N. (2014), "Manager-Salesperson Congruence in Customer and Job Outcomes: The Bright and Dark Sides of Leadership in Aligning Values." *Journal of Personal Selling & Sales Management* Vol 34 No. 3, pp. 188-205.

Netemeyer, R.D., Boles, J.S., McKee, D.O. and McMurrian, R. (1997), "An Investigation into the Antecedents of Organizational Citizenship Behaviors in a Personal Selling Context." Journal of Marketing, Vol 61 No. 3, pp. 85-98.

Neubert, M.J., Carlson, D.S., Roberts, J.A., Kacmar, K.M. and Chonko, L.B. (2008), "Regulatory Focus as a Mediator of the Influence of Initiating Structure and Servant Leadership on Employee Behavior." Journal of Applied Psychology, Vol 93 No 6, pp. 1220-1233.

Panaccio, A., Henderson, D.J., Liden, R.C., Wayne, S.J. and Cao, X. (2015), "Toward an Understanding of When and Why Servant Leadership Accounts for Employee Extra-Role Behaviors." Journal of Business and Psychology, Vol 30 No. 4, pp. 657-675.

Paparoidamis, N.G. and Guenzi, P. (2009), "An Empirical Investigation into the Impact of Relationship Selling and LMX on Salespeople's Behaviours and Sales Effectiveness." European Journal of Marketing, Vol 43 No. 7/8, pp. 1053-1075.

Parolini, J., Patterson, K., and Winston, B. (2009), "Distinguishing between Transformational and Servant Leadership." Leadership & Organization Development Journal, Vol 30 No. 3, pp. 274-291.

Peltokorpi, V., Allen, D.G. and Froese, F. (2015), "Organizational Embeddedness, Turnover Intentions, and Voluntary Turnover: The Moderating Effects of Employee Demographic Characteristics and Value Orientation." Journal of Organizational Behavior, Vol 36 No. 2, pp. 292-321.

Pettijohn, C.E., Pettijohn, L.S. and Taylor, A.J. (2007), "Does Salesperson Perception of the Importance of Sales Skills Improve Sales Performance, Customer Orientation, Job Satisfaction, and Organizational Commitment, and Reduce Turnover?" Journal of Personal Selling & Sales Management, Vol 27 No. 1, pp. 75-88.

Piercy, N.F., Cravens, D.W., Lane, N. and Vorhies, D.W. (2006), "Driving Organizational Citizenship Behaviors and Salesperson In-Role Behavior Performance: The Role of Management Control and Perceived Organizational Support." Journal of the Academy of Marketing Science, Vol 34 No. 2, pp. 244-262.

Podsakoff, N.P., LePine, J.A. and LePine, M.A. (2007), "Differential Challenge Stressor–Hindrance Stressor Relationships with Job Attitudes, Turnover Intentions, Turnover, and Withdrawal Behavior: A Meta-Analysis." Journal of Applied Psychology, Vol 92 No. 2, pp. 438–454.

Podsakoff, P., MacKenzie, S.B., Lee, J.L. and Podsakoff, N.P. (2003), "Common Method Bias in Behavioral Research: A Critical Review of the Literature and Recommended Remedies." Journal of Applied Psychology, Vol 88 No. 5, pp. 879-903.

Rhoades, L. and Eisenberger, R. (2002), "Perceived Organizational Support: A Review of the Literature." Journal of Applied Psychology, Vol 86 No. 5, pp. 825-836.

Richardson, R. (999), "Measuring the Impact of Turnover on Sales." Journal of Personal Selling & Sales Management, Vol 19 No. 4, pp. 53–66.

Riggle, R.J., Edmondson, D.R. and Hansen, J.D. (2009), "A Meta-Analysis of the Relationship between Perceived Organizational Support and Job Outcomes: 20 Years of Research." Journal of Business Research, Vol 62 No. 10, pp. 1027-1030.

Russ, F.A. and McNeilly, K.A. (1995), "Links among Satisfaction, Commitment, and Turnover Intentions: The Moderating Effect of Experience, Gender, and Performance." Journal of Business Research, Vol 34 No. 1, pp. 57-65.

Rutherford, B., Park, J. and Han, S.L. (2011), "Increasing Job Performance and Decreasing Salesperson Propensity to Leave: An Examination of an Asian Sales Force." Journal of Personal Selling & Sales Management, Vol 31 No. 2, pp. 171-184.

Sager, J.K., Varadarajan, P. and Futrell, C.M. (1988), "Understanding Salesperson Turnover: A Partial Evaluation of Mobley's Turnover Process Model." Journal of Personal Selling & Sales Management, Vol 8 No. 1, pp. 21-35.

Schwepker, C.H. and Shultz, R.J. (2015), "Influence of the Ethical Servant Leader and Ethical Climate on Customer Value Enhancing Sales Performance." Journal of Personal Selling & Sales Management, Vol 35 No. 2, pp. 93-107.

Schwepker Jr, C.H. (2016), "Servant Leadership, Distributive Justice and Commitment to Customer Value in the Salesforce." Journal of Business & Industrial Marketing, Vol 31 No. 1, pp. 70-82.

Schwepker, C.H. (2015), "Influencing the Salesforce Through Perceived Leadership: The Role of Salesforce Socialization and Person-Organization Fit on Salesperson Ethics and Performance," Journal of Personal Selling & Sales Management, Vol 35 No. 4, pp, 292-313.

Schwepker, C.H. (2013), "Improving Sales Performance Through Commitment to Superior Customer Value: The Role of Psychological Ethical Climate." Journal of Personal Selling & Sales Management, Vol 33 No. 4, pp. 389-402.

Schwepker, C.H. and Good, D.J. (2010), "Transformational Leadership and its Impact on Sales Force Moral Judgment. Journal of Personal Selling & Sales Management, Vol 30 No. 4, pp. 299-318.

Schwepker, Jr., C.H. (2001), "Ethical Climate's Relationship to Job Satisfaction, Organizational Commitment, and Turnover Intention in the Salesforce." Journal of Business Research, Vol 54 No. 1, pp. 39-52.

Shannahan, K., Bush, A. and Shannahan, R. (2013), "Are Your Salespeople Coachable? How Salesperson Coachability, Trait, Competitiveness, and Transformational Leadership Enhance Sales Performance." Journal of the Academy of Marketing Science, Vol 41 No 1, pp. 40-54.

Stone, G.A., Russell, R.F., and Patterson, K. (2004), "Transformational versus Servant Leadership: A Difference in Leader Focus." Leadership & Organization Development Journal, Vol 25 No. 4, pp. 349-361.

Sweet, K.M., Witt, L.A. and Shoss, M.K. (2015), "The Interactive Effect of Leader-Member Exchange and Perceived Organizational Support on Employee Adaptive Performance." Journal of Organizational Psychology, Vol 15 No. 1, pp. 49-62.

van Dierendonck, D. (2011), "Servant Leadership: A Review and Synthesis." Journal of Management, Vol 37 No. 4, pp. 1228-1261.

van Dierendonck, D., Stam, D., Boersma, P., de Windt, N., and Alkema, J. (2014), "Same Difference? Exploring the Differential Mechanisms Linking Servant Leadership and Transformational Leadership to Follower Outcomes." Leadership Quarterly, Vol 25 No. 3, pp. 544-562.

Verbeke, W., Dietz, B., and Verwaal, E. (2011), "Drivers of Sales Performance: A Contemporary Meta-Analysis. Have Salespeople Become Knowledge Broker?" Journal of the Academy of Marketing Science, Vol 39 No. 3, pp. 407-428.

Waldman, D.A., Carter, M.Z., and Hom, P.W. (2015), "A Multilevel Investigation of Leadership and Turnover Behavior." Journal of Management, Vol 41 No. 6, pp. 1724-1744.

Walumbwa, F.O., Hartnell, C.A., and Oke, A. (2010), "Servant Leadership: Procedural Justice Climate, Service Climate, Employee Attitudes, and Organizational Citizenship Behavior: A Cross-Level Investigation." Journal of Applied Psychology, Vol 95 No. 3, pp. 517-529.

Wang, Guangping, Ma, X. (2013), "The Effect of Psychological Climate for Innovation on Salespeople's Creativity and Turnover Intention." Journal of Personal Selling & Sales Management, Vol 33 No. 4, pp. 373-388.

Wayne, S.J., Shore, L.M., and Liden, R.C. (1997), "Perceived Organizational Support and Leader-Member Exchange: A Social Exchange Perspective." Academy of Management Journal, Vol 40 No. 1, pp. 82-111.

Williams, C.R. and Livingstone, L.P. (1994), "Another Look at the Relationship between Performance and Voluntary Turnover." Academy of Management Journal, Vol 37 No. 2, pp. 269-98.

Zhao, Chen, Yonghong, and Zhonhua Gao. "An Identification Perspective of Servant Leadership's Effects." Journal of Managerial Psychology, Vol 31 No. 5, pp. 898-913.

Zhou, Yingying and Miao, Q. (2014), "Servant Leadership and Affective Commitment in the Chinese Public Sector: The Mediating Role of Perceived Organizational Support." Psychological Reports, Vol 115 No. 2, pp. 381-395.

Zimmerman, R.D. and Darnold, T.C. (2009), "The Impact of Job Performance on Employee Turnover Intentions and the Voluntary Turnover Process: A Meta-Analysis and Path Model." Personnel Review, Vol 38 No. 2, pp. 142-158.

APPENDIX

Turnover Intentions

1. I am actively looking for a job outside of my company.
2. As soon as I can find a better job, I'll leave my company.
3. I am seriously thinking about quitting my job.
4. I often think about quitting my job.
5. I think I will be working at another company five years from now (Reverse scored).

Perceived Organizational Support

1. My organization takes great pride in my accomplishments.
2. My organization really cares about my well-being.
3. My organization strongly considers my goals and values.
4. My organization is willing to help me if I need help.
5. Help is available from the organization when I have a problem.

Servant Leadership

1. My sales manager can tell if something work-related is going wrong.
2. My sales manager makes my career development a priority.
3. I would seek help from my sales manager if I had a personal problem.
4. My sales manager emphasized the importance of giving back to the community.
5. My sales manager puts my best interests ahead of his/her own.
6. My sales manager gives me the freedom to handle difficult situations in the way that I feel is best.
7. My sales manager would NOT compromise ethical principles in order to achieve success.

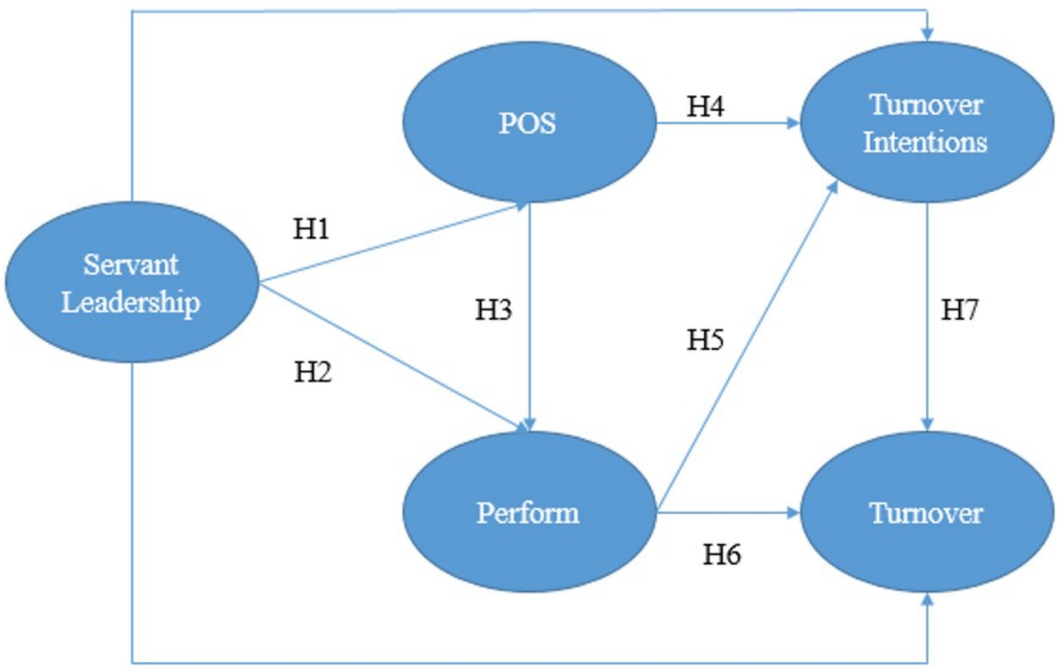
Performance

(items measured on a scale ranging from 1 "needs improvement" to 5 "outstanding")

1. Achieving annual sales targets and other objectives.
2. Understanding customer needs and work processes.

Keeping expenses at acceptable levels.

Hypothesized Model



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Elements of Advocacy in Transport Policy Formulation

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ABSTRACT

Public transport policies appear to be extremely important in almost every aspect of the life of a community and a major component of the economy. However, their viability is not conditioned only by technical aspects affecting engineering problems or economic viability, as there are other components that contribute to the decision of the public official to act or not to act. The failure in the implementation of viable transport projects, technically and economically, can often be attributed to the lack of these external components to the engineering environment. One such component occurs in the arena of disputes and negotiations between actors. This paper presents a proposal for actions and resources to work on the political viability of transport projects in addition to the technical and economic justification. It draws its theoretical basis from the Policy Cycle model, which defines the decision-making steps and advocacy, along with the actions and resources that make it possible to convince the stakeholders involved. The proposed test was performed for two public policy projects, a public transport operation project and a change in traffic safety legislation. The first and third phases of the Policy Cycle forecast 100% of the items for advocacy action, the barriers to policy, actions to overcome these barriers, and resources that support these actions. In the second phase, the barriers and actions were also 100% forecast, but for the resources that support the forecast actions were low, about 33% for the transport project and 22% for the draft amendment of the legislation.

Keywords: Advocacy, Stakeholders, Policy Cycle Model, Transport Policy,

INTRODUCTION

Public policies play an important role in determining social justice, political freedoms and civil freedoms, in the long-term interests of the environment and the well-being of people in general. However, on many occasions, public policy is formulated by members of the dominant players of powerful social groups. Most often, access and the persuasiveness of the decision makers are restricted to these groups, who use the situation to impose their interests, which are not always in line with the needs of marginalized people, in decision making.

There is a need to include the voices of those people excluded from decision-making processes. Therefore, organized groups take actions seeking to defend the interests of these marginalized groups and to generate in those citizens the ability to claim. These actions are called advocacy.

According to Mansfield (2010), the preparation of an action plan is an important step in advocacy and it should contain the following cycle:

I. Identify the desired changes, the time to reach them and quantitative or qualitative indicators to evaluate the result of the action;
II. Identify the stakeholders (allies and opponents) and the degree of influence that each has on the decision;
III. Identify the target actors of the advocacy action; and
IV. Define strategy.

To develop an advocacy action strategy, Morais (2012) identified the need to know certain elements: i) what difficulties (barriers) need to be overcome to achieve the goal? ii) what needs to be done to overcome these difficulties, what actions and what resources should be used in these actions?

The actions and resources to be used are common to all advocacy practice regardless of public policy type, and can vary in intensity of use and positive outcomes from one policy to another. However, the barrier element may be peculiar to each policy.

So, to develop an advocacy action plan on public policy it is necessary to identify the elements regarding barriers, actions and resources. Therefore, the purpose of this article is to present the process of identifying these elements and test projects relating to public transport policies. Therefore, the article is divided into seven sections; after this introduction to the paper, the methodology will be presented. In the third section, the phases of the formulated model, the Policy Cycle, will be presented and an analysis of the public policies to be considered in this work. In the same section a text on advocacy is developed, in addition to its definition, what are the practices and processes and the elements of the actions and resources to actions are presented, since they are inherent in advocacy activity. Section 4 aims to identify the element of barriers, and in the fifth section the tests to validate the three elements will be presented. This validation is achieved through a survey of 8 transportation projects through interviews with their managers. This section will present tables showing the hierarchy of positive results of actions and resources for each type of barrier.

In section 6, this hierarchy will be validated in two projects relating to transport policies, a local project in Brasilia concerning public transport operation of passengers and national project for the approval of a law that regulates traffic behaviour. Finally, the final considerations will be presented.

METHODOLOGY

For the preparation of the advocacy action plan for the implementation of a public transport policy, the steps to be followed are described below:

Step 1: Identification of the components of advocacy that will proceed by reading papers published in the scientific literature on public transport policies as well as advocacy and processes to be described in detail in sections 3 and 4.

Step 2: Quantify the occurrences of the relevant elements in step 1 and their positive results. Therefore, we identified two steps to be performed, the first, to choose a set of transportation projects that will be used as the basis for quantifying the elements and in a second phase, to prepare a questionnaire and apply it to the management of the projects.

Among the wide range of potential transportation projects to be used as a starting point to verify the occurrence of the elements, the choice of projects was made according to the following criteria:

I. Ease of access to documents on the project;
II. Ease of contact with coordinators and managers of the projects; and
III. The availability of engineers and managers of the projects to participate in research.

The questionnaires were developed and implemented using the website www.surveymonkey.com, a paid service for conducting research. Each questionnaire creates its own link sent by email to the corresponding respondent for the project.

The questionnaires were completed in three stages, with direct questions where the respondent, the project coordinator, has as response the elements of advocacy options. The first questionnaire identifies the difficulties; the second, the actions and the third, material support. The questions are referenced to the stages of the process of developing a public policy as considered using the Public Policy Cycle model, i.e. the agenda, the development of options and implementation. The model will be presented in the next section.

Quantification of the variables will be made using the cumulative frequency with which they occur and the ranking is created from the respondents' answers on which elements were considered to provide positive effects.

Step 3: To test the consistency of the elements identified and also the results, the same questionnaire will be applied to the public policy projects and then compared through tables using the ranking created in the previous step.

ADVOCACY, CONCEPTS AND PRACTICES (STEP 1)

Before dealing with advocacy, it is necessary to make some comments on the wording of the model and analysis of public policies that will be considered in this work, the public policy cycle model. This model is seen as a chain of stages, a deliberative cycle consists of stages in a dynamic process (Souza, 2006). Some authors differ in their studies when they indicate the phases that make up the public policy cycle, but four of them are always present and the first two are considered in this work:

I. Agenda setting: mainly comprises the identification of the problem and the recognition of the need to solve it, that is, the process in which the public manager recognizes the existence of a problem, a demand from society that should be addressed through State intervention;
II. Development of options: selection of proposals for the solution of the problem and formalization in law (where necessary);
III. Implementation: creation of instruments to operationalize the policy and its implementation; and
IV. Evaluation: impact of policy implementation and correct directions.

Concept of Advocacy

As Libardoni stated (2000), the term advocacy is derived from the Latin word "advocare", which means helping someone who is in need. Its origin is closely linked to legal issues, the defence of clients by legal process. In the mid-1960s and early 1970s, the civil rights movement in the US expanded the use of the term, taking the concept of justice in three new directions. In addition to the legal defence of the individual, there is the defence of the interests of marginalized groups, proactive measures to change the rules in defence of the environment, and to defend against public abuses of power (Brelaz and Alves, 2011).

Some authors in Brazilian literature, Libardoni (2000), Feix (2004) and Azevedo (2003) and the international Gordon (2002), Negarendeh et al. (2006), O`Flynn (2009), Nukuro (2000), Christoffel (2000) and Thackeray and Hunter (2010), to name a few, understand the term advocacy to mean the politics and process of transformation of values and beliefs for improving the awareness and knowledge of citizens, for the support of a person's rights and the defence of a cause that results in influence on the decision-making power on issues of interest.

Advocacy also has the goal of creating the conditions for citizens to represent themselves or speak for themselves in conflicts relating to political changes. This objective is given the name of empowerment and is considered of great importance in advocacy activity (Azevedo, 2003).

Therefore, it is clear that advocacy, in essence, is an action of defence of citizens' interests, even if the citizen does not recognize that particular fact concerning him or her. Advocacy requires the responsible agent to take actions to generate a transformation of people's values and beliefs in order to improve the awareness and knowledge of citizens, so that it can help in the action to claim their rights.

The targets of the action are the agents responsible for decision-making on public policy, and the goal of advocacy is to promote the greater participation of society in the formulation and implementation of laws and public policies, directly or through representatives, so that influencing decision-makers in the decision-making process can make positive changes in people's lives.

This terminology allows us to understand that the activity of advocacy carries with it the idea of fighting for more and better rights, for a more dignified quality of life, the democratization of decision-making. It is, in short, a process of change. This change can occur at two levels: personal and political.

Personal is directly linked to the empowerment of the event, i.e., is the effect that the work of advocacy has on citizens, turning them into active agents of change. While political change is related to the outcome of the advocacy work, which aims at changing legislation, putting a specific public policy on the agenda of priorities, and the implementation of government programmes and projects in different areas of government action. Thus, the advocacy actions are likely to be directed to the staff of different spheres of government: executive, legislative and judicial.

Practices and Processes of Advocacy

The advocacy of activities may include public and private (lobbying) campaigning through awareness raising, use of research, documentation and media to influence decision makers (Kelly, 2002; Efroymson, 2006). Lobbying and campaigning are sometimes treated as synonymous with advocacy but are distinct practices by the members of an advocacy process and may occur alone or in complementary forms. The basic differences identified in the literature are summarized in Table 1:

Table 1: Differences between campaigning and lobbying

	Campaigns	Lobbying
Participation	Greater number of participants	Either smaller number of participants
Relationship	Contact mediated by media	Direct contact
Approach Form	A public visibility event	A relatively private process
Language	Simplified messages	More detailed messages

The campaign is an activity that enables the publicizing of the goal of the advocacy action, developed with and for a large number of people. The expected results of the campaign are to raise the awareness of decision makers and the involvement of a larger number of people and organizations in the desired change.

The media is a great ally for the success of campaigns because not all citizens or organizations engaged in an advocacy activity have direct contact with the authorities with decision-making power. In this way, the media is a powerful tool to reach governments and make them work for the desired changes. However, the news coverage is not objective regarding advocacy, but the effect of this media cover (Efroymson, 2006; Gibson, 2010).

The more approaches made, the more there is a chance that an authority becomes aware and pays attention to the subject, and also the population is informed and worry about it. Therefore, the media coverage reaches two system poles: the decision maker and the citizen. The story being told by the advocate should be appealing to publishers, and journalists are sensitized to tell it. For this to occur, the agents of advocacy conduct research and provide documentation to give consistency to the information and strengthen its objectives (Kelly, 2002; Efroymson, 2006).

In addition to using the media, there are other ways to develop an advocacy campaign, such as the use of telecommunication technologies (Thackeray and Hunter, 2010); public hearings (Peterman, 2004; Gomm et al., 2006); motions (Christoffel, 2000) and public mobilization (Christoffel, 2000; Gomm et al., 2006).

In opposition to the advertising campaign, the lobby is more related to direct contact with members of the legislature and executive to propose changes, to create or oppose legislation. It is performed by a smaller group of participants, the contact is more direct between the advocacy agent and public agents and the language is more detailed. Due to the direct contact, there may be more detail than is desirable.

Some techniques are used as lobbying actions: letters, meetings, phone calls, petitions, etc. (Gomm et al., 2006). As in the campaign, lobbyists also use statistics and documentation as advocacy strategies to persuade decision makers. Advocacy research should be directed towards the goal, that is, do not do research to increase knowledge but to support and inform about a particular topic and provide evidence on the need for change.

According to Efroymson (2006), the search can be made by advocacy agents or make use of documentation (second-order data) to obtain information needed to convince public officials about the importance of the issue, respond to an objection to the change proposed or demonstrate popular support for the issue.

Letters, phone calls and petitions are easier and quick methods for lobbying, representing advocacy at its most basic level, communication: individuals or groups sending messages in order to influence others (Thackeray and Hunter, 2010). However, these are actions can lead to poor results since many people in positions of power have assistants who read their emails and letters, selecting subjects and summarizing them, and are not always accessible to phone calls. Of the three, petitions may be the method giving the best chance of gaining the attention of the decision maker, as through the signatures it can be shown to the agent that the subject under discussion is supported by a large part of the population.

However, meeting (face-to-face) provides the best results for lobbying because this action assumes access to the decision maker by a direct route and, as Dye stated (2009), access to authority is a factor bringing the influence of a group in the decision-making. A direct encounter may explain in more detail to the decision-making agent the benefits that the defended proposition can generate. It is also an opportunity to give voice to community leaders who support and require the policy advocated and put them face to face with the decision makers.

The campaigning and lobbying techniques and the resources to support them are summarized in Tables 2 and 3, respectively.

Table 2: Actions

Element	Technical	Description	Action Type	Description
Actions	Campaign	Public event in order to reach a large number of people, characterized by generic information and summarizing the benefits of the demand	Media	News in the media
			Public hearings	Use of lectures, seminars, workshops to disseminate demand
			Motions	Action parliamentarians in favour of demand
			Public mobilizations	Events in public places such as streets and squares to demand the disclosure order
	Lobby	Private event characterized by the small number of people participating, where there is the possibility to detail the positive aspects of the demand and necessarily the presence of beneficiaries and / or mediators and decision-makers and/or directors	Telecommunication technologies	Use of phone calls, and email for mobilization and persuasion
			Hearings	Scheduled meetings
			Meetings	Unscheduled meetings

Some elements are considered when carrying out these actions and are inserted in Table 3.

Table 3: Instruments in support of advocacy actions

Element	Resource Types	Description
Resources to support actions	Statistics	Data supporting the positive aspects of the demand
	Examples	Similar demands that were successful
	Statements	Information specialists that contribute to the demonstration of the demand legitimacy
	Releases	Materials made with the positive demand and distributed to the media

TYPES OF BARRIERS TO ADVOCACY IN TRANSPORT PUBLIC POLICY (STEP 1 CONTINUED)

A barrier is an obstacle that prevents a particular claim being implemented or causes delays in its implementation, according to May et al. (2001). These authors claim that barriers can be rigid or flexible, positive or negative. The rigidity of the barrier is not understood as being unsurmountable, but requires greater allocation of resources for longer periods to be overcome.

Barriers are considered positive when one of the objectives of the strategy restricts the ability of public policy to achieve other goals. This occurs, for example, with environmental restrictions. Its imposition may well improve the benefits that policy will bring to society. Negative, in turn, can cause excessive delays and costs in its application.

As this study was conducted in relation to transport policy, research was carried out in the literature areas of political science, transportation and advocacy. In order to identify the existence of direct references to the types of barriers and the interpretation of the texts identifying them, the result is shown in Table 4. Note that the table is not exhaustive.

Table 4: Description of the barriers identified in the literature

Authors	Barriers
May *et al.,* 2001	"Legal and institutional: lack of legal powers to implement a particular measure, and legal responsibilities which are split between agencies, limiting the ability of the city authority to implement the affected measure; Financial: budget restrictions limiting the overall expenditure on the strategy, financial restrictions on specific measures, and limitations on the flexibility with which revenues can be used to finance the full range of measures; Political and cultural aspects: lack of political or public acceptance of a measure, restrictions imposed by pressure groups, and cultural attributes, such as attitudes to enforcement, which influence the effectiveness of measures."
Subaris, 2006	Political game of interest groups
Gomm *et al.,* 2006	"Since reform typically involves changing the status quo with opposition coming from governments, industry and community interest groups."
Lindblom, 1982	"There are most problems to be solved that budget to address them."
Huitema and Meijerink, 2010	"This is why, in this special issue, we explore the role of 'policy entrepreneurs' in instigating, implementing, and sometimes blocking policy change. Insight into their role in stimulating policy change is crucial if we want to develop a more systematic approach to adaptability that is less dependent on shock events to trigger transitions."
Souza *et al.,* 2006	Political and party differences; Administrative and bureaucratic difficulties in the application of resources; Political interference in the pre-election period; and Delay in the arrival of resources.
Ieromonachou *et al.*, 2007	"This is still reflected by the fact that public opposition towards the scheme is still quite high after twenty years and so many completed road projects." "The pioneering niche of Bergen emerged due to particular circumstances, that developed partner motivations, the most important of which was a resource constraint – the need to raise revenue to accelerate the building of much needed road infrastructure." "The biggest issue that the city of Bergen faced was obtaining initial approval for the Toll Ring system, as Norwegians already bore heavy taxes including those for road transport... People argued that road building was a government responsibility, thus, the government should provide the funds for it." "Perhaps most importantly were the presence of strong political leadership from both the elected representatives and the officials of the County Council who campaigned many years for the scheme."
Ubbels and Verhoef, 2006	"Despite the fact that politicians and the public regard transport problems as very urgent and important, people do have concerns about road pricing, often resulting in low acceptance levels."
Han, 2010	"It is common in both developed and less-developed countries that funds for building urban public transport infrastructure tend to be scarce." "Policies on car ownership, known to researchers as demand management tools, are likely to be unpopular with the public and are probably unfair."
Palma and Lindsey, 2006	"Legal restrictions currently prevent differentiation of tolls sufficiently to price all trips at marginal social cost." "Acceptability barriers pose a significant barrier to tolling generally."

The barriers found in the literature and from the authors' own experience were grouped as follows:

I. Legal: legal impediments that make it difficult to meet the demand.
II. Budget: financial difficulties of the government to meet the demand.
III. Auto-financing: Demand have difficulties financial sustainability, require public contribution to be viable.
IV. Infrastructural: the need for other policies or projects to meet the demand.
V. Policy: Resistance of actors that have different demand objectives, lack of political godfather or weak political godfather.

VI. Technology: No technology available on the market that meets the demand.

As described above, to achieve the advocacy goals, there is the need to overcome barriers and, therefore, some practices are implemented.

QUANTIFY AND PRIORITIZE OCCURRENCE OF ELEMENTS OF ADVOCACY ACTION (STEP 2)

This section will present the quantification of occurrences of the elements and the positive results. The projects that were used to create the ranking of advocacy elements are listed in Table 5; questionnaires were sent to their managers.

Table 5: Description of the objectives of the chosen projects

Project	Objective	Situation
A	The development and implementation of a system to evaluate transport programmes	In Implementation
B	Adopt new taxi fare calculation methodology	Partially Implemented
C	Development and implementation of a concession granting process for passenger road transport at the federal level	In Implementation
D	Development and implementation of process of granting aviators a terminal grant	Implemented
E	Facilitate international air traffic at regional airport terminals	Implemented
F	Approve legislation	Implemented
G	Development and delegation model of deployment and management for road transport passengers at the municipal level	Partially Implemented
H	Identify passenger costs for subsidies	In Implementation

The questionnaires indicated the elements found in the studied works and respondents were asked to mark which were present in their respective projects and which actions and resources used generated positive results.

In the answers to the first questionnaire, the sum of the events in the three phases (agenda for the elaboration of options and implementation) shows that the "*resistance of actors*" barrier is the most common difficulty encountered in the projects, with 18 responses, with the triple the occurrences of the second perceived barriers, "*need for other projects or policies to meet the demand*" and "*other*" six each. Project "B" was the only one that did not present "*resistance of actors*" in any of the surveyed phases. The cumulative frequency of responses, aggregated over the three phases surveyed is presented in Table 6.

Table 6: Number of identified barriers

Barriers	Occurrences
Resistance of actors who have different demand goals	18
Need for other policies or projects to meet the demand	6
Demand does not have financial sustainability	3
Legal impediments that make it difficult to meet the demand	3
Financial difficulties of the government to meet the demand	3
Lack of a political godfather	2
Weak political godfather	2
Lack of technology to meet the demand	1

The barriers that were not mentioned in the answers are not shown in Table 6. Following the results of the first questionnaire, the second was prepared, whose results are presented below.

In this second phase of the questionnaires, the actions taken in order to overcome the barriers related to the first questionnaire were identified. Out of the eight completed questionnaires in the first step, in the second phase only the questionnaire for project "G" went unanswered. Therefore, for this phase the sample was seven projects.

The results of the questionnaires show that the action "scheduled meeting" was the most frequently performed and the one with the best aggregate result in the three phases with 29 responses. The results for the number of actions that were positive to overcome the barriers in aggregate values in the three phases are presented in Table 7.

Table 7: Quantitative of the actions performed and positive results

Action	Number executed	Positive results
Scheduled meetings	29	22
Lectures, seminars, workshops and public hearings	17	8
Contact through phone, email and social networks	17	5
Non-scheduled meetings	7	6
News in the media	4	1

The actions "*Lectures, seminars, workshops and public hearings" and "Contact through phone calls, email and social networks*" were in second place in terms of achievements, with 17 events each, but with different results. The second underperformed with five positive results. This performance is explained by the fact that many people in positions of power have assistants who read their emails and letters, selecting subjects and summarizing them and are not always accessible to phone calls.

The values of the frequencies of occurrence of each action performed disaggregated by developing a public policy phase shows that with the exception of the actions "*parliamentary action in favour of demand*" and "*events in public places such as streets and squares*" – which were not carried out in any phase of the projects and "*news in the media*" that only occurred in the implementation phase, all the others were achieved at all the stages studied.

The third questionnaire was intended to identify the resources used in carrying out the actions. Just as in the second questionnaire, the sample contained seven projects.

The resources most used in all three phases studied were "*data supporting the positive aspects of the demand*", followed by "*information specialists that contribute to the demonstration of the demand legitimacy*", "*similar demands were successful*", and less used was "*materials made with the positive demand and distributed to the media*".

Regarding resources used for actions that produced positive results (Table 8) show that there was no difference in the results. In drafting the options, the resources that were most used to produce positive results with the best performance in the ratio of four positive results for thirteen uses were the resource "*data supporting the positive aspects of the demand*".

Table 8: Quantitative of resources used and positive results

Resources to support actions	Used	Positive results
Data supporting the positive aspects of the demand	58	34
Information from specialists	41	25
Similar demands that were successful	21	17
Materials prepared for the media	10	2

Ranking of Constituents Advocacy Elements

With the results of these questionnaires it was possible to elaborate a ranking of the actions and resources to be employed in overcoming the barriers as in tables 9 (schedule), 11 (development of options) and 12 (deployment).

Table 9: Priority actions and resources to overcome the barriers in the inclusion phase in public agenda

Barriers	Priority	Action	Priority	Resource
Resistance of actors	1st	Scheduled meetings	1st	Data supporting the positive aspects of the demand
			2nd	Information from specialists
			3rd	Similar demands that were successful
	2nd	Lectures, seminars, workshops and public hearings	1st	Data supporting the positive aspects of the demand
			2nd	Similar demands that were successful
			3rd	Information from specialists
			4th	Materials prepared for the media
	3rd	Contact through phone, email and social networks	1st	Data supporting the positive aspects of the demand
			2nd	Information from specialists
			3rd	Similar demands that were successful
	4th	Non-scheduled meetings	1st	Data supporting the positive aspects of the demand
			2nd	Information from specialists
			3rd	Similar demands that were successful
Lack of government resources	Unique	Scheduled meetings	-	Not identified
Demand does not have financial sustainability	Unique	Scheduled meetings	1st	Data supporting the positive aspects of the demand
			2nd	Information from specialists
Need for other policies	Unique	Scheduled meetings	1st	Data supporting the positive aspects of the demand
			2nd	Information from specialists

Table 10: Priority actions and resources to overcome the barriers in the development of options phase

Barriers	Priority	Action	Priority	Resource
Resistance of actors	1st	Scheduled meetings	Unique	Data supporting the positive aspects of the demand
	2nd	Lectures, seminars, workshops and public hearings	Unique	Data supporting the positive aspects of the demand
	3rd	Non-scheduled meetings	Unique	Data supporting the positive aspects of the demand
Lack of government resources	Unique	scheduled meetings	Unique	Materials prepared for the media
Demand does not have financial sustainability	Unique	scheduled meetings	Unique	Not identified
Weak political godfather	1st	scheduled meetings	Unique	Information from specialists
	2nd	Non-scheduled meetings	1st	Data supporting the positive aspects of the demand
			2nd	Information from specialists

Table 11: Priority actions and resources to overcome the barriers in the implementation phase

Barriers	Priority	Action	Priority	Resource
Resistance of actors	1st	Scheduled meetings	1st	Data supporting the positive aspects of the demand
			2nd	Information from specialists
			3rd	Similar demands that were successful
	2nd	Non-scheduled meetings	1st	Data supporting the positive aspects of the demand
			2nd	Information from specialists
			3rd	Similar demands that were successful
	3rd	Lectures, seminars, workshops and public hearings	1st	Data supporting the positive aspects of the demand
			2nd	Similar demands that were successful
			3rd	Information from specialists
	4th	Contact through phone, email and social networks	1st	Data supporting the positive aspects of the demand
			2nd	Information from specialists
			3rd	Similar demands that were successful
Lack of government resources	Unique	Scheduled meetings	-	Not identified
Need for other policies	1st	Scheduled meetings	1st	Data supporting the positive aspects of the demand
			2nd	Information from specialists
			3rd	Similar demands that were successful
	2nd	Non-scheduled meetings	1st	Data supporting the positive aspects of the demand
			2nd	Information from specialists
			3rd	Similar demands that were successful
	3rd	Lectures, seminars, workshops and public hearings	1st	Data supporting the positive aspects of the demand
			2nd	Similar demands that were successful
			3rd	Information from specialists
	4th	Contact through phone, email and social networks	1st	Data supporting the positive aspects of the demand
			2nd	Information from specialists
			3rd	Similar demands that were successful
Legal impediments	1st	Scheduled meetings	1st	Data supporting the positive aspects of the demand
			2nd	Information from specialists
			3rd	Similar demands that were successful
	2nd	Non-scheduled meetings	1st	Data supporting the positive aspects of the demand
			2nd	Information from specialists
			3rd	Similar demands that were successful
	3rd	Contact through phone, email and social networks	1st	Data supporting the positive aspects of the demand
			2nd	Similar demands that were successful
			3rd	Information from specialists
	4th	Lectures, seminars, workshops and public hearings	1st	Data supporting the positive aspects of the demand
			2nd	Information from specialists
			3rd	Similar demands that were successful

VALIDATE THE ELEMENTS (STEP 2)

The first public policy project used to validate the advocacy elements and their ranking was the implementation of the first exclusive route for buses, student transport and taxi transport vehicles in a large corridor linking the west to the CBD of Brasilia, the capital of Brazil.

The route has a length of eight kilometres, and it is stipulated that it can serve an area of 415,000 inhabitants. The proportion of users using public mass transport is 70% and the remaining 30% are users of private vehicles and trucks, but only 6% of vehicles on the road are buses (DFTRANS, 2011).

The second was the legislative process for approval of Law 11.705 of 2008 to increase the penalties for those who are caught driving under the influence of alcohol or any other psychoactive substance that involves addiction.

As the methodology of this work predicts, the same questionnaire from step two was applied to the stakeholders responsible for the chosen projects to validate the elements of advocacy.

Regarding the implementation project for the exclusive corridor for public passenger transport, the chosen respondent was the director of the agency responsible for its implementation, and for the second passage of the law, the respondent was the parliamentary author of the law in Congress.

The two policies studied in this work were selected due to the availability of respondents, however, only the project to provide an exclusive corridor for buses in the city of Brasilia has been tested at the stage of implementation.

This project only identified the barrier "resistance of actors" in the implementation phase, it also performed a single action "scheduled meetings" to overcome the barrier and for this three resources were used, "data supporting positive aspects of the demand, similar demands that were successful and information specialists that contribute to the demonstration of the demand legitimacy".

This indicates that the difficulty and what was performed to overcome this in the phase of implementation was provided in full as can be seen in Table 11 above.

Tables 12 and 13 shown below were prepared to compare the responses obtained in the policies studied with the ranking of the elements presented in Tables 9 and 10 and that will be the subject of analysis in this paper.

Table 12: Comparison of the resources used in support of actions to overcome the barriers at the stage of schedule

Barriers	Actions	Resources	Occurrence (Table 10)	Occurrence in Law 11.705/2008	Occurred on the Bus Corridor
Resistance of actors	Scheduled meetings	Data supporting the positive aspects of the demand	X	X	X
		Similar demands that were successful	X	X	X
		Information specialists that contribute to the demonstration of the demand legitimacy	X	X	X
	Lectures, seminars, workshop and public hearings	Data supporting the positive aspects of the demand	X	X	-
		Similar demands that were successful	X	X	-
		Information specialists that contribute to the demonstration of the demand legitimacy	X	X	-
		Data supporting the positive aspects of the demand	X	-	-
	Contact through phone, email and social networks	Similar demands that were successful	X	X	-
		Information specialists that contribute to the demonstration of the demand legitimacy	X	X	-
		Data supporting the positive aspects of the demand	X	X	-
	Non-scheduled meetings	Data supporting the positive aspects of the demand	X	-	X
		Similar demands that were successful	X	-	X
		Information specialists that contribute to the demonstration of the demand legitimacy	X	-	X
Need for other policies	Scheduled meetings	Data supporting the positive aspects of the demand	X	-	X
		Similar demands that were successful	X	-	-

Table 13: Comparison of the resources used in support of actions to overcome the barriers at the stage of development of options

Barriers	Actions	Resources	Occurrence (Table 11)	Occurrence in Law 11.705/2008	Occurred on the Bus Corridor
Resistance of actors	Scheduled meetings	Data supporting the positive aspects of the demand	X	X	X
		Similar demands that were successful	-	X	X
		Information from specialists that contribute to the demonstration of the demand legitimacy	-	X	X
	Lectures, seminars, workshop and public hearings	Data supporting the positive aspects of the demand	X	X	-
		Similar demands that were successful	-	X	-
		Information from specialists that contribute to the demonstration of the demand legitimacy	-	X	-
	Contact through phone, email and social networks	Data supporting the positive aspects of the demand	-	X	-
		Similar demands that were successful	-	X	-
		Information from specialists that contribute to the demonstration of the demand legitimacy	-	X	-

CONCLUSIONS

The tables show two different situations, analysing Table 12 verifies that all elements, barriers, actions and resources found in the two policies were included in the proposal, i.e. a 100% predictive power, actually occurred also in the deployment phase, but looking at the comparison in Table 13 such probability was not repeated with respect to the elements "actions and resources to support actions".

In the second phase of the Policy Cycle, develop options, only one barrier, "resistance of actors" was identified, the two objectives of the projects studied. The element "actions" for such a barrier was predicted, with the occurrence of three in the evaluation of the second stage of the method of this work, which can be seen in Table 10, the assessment made on public transport operation of the project was found of the three, "schedule meetings" so achieving the total forecast of occurrence. In the project to approve the legislation three actions were used to overcome the barrier, one of which, "contact by phone, e-mail and social networks", did not appear in the forecast. Thus, the proposal predicted 2 of 3 occurrences.

For the element "resources to support actions", for the transport operation the level forecast was 33% and for the adoption of the law 22%. It may appear that the project for the approval of the law possessed worse results than the other project, such an occurrence can be explained by the fact that the eight projects used to compile Tables 9, 10 and 11 were just a case of legislating.

Even with these results for this element the level of predictability in the set was high, a fact that allows the use of these tables as indicators and to act so that we can achieve goals in the implementation of public policies.

The fact that these tables have been presented in this work with the ranking of elements enables stakeholders who are favourable to the demand to see which actions and resources should be given priority in choosing to mount an action strategy.

The method followed here for the assembly of the elements' occurrences in the tables allows the inclusion of new information in the analysis of new public policy projects and consequent updating of Tables 9, 10 and 11, which could improve predictions for the analysis of a new project involving legislation approval.

References

Azevedo, M. A. (2003) *Advocacy* em Rede. Available in: www.ip.usp.br/laboratorios/lacri/advocacy.doc. Accessed in September 2007.

Breláz, G. and Alves, M. A. (2011) Deliberative democracy and advocacy: Lessons from a comparative perspective. *Canadian Journal of Administrative Sciences*, 28, 202–216.

Christoffel, K. K. (2000) Public health advocacy: Process and product. *American Journal of Public Health*, 90 (5), 722–726.

Dye, T. R. (2009) Mapeamento dos modelos de análise de política públicas. In: Heidemann, F. G. and Salm, J. F. (eds). *Políticas Públicas e Desenvolvimento: Bases Epistemológicas e Modelos de Análise.* Brasília, Brazil. Editora UnB.

Efroymson, D. (2006) Using media and research for advocacy: Low cost ways to increase success. Available at: www.healthbridge.ca/assets/images/pdf/Using%20Media%20and%20Research%20for%20Advocacy%20low%20cost%20ways%20to%20increase%20success%20June%202006.pdf. Accessed in October 2010.

Feix, V. (2004) Por uma política pública nacional de acesso à justiça. *Estudos Avançados*, São Paulo, Brazil, nº. 51, p. 219-224.

Gibson, T. A. (2010) The limits of media advocacy. *Communication, Culture & Critique* 3, 44–65.

Gomm, M., Lincoln, P., Pikora T., and Giles-Corti (2006) Planning and implementing a community-based public health advocacy campaign: a transport case study from Australia. *Health Promotion International*, 21 (4), 284–292.

Gordon, G. (2002) Advocacy toolkit: Understanding advocacy. Available at: http://tilz.tearfund.org/webdocs/Tilz/Roots/English/Advocacy%20toolkit/Advocacy%20toolkit_E_FULL%20DOC_Parts%20A%2BB.pdf. Accessed in August 2010.

Han, S. S. (2010) Managing motorization in sustainable transport planning: the Singapore experience. *Journal of Transport Geography*, 18, 314–321.

Huitema, D. and Meijerink, S. (2010) Realizing water transitions: the role of policy entrepreneurs in waterpolicy change. *Ecology and Society* 15 (2), 26. [online] URL: http://www.ecologyandsociety.org/vol15/iss2/art26/

Ieromonachou, P., Potter, S. and Warren, J. P. (2007) A strategic niche analysis of urban road pricing in the UK and Norway. *EJTIR*, 7 (1), 15–38.

Kelly, L. (2002) International advocacy: Measuring performance and effectiveness. Available at: http://portals.wi.wur.nl/files/docs/ppme/measuring_performance_effectiveness_advocacy.pdf. Accessed on 3 July 2009.

Libardoni, M. (2000) Fundamentos Teóricos e Visão Estratégica da Advocacy. Available at: http://www.periodicos.ufsc.br/index.php/ref/article/viewFile/11936/11202. Accessed on September 2010.

Lindblom, C. E. (1982) O processo de decisão política. Brasília, Brazil. Ed. UnB.

Mansfield, C. (2010) Monitoring & evaluation of advocacy campaigns: Literature review. Available at: www.e-alliance.ch/fileadmin/user_upload/docs/Advocacy_Capacity/2011/11._EAA_M_E_Literature_Review.pdf. Accessed in March 2011.

May, A. D., Jarvi-Nykanen, T., Minken, H., Ramjerdi, F., Matthews, B., and Monzón A. (2001) Cities' decision-making requirements. Available in: www.ivv.tuwien.ac.at/fileadmin/mediapool-verkehrsplanung/Diverse/Forschung/International/PROSPECTS/pr_del_1.pdf. Accessed in November 2011.

Morais, A. C. (2012) Projetos de infraestrutura de transportes: Inserção efetiva na agenda governamental.

Doctoral Thesis. Universidade de Brasília, Brasília, Brazil.

Negarendeh, R., Oskouie, F., Ahmadi, F., Nikravesh, M. and Hallberg, I. R. (2006) Patient advocacy: Barriers and facilitators. *BMC Nursing*. 5 (3).

Nukuro, E. (2000) The lobbying process and building advocacy networks. Available at: http://pt.scribd.com/doc/35678252/The-Lobbying-Process-and-Building-Advocacy-Networks. Accessed in April 2009.

O´Flynn, J. (2009) The cult of collaboration in public policy. *The Australian Journal of Public Administration*, 68 (1), 112–116.

Palma, A. and Lindsey, R. (2006) Modelling and evaluation of road pricing in Paris. *Transport Policy*, 13 (2), , 115–126.

Peterman, W. (2004) Advocacy vs. collaboration: Comparing inclusionary community planning models. *Community Development Journal*, 39 (3), 266–276.

Souza, C. (2006) Políticas públicas: Revisão da literatura. *Sociologia*, 8 (16), 20–45.

Souza, A. I. J., Althoff, C. R., Ribeiro, E. M. and Elsen I. (2006) Construindo movimento para o fortalecimento da família. Família. *Saúde Desenvolvimento*. 8 (3), 265–272.

Subaris, J. (2006) Definición del problema. Relevancia pública y formación de la agenda de actuación de los poderes públicos. In: Saravia, E. and Ferrarezi, E. *Políticas Públicas; Coletânea*. Brasília: ENAP; volume 1.

Thackeray, R. and Hunter, M. (2010) Empowering youth: Use of technology in advocacy to affect social change. *Journal of Computer-Mediated Communication*, 15, 575–591.

Transportes Urbanos do Distrito Federal (DFTRANS) (2011) Faixa exclusiva da EPNB comprova eficiência e reduz tempo de viagem dos ônibus. Available at: http://www.dftrans.df.gov.br/003/00301009.asp?ttCD_CHAVE=162435. Accessed in June 2012.

Ubbels, B. and Verhoef, E. (2006) Acceptability of road pricing and revenue use in the Netherlands. *European Transport*, 32, 68–94.

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Impact of Capital Budget Implementation on Economic Growth in Nigeria

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ABSTRACT

The study examined the impact of capital budget expenditure implementation on economic growth in Nigeria. Specifically the study assessed the impact of implementation of capital expenditure on administration, economic services, socio-community services on the growth of Nigerian economy. Secondary data used in the study were collated from Central Bank of Nigeria (CBN) statistical bulletins, and analyzed with the use of Augmented Dickey-Fuller unit root test, co-integration test and error correction model (ECM) analysis. The long run normalized estimation reported coefficient values of -387,2292, 69.05, 184.17 for capital expenditure on administration, economic services and socio-community services respectively, while the short run parsimonious ECM estimation reported coefficient estimates and probability value of 27.20(p=0.11), -27.82(p=0.001), -17.23(p=0.49) respectively. Thus, it was concluded that capital expenditure implementation is germane in maintaining and sustaining economic growth in Nigeria. Hence, it was recommended that government should ensure adequate implementation of capital expenditure in the country especially in areas of economic and socio-community services and also overhaul ministries, government agencies and parastatals to curb and curtail loopholes impeding effective and efficient implementation of capital budget in the country.

Keywords: Capital budget, Budget implementation, Economic growth, Capital expenditure, Socio-community services, Augmented Dickey-Fuller unit root test

INTRODUCTION

Budget is an important instrument of governance in any modern state. It exercises control over size and relationship of government receipts (revenue) and expenditures (payment) (Edame, 2010). These expenditures comprises of recurrent expenditures, capital expenditures, subsidies, debt servicing and so on. These expenditures often have significant impact on the economy. Ohanele (2010) further stressed that a well-functioning budget system is vital for the formulation of sustainable fiscal policy and the facilitation of economic growth. In a bid to achieve the macroeconomic goals and objectives of stable and full employment, infrastructural development among others, the national government initiates several types of budget such as surplus, balanced, deficit, supplementary, development budget; and also include the line item or traditional budgeting system, performance budgeting system, planning budgeting system, programming budgeting system and the zero-based budgeting system.

Ogujiuba and Ehigiamusoe (2013) posited that the national budget is the most important economic policy instrument for a government and it reflects the government's priorities regarding social and economic policy more than any other document. In addition, the instrument translates policies, campaign promises, political commitments, and goals into decisions regarding where funds should be spent and how funds should be collected. The focus on the budget has assumed greater prominence in recent years with increasing democratization, civil society participation and the desire to respond to development challenge of poverty. The national budget is basically divided into recurrent and capital budget.

The capital budget is a fragment of the national budget which shows the proportion of the national revenue allocated for the purpose of carrying out project with useful life of more than a year. The crux of this study being 'capital budget' unlike the recurrent budget is initiated to provide funds to finance capital projects or assets. Ogujiuba and Ehigiamusoe (2013) stated that capital project includes the likes of construction of roads, bridges, hospitals, schools, prisons, public administrative buildings, highways, dams, and irrigation systems; the purchase of machinery and equipment; and the supply of water, electricity, and transport, health, and educational facilities. Either a recurrent or capital budget, a budget must fulfill the obligation for which it was initiated.

Generally, for a budget (capital or recurrent) to perform its obligations effectively and efficiently, it must however possess some important qualities. Faleti and Myrick (2012) in their study opined that for a public budget to effectively perform its obligations, it should be well designed, effectively and efficiently implemented, adequately monitored, and ultimately, its performance should be evaluated. However, it must be stated herein that the beauty of a budget lies not in its formulation or initiation but in its implementation. The performance of a country's budget heavily depends on whether it is effectively and efficiently implemented to meet the needs and aspirations of the people of the country. A well-implemented budget helps to translate government policies and programs into outcomes that have a direct, positive impact on people, such as the development of critical infrastructure (electricity, roads, water, hospitals, schools and so on), the provision of employment opportunities, the reduction of poverty, and the supply of transport, health, and educational facilities. Hence this study analyzed impact of capital budget implementation on economic growth in Nigeria.

The size and structure of public expenditure (both recurrent and capital expenditure) is expected to boost the growth in output of the economy. This statement is believed to be true even without conducting any research whatsoever. A recent study conducted by Ogujiuba and Ehigiamusoe (2013) indicated that the level of capital budget implementation in Nigeria since the advent of democracy in 1999 has been low and that there have been wide disparity between budgeted capital expenditures and actual capital expenditures. The researcher would resolve to the fact that this above assertion is true but the fact is that the problem with capital budget is traceable to as far back as 1986 (SAP period), this has been a recurring problem.

Contrary to Ogujiuba and Ehiagiamusoe (2013) that the level of capital budget implementation in Nigeria since the advent of democracy in 1999 has been low, Maku (2009) reported that the rate of government expenditures have been increasing since the Structural Adjustment Programme (SAP) despite having no significant contribution to economic growth in Nigeria. What Maku (2009) has been able to establish is that from the SAP period till this time, the major challenge among others challenges confronting capital budget implementation in Nigeria is that in as much as the capital budget is implemented, it is not having any significant positive effect on the nation's Gross Domestic Product (GDP).

Tracing history revealed that the implementation of the 2012 capital budget did not match expectations, as controversy concerning the implementation level of the 2012 Appropriation Act continued between the executive and legislative arms of the government. While the executive claimed that 56% of the budget had been released and implemented by July 20, 2012, the National Assembly submitted that less than 30% of the budget was implemented by September 30, 2012. The Central Bank of Nigeria (CBN) in their various bulletin issues has made it clear that administration, economic services, social community services and transfer are the major components of capital expenditure. The aforementioned will be used as proxy for capital expenditure in Nigeria. It becomes imperative to use this variables as they serve a good indicators to reveal the actual component of capital expenditure that contribute negatively to economic growth or otherwise. Unfortunately, studies by Olurakinse (2012), Ogujiuba and Ehiagiamusoe (2013) among others previously conducted have not addressed the subject matter from this perspective.

The broad objective of this study is to evaluate the impact of capital budget implementation on the economic growth in Nigeria, while the specific objectives are to assess the impact of the capital implementation of expenditure on administration on the growth of the Nigerian economy, also to evaluate the impact of the capital implementation of economic services on administration on the growth of the Nigerian economy and to examine the impact of the capital implementation of expenditure on social community services on the growth of the Nigerian economy.

LITERATURE REVIEW

Capital Budget Implementation in Nigeria

Emphasizing the importance of capital budget implementation in the process and promotion of democracy within the territory of a nation state, Makstutis (2007) analyzed the global economic factors that drive the development of a nation state and examined the place of a nation state in the development of progress, the promotion of democracy in the territory of the state, and activation of public activity in light of globalization Boyo (2012) asserted that Nigerians may be misguided, however, for expecting substantial improvements in social welfare resulting for the appropriate and full disbursement of the capital budget. Indeed, the seemingly traditional pattern of less than 30% allocation for capital projects cannot truly support rapid infrastructural improvement for a country of over 160 million people. Furthermore, tangible progress is further precluded by the prevalent culture of impunity and corruption, which inevitably substantially diminishes the already meager capital budget.

Capital Budget Expenditure and Economic Growth

Different forms of government expenditures and economic growth have been examined in the literature. Rizvi, Qamar and Shamim (2010) investigated the relationship between government expenditures and Gross Domestic Product (GDP) based on modern time series econometric techniques. The paper used thirty years of data for the period from 1979 to 2008 and found a long-run relationship between government development expenditures and economic growth. A Granger causality test indicated that government expenditures are caused by economic growth, while an error correction model showed that there is a short-run relationship between government development expenditures and economic growth. Wagner's law proposed by the German economist Adolph Wagner (1835-1917) predicts that the development of an industrial economy will be accompanied by an increased share of public expenditures in Gross National Product. During the last three decades, Wagner's law has been tested very intensively, particularly for the developed countries and more recently for developing countries (Rizvi et al., 2010). Henrekson (2003) claimed that there are three main reasons for an increase in the role of government. First, industrialization and modernization would lead to a substitution of public for private activities. Second, an increase in real income leads to an expansion of income-elastic "cultural and welfare" expenditures. Third, natural monopolies, such as railroads, have to be taken over by government because private companies would otherwise be unable to run these undertakings efficiently because it would be impossible to raise the huge financing needed to develop them.

Theoretical Review

The Keynesian Theory

Keynes theory on public expenditure and economic growth was among the most noted with his apparently contrasting viewpoint on this relation. Keynes regards public expenditures as an exogenous factor which can be utilized as a policy instruments promote economic growth. From the Keynesian's point of view, public expenditure can contribute positively to economic growth. Hence, an increase in the government consumption is likely to lead to an increase in employment, profitability and investment through multiplier effects on aggregate demand. As a result, government expenditure augments the aggregate demand, which provokes an increased output depending on expenditure multipliers.

Empirical Review

Loizides and Vamvouks (2005) employed the causality test to examine the relationship between public expenditure and economic growth, using data set on Greece, United Kingdom, and Ireland. The authors found that government size Granger causes economic growth in all the countries they studied. The results also indicated that economic growth Granger causes public expenditure for Greece and United Kingdom.

Zheng, Li, Wong and Li (2010) studied the empirical analysis on the relationship between the sizes of Chinese government, as measured by its annual spending, and the growth rate of the economy. More specifically, it designed to examine the applicability of Wagner's law to the Chinese economy. The statistics used in this research is annual time series data on total government spending and gross domestic product covering the period from 1952 to 2007. Empirical results showed no strong evidence in support of the validity of Wagner's law for Chinese economy.

Bingxin, Fan and Saurkar, (2009) assessed the impact of the composition of public expenditure on economic growth in developing countries. They used a dynamic generalized method of moment (GMM) model and a panel data set for 44 developing countries between 1980 and 2004. The results indicated that the various types of government spending had different impact on economic growth. In Africa, human capital expenditure contributes to economic growth whereas, in Asia, capital formation, agriculture, and education expenditure had strong growth promoting effect.

Asghar, Hussain and Rehman (2012) examined the impact of government spending on poverty reduction in various sectors of the economy in Pakistan. Time series annual data for the period from 1972 to 2008 were used to analyze the long-run impact of government spending on education, health, and economic and community services. The results showed that government spending on education and law and order significantly contribute to poverty reduction, while government spending on budget deficit and economic and community services appeared to be responsible for increased poverty in Pakistan. The study recommended that the Government of Pakistan allocate more resources to the education and health sectors to foster the development of human capital. Health and education are very important determinants of poverty. Educated and healthy individuals may have more opportunities to obtain better employment, which increases their earnings and helps raise their standard of living. Education is considered to be the most important way to build human capital and eradicate poverty by enhancing productivity. Health is another major form of human capital. The results of various studies have shown that there is a positive relationship between government expenditures on health and poverty reduction, as spending on health increases individuals' capabilities and thereby reduces poverty. Improvements in health lead to increased life expectancy, which provides more opportunities for people to work and earn more income and eventually leads to poverty reduction. Government spending on both education and health are accordingly expected to have a negative impact on poverty (Asghar, *et al* 2012).

Maku (2009) examined the connection between total government spending and economic growth in Nigeria over 30 years (1977-2006). The author regressed real GDP on private investment, human capital investment, government investment, and consumption spending. The result showed that human capital investment as a share of real output has a positive but statistically non-significant effect on the growth rate of real GDP. Maku concluded that government expenditures have had no significant influence on economic growth in Nigeria based on his analysis, which reveals that the variables have not maintained a uniform pattern over the period of study because of a persistent random shock effect on the time series. He reported that the rate of government expenditures to real GDP has been increasing since the Structural Adjustment Programme (SAP) despite having no significant contribution to economic growth in Nigeria. Maku attributed this increase to the lack of government monitoring of the contract awarding process of capital projects, the ineffective deployment of government funds to productive activities, and the lack of transparency and accountability by the government regarding government spending (Oluwatobi & Ogunrinola, 2011).

Ogujiuba and Ehigiamusoe (2013) examined the capital budget implementation in Nigeria: evidence from the 2012 capital budget. Using descriptive analysis, this paper examines the capital budget implementation in Nigeria by focusing on the 2012 Federal Government Budget. The findings indicate that only 51% of the total appropriated funds for capital expenditures were utilized as of December 31st, 2012. The observed level of performance is insufficient to foster rapid economic development and reduce poverty. Some of the challenges that are responsible for the low performance include poor conceptualization of the budget, the inadequacy of implementation plans, the non-release or late release of budgeted funds, the lack of budget performance monitoring, the lack of technical capacity among MDAs, and delays in budget passage and enactment. The paper recommends that Nigerian government formulate a realistic and credible budget, release appropriated funds early to Ministries, Departments, and Agencies (MDAs), and strengthen MDAs' technical capacity to utilize capital expenditures in order to improve the index of capture in public expenditures.

METHOD

Model Specification

The study adopts an econometric model in determining the effect of capital budget implementation on economic growth in Nigeria. The study adopts a similar model used by Oke (2013) which is specified below as:

GDP = f (PEX, PRE, PCE, PDS)--Eqn 3.1

In specifying the model for this study, the above model will be modified substituting all the explanatory variables of the study for CAD, CES, CSCS and CT. As a result, the new model adopted to underpin the research is specified below as:

GDP = f (CAD, CES, CSCS, CT, U) --Eqn 3.2

GDP= Gross Domestic Product, CAD= Capital Expenditure on Administration, CES= Capital Expenditure on Economic Services, CSCS= Capital Expenditure on Social Community Services, CT= Capital Expenditure on Transfer

Sources of Data and Methods of Estimation

The model is estimated using time series annual data for the period 1981 – 2014. The data needed for the study are secondary in nature; implying data will be obtained from published sources. The main source of these data is the Central Bank of Nigeria (CBN) Statistical Bulletin, various issues. The study employed techniques of co-integration and error correction model (ECM) after carried out correlation and stationary test on the data collated to ascertain the direction of relationship between the series, and the order of integration. The intention behind the use of co-integration and error correction model is to tack both long run and short run nexus between interest rate and portfolio management.

DATA PRESENTATION AND ANALYSIS OF RESULT

Results

Table 4.1 Correlation Matrix

	GDP	CAD	CES	CSCS	CT
GDP	1				
CAD	0.80073808	1			
CES	0.65682794	0.50275160	1		
CSCS	0.77557282	0.99095501	0.45802600	1	
CT	0.75344927	0.89419913	0.30550225	0.89786601	1

Source: Authors Computation, (2017)

The correlation coefficients between pairs of variables included in the model are presented in table 4.1 above. Table 4.1 reveals that there is positive correlation between all pairs of variables used in the study. Specifically tables 4.1 reported correlation coefficient of 0.80073808, 0.65682794, 0.77557282, 0.75344927, 0.50275160, 0.99095501, 0.89419913, 0.45802600, 0.30550225, 0.89786601 for GDP and CAD, GDP and CES, GDP and CSCS, GDP and CT, CAD and CES, CAD and CSCS, CAD and CT, CES and CSCS, CES and CT, CSCS and CT.This implies that the above pairs of variables moves in the same direction, meaning as one variable increases the other also increases with the strength of their relationships reflected in the magnitude of the correlation coefficient.

Unit Root Test Analysis

Table 4.2a Augmented Dickey Fuller Unit Root Test at Level (1981-2014)

	ADF stat	**1% critical value**	**5% critical value**	**Order of integration**	**Remarks**
GDP	-0.197626	-3.646342	-2.954021	---	Non-Stationary
CAD	-0.341471	-3.646342	-2.954021	---	Non-Stationary
CES	-0.952327	-3.646342	-2.954021	---	Non-Stationary
CSCS	-0.108036	-3.646342	-2.954021	---	Non-Stationary
CT	-2.601504	-3.646342	-2.954021	---	Non-Stationary

Source: Authors Computation, (2017)

Table 4.2b Augmented Dickey Fuller Unit Root Test at First Difference (1981-2014)

Variables	ADF stat	1% critical value	5% critical value	Order of integration	Remarks
GDP	-5.378235	-3.653730	-2.957110	I(1)	Stationary
CAD	-9.047395	-3.653730	-2.957110	I(1)	Stationary
CES	-5.901772	-3.653730	-2.957110	I(1)	Stationary
CSCS	-8.301753	-3.653730	-2.957110	I(1)	Stationary
CT	-7.146513	-3.653730	-2.957110	I(1)	Stationary

Note: * (**) denotes significance at 1% (5%) significant levels respectively
Source: Authors computation, (2017)

Tables 4.2a&b presents the unit root test result of variables used in the study. Table 4.2a reports the unit root test result of the series at level while table 4.2b reports the unit root test at first difference. From table 4.2a&b it can be observed that all the series used in the study are not stationary at level, but they became stationary only after first differencing, which connotes that all the variables are integrated of order one I(1). This implies that all the variables used in the study retain innovative shock passed on them only for short period of time after which they let go. Hence confirmation of the presence of non-stationary variables in the series, which brings to book the possibility of spurious relationship in the short run due to the presence of random walk, suggest that long run association ship test should be carried out to test for the presence of co-integrating equation amidst the multivariate series in the long run. The co-integration test was done using Johansen maximum likelihood ratio approach

Co-integration result

Table 4.3 Johansen Co-integration Test Result
Series: GDP CAD CES CSCS CT

Hypothesized No of CE(s)	Eigen Value	Trace statistics	5 Percent Critical Value	Probability
None *	0.894658	147.7052	76.97277	0.0000
At most 1 *	0.809192	75.68797	54.07904	0.0002
At most 2	0.338877	22.68044	35.19275	0.5497
At most 3	0.212130	9.438339	20.26184	0.6946
At most 4	0.054958	1.808828	9.164546	0.8154

***(**) denote rejection of the hypothesis at 5%(1%) significance level**
trace test indicate 2 cointegration equation(s) at the 0.05 level of significance.

The normalized long run equation is thus estimated as:

GDP	CAD	CES	CSCS	CT	C
1.000000	-387.2292	69.05100	184.1746	-183.5151	1000.236
	(32.5932)	(9.89691)	(54.4776)	(11.8732)	(652.254)

Source: Authors Computation, (2017)

Co-integration test result presented in table 4.3 above is the summary of co-integration analysis using Johansen trace statistics approach. This test statistics strongly rejects the null hypothesis of no co-integration, in favor of two co-integrating equation at 5 percent significance level. This depicts that even though there is no short run equilibrium equation as a result of the presence of non-stationary series in the model, on the long run there is equilibrium relationship, meaning linear combination of all the series will produce a stationary error term on the long run. From the normalized long run estimate presented in table 4.3 it was revealed that capital expenditure on administration and transfer exert significant negative impact on economic growth on the long run, while capital expenditure on economic services as well as socio community services exert significant positive impact on economic growth on the long run. It thus implies that implementation of capital expenditure on the general ground exert significant influence on economic growth though the direction of such impact depend on the type of capital expenditure.

Error Correction Model (ECM)

Table 4.4 Parsimonious (ECM)
Series: GDP CAD CES CSCS CT
Dependent Variable: D(GDP)

Variable	Coefficient	Std Error	t-statistics	Prob.
C	-52.09077	548.8256	-0.094913	0.9253
D(GDP(-2))	0.507408	0.127908	3.966971	0.0008
D(CAD)	27.20799	16.42982	1.656012	0.1133
D(CAD(-2))	171.6068	29.91349	5.736770	0.0000
D(CES)	-27.81787	5.544910	-5.016831	0.0001
D(CES(-1))	-32.57411	7.938129	-4.103500	0.0006
D(CES(-2))	-14.52232	9.355409	-1.552291	0.1363
D(CSCS)	-17.22578	24.88537	-0.692205	0.4968
D(CT(-1))	63.28427	10.73068	5.897506	0.0000
D(CT(-2))	74.27267	10.44065	7.113798	0.0000
ECM(-1)	-0.108110	0.081412	-1.327938	0.1992

R-Squared=0.901087, Adjusted R-Square=0.851630, Durbin Watson stat=2.330456, F-statistics=18.21976, Prob (F-statistics) =0.000000
Source: Authors Computation, (2017)

The result of parsimonious error correction model presented in table 4.4 above showed the coefficient of the parameter estimates, alongside the standard errors, t-values and the probability values. The result reveals that there existed pronounced feed-back of the previous period disequilibrium from the long-run trend. Specifically, the result indicated feed-back of about 10%. Notably the reported ECM(-1) coefficient is correctly signed, thus validating the presence of long run relationship amidst the variables and that about 10% of the short run inconsistencies are corrected and incorporated into the long run dynamics annually. The parsimonious error correction model explained the short run relationship between the variables. Notably the result revealed that on the short run capital expenditure on administration and transfer exert positive impact on economic growth, while the impact of capital expenditure on economic services, as well as socio community services tend to be negative. The result reported R-square value of 0.901087, which implies that about 90% of the systematic variations in the dependent variable (gross domestic product) can be explained by variations in the explanatory variables. The result showed that the model is overall significant given the f-statistics probability value of 0.000000. This implies that the explanatory variables jointly and significantly explain the variation in economic growth measured by real gross domestic product, thus the model is a good-fit. The Durbin-Watson statistics of 2.330456 which falls within the acceptance region of the null autocorrelation between successive values of error terms, hence the model is econometrically fit.

From the analyses conducted in the study the following discoveries were made: First the study discovered that there is strong relationship between capital expenditure implementation on administration, economic services, socio community services, transfer and economic growth of Nigeria. Secondly it was discovered in the study that there is on the long run capital expenditure implementation on administration exert significant negative impact on economic growth of Nigeria, but positive on the short run. Thirdly the study discovered that on the long run capital expenditure on economic services exert significant positive on economic growth of Nigeria, though negative on the short run. Fourthly the study discovered that on the long run capital expenditure on socio community service exert significant positive impact on economic growth of Nigeria, though negative on the short run. On the fifth ground the study discovered that on the long run capital expenditure on transfer exert negative impact on economic growth but positive on the long run, and finally the study discovered that both on the long and short run capital expenditure implementation exert significant impact on economic growth of Nigeria.

CONCLUSION AND RECOMMENDATIONS

Premised on the findings of the study, it was concluded that capital expenditure implementation is germane to maintaining and sustaining economic growth in Nigeria, that capital expenditure on some sectors of the economy influence the growth prospect of the economy more on the long run that some other sectors. Based on the discoveries made in the study government should ensure adequate implementation of capital expenditure in the country especially in areas of economic services and socio community services as this has a significant capacity to trigger rapid growth of the economy on the long run, increase the percentage of the total expenditure that goes to capital expenditure has this will put the economy on the vantage position for rapid growth which when sustained will culminate into economic development, and also overhaul the ministries, government agencies and parastatals to curb and correct loopholes impeding effective and efficient implementation of government capital budget in the country.

References

Asghar, N., Hussain, Z. & Rehman, H. (2012). The Impact of Government Spending on Poverty Reduction: Evidence from Pakistan (1972-2008). *African Journal of Business Management*, 6(3), 845-853.

Bingxin, Yu, Fan, S, & Saurkar, A. (2009). Does Composition of Government Spending Matter to Economic Growth? In Proceedings of the International Association of Agricultural Economists Conference, Beijing, China.

Boyo, H. (2012). Capital Budget Imbroglio and Subsidy: *The Punch Newspapers*, August 10. 3-4.

Edame, E. (2010). Development Economics and Planning in Nigeria, 3rd Ed, Calabar; favoured Trust Ltd.

Faleti, K. O. & Myrick, D. (2012). The Nigerian Budgeting Process: A Framework for Increasing Employment Performance. *Mediterranean Journal of Social Sciences, 3*(12), 193-213.

Henrekson, M. (2003). Wagner's Law, A Spurious relationship, *Public Finance*, *48*(3), 406-415.

Loizides, J. & Vamvoukas, G. (2005) "Expenditure and economic growth: evidence from trivariate causality testing," *Journal of Applied Economics*, 1(8), 125–152.

Makstutis, A. (2007). The Problems of Development of National State. *Journal of Business Economics and Management*, 8 (1), 63-68.

Maku, O. E. (2009). Does Government Spending Spur Economic Growth in Nigeria*? (Working Paper No. 17941). Munich Personal RePEc Archive.*

Ogujiuba, K. K. & Ehigiamusoe, K. (2013). Capital budget Implementation in Nigeria: Evidence from the 2012 Capital Budget, 24(10), 299-314.

Ohanele, J. C. (2010). Government Budgets in Nigeria: Who benefits? *The Punch Newspaper*, pp. 6-7.

Oke, M. O. (2013). Budget Implementation and Economic Growth in Nigeria. *Developing Country Studies*, *3*(13), 1-7.

Olurankise, F. (2012). Due Process and Budget Implementation: an evaluation of Nigerian Public Sector Auditing", *Asian journal of finance and accounting*, (4)2, 213-214.

Oluwatobi, S. O., & Ogunrinola, I. O. (2011). Government Expenditure on Human Capital Development: Implications for Economic Growth in Nigeria. *Journal of Sustainable Development,* 4 (3), 72-80.

Rizvi, S. Z. A., Qamar, Z. & Shamim, A. (2010).*Impact of Development Spending on Economic Growth Measuring the*

Effectiveness of Fiscal Policy in Sindh. Pakistan Business Review, 12 (3), 588-600.

Zheng, Y, Li, J., Wong X.L., & Li, C. (2010) "An empirical analysis of the validity of Wagner's law in China: a case study based on Gibbs sampler," *International Journal of Business and Management*, (5)6

APPENDIX

CORRELATION

	GDP	CAD	CES	CSCS	CT
GDP	1				
CAD	0.80073808	1			
CES	0.65682794	0.50275160	1		
CSCS	0.77557282	0.99095501	0.45802600	1	
CT	0.75344927	0.89419913	0.30550225	0.89786601	1

COINTEGRATION

Date: 07/03/16 Time: 13:25
Sample (adjusted): 1983 2014
Included observations: 32 after adjustments
Trend assumption: No deterministic trend (restricted constant)
Series: GDP CAD CES CSCS CT
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.894658	147.7052	76.97277	0.0000
At most 1 *	0.809192	75.68797	54.07904	0.0002
At most 2	0.338877	22.68044	35.19275	0.5497
At most 3	0.212130	9.438339	20.26184	0.6946
At most 4	0.054958	1.808828	9.164546	0.8154

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.894658	72.01724	34.80587	0.0000
At most 1 *	0.809192	53.00753	28.58808	0.0000
At most 2	0.338877	13.24210	22.29962	0.5333
At most 3	0.212130	7.629511	15.89210	0.5924
At most 4	0.054958	1.808828	9.164546	0.8154

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by b'*S11*b=I):

GDP	CAD	CES	CSCS	CT	C
0.000152	-0.059041	0.010528	0.028081	-0.027981	0.152506
-4.50E-05	0.052339	-0.013371	-0.040072	0.033526	-0.190533
9.59E-05	0.027714	0.011941	-0.102777	-0.035125	0.478839

-3.16E-05	-0.009282	0.015106	-0.046548	0.006632	-0.862751
3.64E-05	0.010722	0.004802	-0.011675	-0.011938	-1.097399

Unrestricted Adjustment Coefficients (alpha):

D(GDP)	-916.3959	932.7020	-1432.510	560.7385	165.4738
D(CAD)	66.38615	52.44755	-14.26456	4.571110	3.349549
D(CES)	-36.52684	9.716487	21.11820	-24.84901	-7.516081
D(CSCS)	36.22100	40.77173	-4.671892	5.285020	3.711857
D(CT)	55.01625	19.72661	-8.944327	-8.973016	11.15814

1 Cointegrating Equation(s): Log likelihood -937.6641

Normalized cointegrating coefficients (standard error in parentheses)

GDP	CAD	CES	CSCS	CT	C
1.000000	-387.2292	69.05100	184.1746	-183.5151	1000.236
	(32.5932)	(9.89691)	(54.4776)	(11.8732)	(652.254)

Adjustment coefficients (standard error in parentheses)

D(GDP)	-0.139723
	(0.09075)
D(CAD)	0.010122
	(0.00208)
D(CES)	-0.005569
	(0.00222)
D(CSCS)	0.005523
	(0.00154)
D(CT)	0.008388
	(0.00182)

2 Cointegrating Equation(s): Log likelihood -911.1604

Normalized cointegrating coefficients (standard error in parentheses)

GDP	CAD	CES	CSCS	CT	C
1.000000	0.000000	-44.78198	-168.3206	96.72535	-613.6913
		(26.9748)	(100.137)	(33.4693)	(1840.25)
0.000000	1.000000	-0.293968	-0.910301	0.723707	-4.167886
		(0.06030)	(0.22386)	(0.07482)	(4.11402)

Adjustment coefficients (standard error in parentheses)

D(GDP)	-0.181682	102.9211
	(0.09003)	(44.6861)
D(CAD)	0.007762	-1.174471
	(0.00142)	(0.70411)
D(CES)	-0.006006	2.665125
	(0.00230)	(1.14065)
D(CSCS)	0.003688	-0.004588
	(0.00098)	(0.48766)
D(CT)	0.007501	-2.215749
	(0.00180)	(0.89281)

3 Cointegrating Equation(s): Log likelihood -904.5393

Normalized cointegrating coefficients (standard error in parentheses)

GDP	CAD	CES	CSCS	CT	C
1.000000	0.000000	0.000000	-281.0842	-21.65686	585.9543
			(51.1911)	(23.5311)	(1416.66)
0.000000	1.000000	0.000000	-1.650529	-0.053404	3.707097

			(0.16841)	(0.07741)	(4.66065)
0.000000	0.000000	1.000000	-2.518058	-2.643523	26.78858
			(0.68617)	(0.31541)	(18.9890)

Adjustment coefficients (standard error in parentheses)

D(GDP)	-0.319111	63.22098	-39.22534
	(0.09131)	(41.1250)	(10.2241)
D(CAD)	0.006394	-1.569795	-0.172698
	(0.00157)	(0.70867)	(0.17618)
D(CES)	-0.003980	3.250389	-0.262308
	(0.00257)	(1.15830)	(0.28796)
D(CSCS)	0.003240	-0.134064	-0.219615
	(0.00113)	(0.51116)	(0.12708)
D(CT)	0.006643	-2.463629	0.208647
	(0.00208)	(0.93485)	(0.23241)

4 Cointegrating Equation(s): Log likelihood -900.7245

Normalized cointegrating coefficients (standard error in parentheses)

GDP	CAD	CES	CSCS	CT	C
1.000000	0.000000	0.000000	0.000000	-411.7159	11023.86
				(82.4451)	(5004.32)
0.000000	1.000000	0.000000	0.000000	-2.343835	64.99858
				(0.51118)	(31.0280)
0.000000	0.000000	1.000000	0.000000	-6.137819	120.2952
				(0.92468)	(56.1268)
0.000000	0.000000	0.000000	1.000000	-1.387695	37.13444
				(0.29515)	(17.9152)

Adjustment coefficients (standard error in parentheses)

D(GDP)	-0.336817	58.01621	-30.75480	58.01955
	(0.09028)	(40.3297)	(12.3179)	(58.9471)
D(CAD)	0.006250	-1.612224	-0.103647	1.015830
	(0.00159)	(0.70902)	(0.21656)	(1.03632)
D(CES)	-0.003196	3.481037	-0.637678	-2.428874
	(0.00244)	(1.09090)	(0.33319)	(1.59449)
D(CSCS)	0.003073	-0.183119	-0.139779	-0.382506
	(0.00113)	(0.50685)	(0.15481)	(0.74082)
D(CT)	0.006926	-2.380342	0.073101	2.091383
	(0.00208)	(0.92886)	(0.28370)	(1.35765)

OVERPARAMETERIZED ECM

Dependent Variable: D(GDP)
Method: Least Squares
Date: 07/03/16 Time: 13:32
Sample (adjusted): 1984 2014
Included observations: 31 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-136.7246	650.4971	-0.210185	0.8364
D(GDP(-1))	0.079935	0.318572	0.250915	0.8053
D(GDP(-2))	0.445886	0.284659	1.566388	0.1381
D(CAD)	24.45312	27.99324	0.873537	0.3961
D(CAD(-1))	30.96988	39.62123	0.781649	0.4466
D(CAD(-2))	156.8842	55.68415	2.817394	0.0130
D(CES)	-28.02588	9.614871	-2.914847	0.0107
D(CES(-1))	-33.39778	11.95104	-2.794549	0.0136
D(CES(-2))	-13.18742	14.18901	-0.929411	0.3674
D(CSCS)	-16.68643	37.42440	-0.445870	0.6621
D(CSCS(-1))	2.344891	45.01525	0.052091	0.9591
D(CSCS(-2))	-8.404996	41.45773	-0.202736	0.8421
D(CT)	-2.322230	12.75218	-0.182104	0.8579
D(CT(-1))	68.68301	21.03008	3.265941	0.0052
D(CT(-2))	69.39536	30.04592	2.309644	0.0356
ECM(-1)	-0.085640	0.106861	-0.801415	0.4354

R-squared	0.905164	Mean dependent var	2868.825
Adjusted R-squared	0.810328	S.D. dependent var	5745.779
S.E. of regression	2502.363	Akaike info criterion	18.79418
Sum squared resid	93927297	Schwarz criterion	19.53430
Log likelihood	-275.3098	Hannan-Quinn criter.	19.03544
F-statistic	9.544532	Durbin-Watson stat	2.244312
Prob(F-statistic)	0.000040		

PARSIMONIOUS ECM

Dependent Variable: D(GDP)
Method: Least Squares
Date: 07/03/16 Time: 13:40
Sample (adjusted): 1984 2014
Included observations: 31 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-52.09077	548.8256	-0.094913	0.9253
D(GDP(-2))	0.507408	0.127908	3.966971	0.0008
D(CAD)	27.20799	16.42982	1.656012	0.1133
D(CAD(-2))	171.6068	29.91349	5.736770	0.0000
D(CES)	-27.81787	5.544910	-5.016831	0.0001
D(CES(-1))	-32.57411	7.938129	-4.103500	0.0006
D(CES(-2))	-14.52232	9.355409	-1.552291	0.1363
D(CSCS)	-17.22578	24.88537	-0.692205	0.4968
D(CT(-1))	63.28427	10.73068	5.897506	0.0000
D(CT(-2))	74.27267	10.44065	7.113798	0.0000
ECM(-1)	-0.108110	0.081412	-1.327938	0.1992

R-squared	0.901087	Mean dependent var	2868.825
Adjusted R-squared	0.851630	S.D. dependent var	5745.779
S.E. of regression	2213.205	Akaike info criterion	18.51369
Sum squared resid	97965505	Schwarz criterion	19.02253
Log likelihood	-275.9622	Hannan-Quinn criter.	18.67956
F-statistic	18.21976	Durbin-Watson stat	2.330456
Prob(F-statistic)	0.000000		

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Sukuk Bond In Pakistan: An Analysis Of Islamic Mode Of Financing For Investors

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ABSTRACT

Banking and financial system in an economy acts as blood circulation in body. Just as effective and efficient blood circulation ensures healthy and sound body similarly strong banking and financial system ensures economic efficiency and development. The basic objective of financial system is to find comprehensive solutions to existing practical problems. Islamic banking and financial industry is rapidly growing all over the world predominantly in Islamic countries. Islamic finance industry has arisen as best alternative to conventional financial system by providing better products and effective means of financing. The products introduced by Islamic finance industry are recognized all around the globe. Islamic banking and finance industry is making positive contribution to all segments of society like trade and industry. Islamic finance industry offer different products to investors for financing purposes. The study relates to Islamic Banking specifically focusing on Islamic bonds. Islamic bonds have been developed as capital market instrument in past few decades. The purpose of this study is to identify those factors that can increase the investment in sukuk. Present study is quantitative research in which mix method design is adopted to conduct the analysis. This study contains three questions. First question identifies the difference between conventional bonds and sukuk. Second question describes the structure of the sukuk. These questions were answered from the literature available on this field. Third question identifies those factors which enhance the investment in sukuk in Pakistan. To investigate this, a structured and self-administered questionnaire was constructed to collect the response of current and potential investors. The respondents were teachers who are teaching in University of the Punjab. The data was collected by distributing 285 questionnaires among respondents. The questionnaire consisted of two sections based on five point likert scale. The questionnaire was examined for validity and reliability. To check and determine the predictive relationship among dependent variable and independent variables linear regression model is used in this study. The questionnaire contains five independent variables; Knowledge about the Sukuk, Islamic spirit, and Return on investment, Mechanism, and Trust on issuing authority and one dependent variable, as investment in Sukuk. The empirical results of study indicates that Knowledge about the Sukuk has positive, significant and the strongest relationship with investment in Sukuk, and Islamic spirit has positive, significant and stronger relationship with investment in Sukuk. Return on investment has positive, significant and strong relationship with investment in Sukuk whereas the relationship with Mechanism and investment is positive and significant but is weaker as compared to these three variables. Moreover relationship of Trust on issuing authority is although positive but insignificant and has the weakest relationship.

INTRODUCTION

Islamic banking and finance is augmenting significant market in global finance industry. Contemporary Islamic finance in now enjoying its fourth decade and during that period Islamic finance has shown remarkable growth. In last few years, overall market growth rate is estimated to be 15 to 20 percent per annum, and on the other hand individual Islamic financial institutions have reported event faster growth. Market dynamics have been found in Islamic financial centers and different other markets (Mansoor & Ishaq, 2008). Presently more than 300 Islamic banks and financial institutions are profitably operating their business operations from London, Los Angeles, Dubai, Karachi, Riyadh, Jakarta, Cairo and many other parts of the world. Islamic finance is rapidly growing segment of the world. It has captured the new markets such as Pakistan, China, England, America, Turkey, Syria, Lebanon and Canada, and it is difficult to predict that this development is going to slow down in future, so it has proved to be one of the best growing sectors in global financial markets (Afshar, 2013). Since there is potential growth in Islamic finance industry, Conventional banks are considering to shift their system from Conventional banking system to Islamic banking system. Couple of years ago, Kuwait Real Estate Bank has announced its conversion to entire Islamic banking system and Central Bank of Kuwait has approved it to Kuwait International Bank. Perceptions of Islamic banking have considerably developed. Islamic banking and finance has captured significant share in financial world. In Muslims countries, particularly in the west, different institutional, sectional and retail markets are selecting Islamic financial products for their investment and other financial purposes. In the presence of financial and investment opportunities, today more than seven hundred Islamic financial institutions are functioning around the world with $ 1.2 trillion assets under more than 85 countries. Moreover USA, Europe, Africa, Central Asia and South Asians countries are offering Islamic financial services. Standard and Poor's have forecasted $ 4 trillion market growth of Islamic finance industry (Iqbal & Molyneux, 2005). All the practices, procedures and objectives are common to any banking and financial system whether it is conventional system or Islamic system. The main difference in these two systems consists in the methodology acquired to achieve the objectives. Conventional banking systems try to attain these objectives by using the interest based agreements while Islamic banking aims to achieve these objectives through interest free agreements. All the agreements and practices adopted in Islamic banking are permissible in Islam and all the agreements and practices adopted in Conventional banking system are not allowed in Islam (Othman & Owen, 2001).

This resemblance of objectives and differences in the methodology of Islamic and Conventional system explains the regulatory framework which is required for Islamic financial system. Regulatory framework used in both conventional and Islamic banking system is almost same; however because of methodological difference to accomplish these objectives made it compulsory to make changes in regulatory frame work in accordance with Shariah.

This is a pragmatic way that helps circumvent the tendency of unnecessarily reinventing the wheel. It gives Islamic banking a greater opportunity to attain maximum to leverage from existing and well defined regulatory framework of the Conventional banking system. In Pakistan, Islamic banking and financial system provide response to both economic and financial needs. Efforts were started to eradicate Riba from economical system during 1970s and in order to make these efforts more important and practical significant step were exercised in 1980s. In the mid of eighties the revolution of Islamic banking spread across the country. Advance practices and model were introduced in Islamic banking system which were more efficient and effective models being implemented anywhere in the Islamic financial system across the globe (Moore, 1997). Though these arrangements could not fulfill the entire requirement needed in implementing full practices of Islamic banking regulations but these arrangements provided the foundation to State Bank of Pakistan to formulate current and potential strategies to launch Islamic banking in Pakistan. The step to re-launch Islamic financial system in the country was introduced in early 2001 when the Government of Pakistan made the decision to advance and promote Islamic banking system gradually which is equitable and compatible with internationally practiced Islamic banking operations. Government of Pakistan made sure that no hurdles were created in the economy while shifting the Conventional banking to Islamic banking. In this context it was decided to build and introduce a strong Islamic financial system in the country which is accessible to each individuals who wants financial services. Furthermore, State Bank of Pakistan made policies to enhance and expand the Islamic banking in all areas of the country by granting full permission to private investors to open full-fledged Islamic banks in the country and made it obligatory to already existing Conventional banks to open Islamic banking branches (Ahmad & Safwan, 2010).

These steps boosted Islamic banking system of the country although there were regulatory and legal issues in the way to introducing new banking practices but commitment on the part of State Bank removed these obstacles. New approaches of Islamic banking provided more convenience and ease to implement Shariah compliant agreements. It gave more elasticity to Islamic financial institution in respect of Islamic financial products, instruments and Shariah compliant methodologies. These new steps proved very effective and successful. In early 2003, there was only one full-fledged Islamic bank and three Conventional banks were operating their Islamic banking branches, and now in 2015 there are six Islamic banks who are completely Islamic and twelve other Conventional banks have got the license to operate Islamic banking branches and deliver Islamic financial products (Ataullah, 2004). All major five banks of Pakistan are providing Islamic financial services while opening their separate Islamic branches or providing separate departments of Islamic banking within their Conventional branches. In recent years Islamic finance industry has offered wide range of Islamic financial products which are required by the major segment of the economy. It has also been noticed that financial industry performed well as compared to other industries in the economy. These developments not only support the financial system of the country but also provide the means of development and growth to other industries. This positive trend not only improves the overall economy of the country but also provide instruments to attract foreign direct investment in Pakistan (Akhtar & Sadaqat, 2011).

The definition Islamic finance provides fundamental difference between Islamic finance industry and Conventional finance industry. Although it is theoretically appeared that Islamic finance industry uses same method of financing as used by the Conventional finance industry but the difference lies in the structure and application of these two industries. Islamic finance industry products have been derived over time from Murahaba which is referred as cost plus financing to Sukuk which are referred to as Islamic bonds. Islamic laws prohibits giving and taking of interest in financial contracts and as result of that countries with majority of Muslims; conventional debts market are considered in contrast of Islamic laws/Shariah (Hassan, 2012) . Islamic finance is the key feature that differentiates the Islamic economy from Conventional economy. The definition of Islamic economy has been defined by different researchers, scholars and economists. Mohsen .S. Khan who is working as senior economists in International Monetary Fund (IMF) has defined the Islamic economy as a complete system that describes a specific pattern of individuals and ways to deal with large number of business matters such as incentive system, allocation of resources, property rights, the types of economic freedom, proper role of state provides income and wealth distribution, ensuring social justice and complete system of economic decision making (Khan & Mirakhor, 1994).

Another definition of Islamic economy defined by Hasanuz Zaman who is Islamic economic expert in International Development Bank (IDB) as a complete knowledge and understanding of the application of injunctions, rules and regulations that give satisfaction to individuals and enable them to perform their duties to their God and to the society by avoiding inequality and injustice in the acquisition of funds and resources (Zaman, 1994). The fundamental principles, objectives, practices and procedures are same in Conventional and Islamic banking system. However methodology adopted to achieve defined objectives and goals are different in Islamic and Conventional banking system. Conventional banking industry aims to achieve these objectives using interest based contracts while Islamic banking industry seeks to achieve these objectives using interest free contracts (Zaher & Hassan, 2001). Islamic teachings has clearly prohibited the use of interest based contracts but has allowed the trade in the following verses of Quran."Those who consume interest cannot stand (on the day of Judgment) except as one stands, who is being beaten by satan into insanity. That is they say (trade is just like interest), but Allah has prohibited interest, so whoever has received admonition from his Lord and desists may have what is just, and his affairs rests with Allah. But whoever returns (to dealing in interest), those are champions of fire, they will be abide eventually therein" (Al-Quran 2-275) "Allah destroys interest and gives increase for charity. And Allah does not like every sinning disbeliever" (Al-Quran 2-276) "O you believe, fear Allah and give up what remains (due to you) of interest if you should be believe" (Al-Quran 2-278) "And if you do not, then be informed of War (against you) from Allah and His Prophet (P.B.U.H.) but if you repent you may have your principles _ Thus to no wrong nor are you wronged" (Al-Quran 2-279) Islamic teachings regarding the usury are described in the Holy Quran: "O you, who are believed, do not consume usury, doubled and multiplied, but fear Allah that you may be successful" (Al-Quran 3-130) "And (for) their taking of Usury while forbidden from it and their consuming of the peoples wealth unjustly and we have prepared for the disbelievers among them a painful punishment" (Al- Quran 4-161) "And whatever you give for interest to increase within the wealth of people will not increase with Allah. But what you give in Zakat, desiring the countenance of Allah-those are multiplier" (Al-Quran 30-39) the regulatory framework used in both conventional and Islamic banking also differentiates both of them. The regulatory framework adopted in Islamic banking is purely based on Islamic Shariah practices.

Islamic banking in Pakistan is engrossed as a reaction to religious and economic needs. In order to eliminate Riba different attempts were made in 1970. However, substantial steps were taken in 1980's. In the early eighties, significant steps particularly contributed in development of Islamic banking and industry in Pakistan (Yahya et al., 2012). With the passage of time that system came apart because each was failed to resolve the issues. Nevertheless, this development provided basics to the State Bank of Pakistan in the formation of new Islamic banking strategies in Pakistan. In 2001, Government of Pakistan determined to develop new approaches and promoted existing strategies which were equitable and compatible in accordance with the International practices (Khattak, 2010).

Entrepreneurship is the basis of western capitalistic system. The new business creation and developing new ideas have certainly provided benefits to the society, but without investing in opportunities; continuous development, innovation and commercial growth would have been procrastinated. Presently Islamic finance has the potential opportunities to encourage entrepreneurship in Muslims societies (Kuran, 2008). Muslims have substantial financial resources in hand have always faced the question about how to safeguard their financial resources while remaining faithful to the laws of Islamic finance. Islam forbids the hoarding of money because when the money is hoarded, it prevents from attaining its desired objectives (Kayed & Hassan,2011). Islam has clearly defined principles about the hoarding of money in

Holy Quran as" Those who hoard up gold and silver and do not spend in the way of ALLAH, give them the tidings of painful punishment". The legitimate substitute of hoarding is to invest it by having a large range of new opportunities.

Financial resources can be deposited in different bank accounts to earn fixed rate of interest on them. These earning are in shape of fixed interest that is considered unlawful, thus forbidden and condemned in Islam. There are many other alternatives available where investment could be made in form of import/export, stock market and real estate and many other alternatives. This type of investment consists of productive, unproductive and sometimes destructive business activities. Islam only approves of those business resources in the way of ALLAH, which involves making investment in business related activities which are moral, productive and desirable by the society (Salarzehi & Armesh, 2010). Therefore Muslims investors are encouraged to invest in productive trade activities or to start his/her own business entity or entering into partnership agreement. It is significant to describe here that every Muslim investor with extra money to invest, has some special personality traits, qualities, skills and abilities to be an entrepreneur. Islamic financial system provides best solution to this situation by allowing an investor to have some share in business venture by partnership agreement with potential entrepreneur who has not enough money to start his own business entity. Islamic banking and finance provides entrepreneurial opportunities to investors through investing in Sukuk, Musharaka and Mudaraba agreements.

Musharaka is an Arabic word which means "partnership". Musharaka and Mudaraba are two major partnership agreements based on profit and loss sharing principles. Musharaka agreement is just like Mudaraba agreement the only difference is that in Musharaka the entrepreneur not only provides skills and abilities but also puts capital in the business venture. Musharaka provides both the entrepreneur and the financial institution chance not only to share business assets and working capital but also to participate in the management of business. Both parties have full control on the management of the business. Profit is shared according to pre-defined ratios which are based on the percentage of contribution of both parties to the business venture. Losses are also shared according to the percentage of share in the business venture (Rammal, 2004). Research has identified that Muslims in the interest free economy not only increases their own profits but also try to increase the financial positions of their partners. This is the true spirit which improves the essence of entrepreneurship. Islamic entrepreneurship provides social economic conditions to the society by promoting and emphasizing on the Zakat. Zakat is very efficient instrument to gain the ultimate objective of social justice. It is a meaningful tool which reflects in these distinctive groups of Muslims, the giver, the taker, and the needy Muslims. In comparison to non-Muslim societies where public pays heavy taxes and does not expect any reward in return just only better government service (Qasaymeh, 2011). On the other hand, Muslims give due amount of Zakat whole heartedly. They do so because they have perceived that while paying Zakat, they are contributing towards social economic justice. Moreover, Zakat provide essence of unity, respect, and equal distribution of wealth. Islam clearly motivates the Muslims towards productive business activities which help the societies in eradication of poverty and equal distribution of wealth.

OBJECTIVES OF THE STUDY

The purpose of this study is to understand and review the investment opportunities provided by Islamic finance. Islamic finance provides Islamic bonds to investors who want to make Shariah compliant investment. The purpose and objectives of the study are:

- To gauge the difference between Conventional and Islamic banking.
- To identify the major differences in Conventional and Islamic bonds
- To understand the viability and applicability of Islamic bonds

- To identify how Islamic bonds are structured and operated
- How to make investment in Sukuk
- To increase the knowledge and understanding of Islamic bonds to both individual and corporate investors.
- What are important factors required to make investment in Islamic bonds?
- Which factors are more significant on which investment in Islamic finance depends?

RESEARCH QUESTIONS

This research aims to investigate why the Muslim investors are reluctant to invest in Islamic financial products like Sukuk and what are the basic variables that differentiate the Conventional bonds from Islamic bonds (Sukuk). This study seeks to give answers to the following specific questions:

- What are the key differences between Conventional bonds and Islamic bonds?
- What are structures of the Sukuk in Islamic finance?
- Which are the factors that encourage the investors to invest in Islamic Bonds?

LITERATURE REVIEW

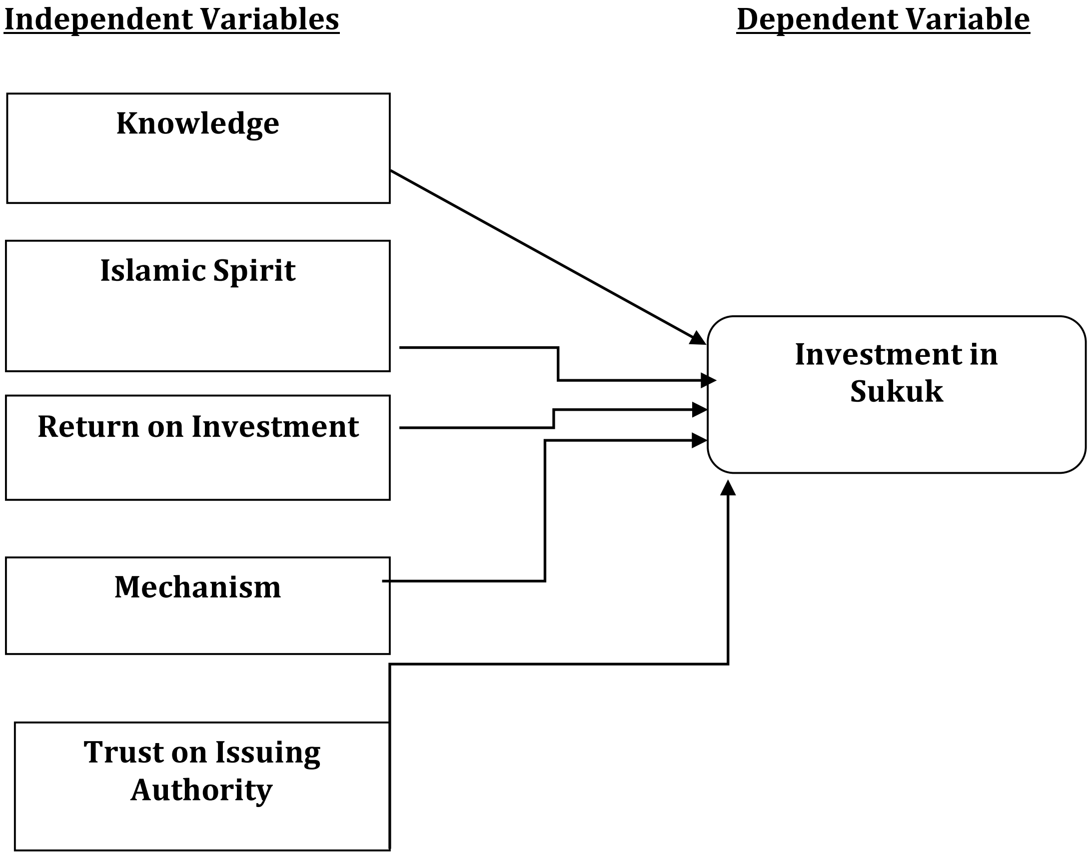
Numbers of studies are available on Islamic finance and its products. Though prominent work has been done by Muslim and non-Muslim researchers but as Islamic finance is a newly developed industry so the researchers of these studies sometimes face the issue of scarcity of data. This study has three dimensions i.e Islamic finance, Entrepreneurship and Sukuk. Before moving forward, this research firstly probe what Islamic finance is? Islamic banking and finance is growing speedily in the entire world and especially in Pakistan. On the contrary, Conventional banking system is notably falling in all those countries where the system of capitalism and interest based system is prevailing from hundreds of years (Khan,2010). These countries are now manipulating the interest rates to gain the desired results but they have failed. In financial crisis large numbers of companies and financial institutions have been vanished from the financial industry. After the financial crisis, Islamic financial industry has introduced itself as a big alternative to Conventional financial system (Maurer, 2005). Islamic banking has evidenced significant development in short span of time. Islamic financial industry is not only expanding in Muslims countries but Islamic financial products are also gaining popularity in non-Muslims countries (Siddiqi, 1983). Islamic banking and financial industry has developed not merely in terms of its magnitude but also in terms number of players. It has grown to more than 50 countries around the globe such as in Pakistan, Iran, Bangladesh, Sudan, Indonesia and Malaysia Islamic banking is operating parallel to Conventional banking practices. The operations of Islamic banking and finance industry are not just limited to Islamic countries. In august 2004, Government of Britain allowed the license to Islamic bank of Britain to start its Islamic financial operation and it was the first bank in any non-Islamic country to engage in Islamic financial business (Chong & Liu, 2009). In recent years, financial institutions have showed fast paced dynamic and competitive environment, out of these financial institutions Islamic financial institutions have gained the attention of both contemporary and Islamic economists. Islamic banks are expanding all around the world and many developed economies are starting to value the greatest demand of Islamic financial products (Yudistira, 2003). The importance of Islamic finance was described in Holy Quran fourteen hundreds years ago. The development of Islamic finance have experienced ups and downs. In its evolutionary phase it is observed in the final chapter of 20th century that most Islamic financial institutions developed and shaped, Islamic banks were set up to operate in accordance with shariah principles for instance in 1983 there was only one bank in Malaysia which was providing Islamic financial products and services but now there are more than 30 banks which are providing Islamic financial product and services (Halim et al.,2001). Another advocates of

Islamic finance industry describe that the development and emergence of Islamic finance industry is a phenomena which has attracted considerable interest in financial world. Islamic financial industry has given innovative solutions to global financial system and because of this reason Islamic finance is seen as fast-based banking niche. Islamic countries and particularly in the west most financial institutions are choosing Islamic finance for their financing and investment purposes (Salem, 2008).It has been evidenced that before the inception of Islamic finance industry global financial system has faced many financial crisis after each five years which caused the substantial demand of Islamic financial products and Islamic finance arose to set aside the Conventional financial system to meet demand and most of Muslims researchers started writing about Islamic finance. Since 1970 they mostly studied and wrote about the patterns and development of Islamic finance industry. These scholars not only stressed to eradicate Riba from financial system but also provided best alternatives to replace Riba from global financial system (Mirakhor & Smolo, 2014). A rapid and significant growth in international financial system has been traced over the last fifteen years and it is due to the Islamic banking and finance industry. Now days there are more than 300 hundred Islamic financial institutions around the globe with estimated value of asset US$200 and $300 and this growth is increasing with the passage of time (Pollard & Samers, 2007). Countries such as Pakistan, Bahrain, Iran and Malaysia have converted their Conventional banking system to Islamic banking system and Conventional banks in these countries are also shifting their investment towards Islamic banking system (Henry & Wilson, 2004). Islamic finance industry is considerably growing worldwide and this continuous growth has compelled the international financial institutions, national regulatory authorities, international standard setters, policy makers and research scholars to examine different dimension of Islamic financial intermediation from their own point of view (Hawary & Grais, 2004). Many global financial institutions have opened their cells to deal with Muslims client. International Monetary Fund (IMF), Word Band and IFC and ADBP, are now considering to formulate their policies to deal with Islamic financial industry. (Awan, 2009). Another author defined Islamic banking as financial institution that function with objectives to exercise and realize the economic and financial rules of Shariah in banking industry (Hanan, 2010) . The other dimension of this study is entrepreneurship. Entrepreneurship is an ancient concept. The concept of entrepreneurship was first introduced two hundred and fifty years ago. The practices of entrepreneurship are coming from the ages where tribes and villages trade between each other (Drucker, 2014). Research has different approaches to describe and elaborate the concept of entrepreneurship. The major research in the field of entrepreneurship has identified that the concept of entrepreneurship has three categories; management of entrepreneurship, the results of entrepreneurship and the causes of entrepreneurship. The concept of entrepreneurship is developing more deeply from last two decades because of globalization. Competitiveness has increased both at national and international levels which has acknowledged the significance of entrepreneurship in established companies to achieve competitive advantage and its sustainability. Entrepreneurship is the collection of competitive aggressiveness, risk taking, pro activeness and innovativeness (Aktan & Bulut, 2008).

Conceptual Model

In present research, 6 variables are considered for analysis. Out of these 5 are independent variables and 1 is dependent variable. The conceptual model of these six variables is exhibited below.

Conceptual Model for Research



RESEARCH METHODOLOGY

This chapter comprises of research design, population and sample, sampling technique, research instrument, data collection and pilot study of the research instrument. This design of this study is cross sectional. Cross sectional design of the study is that in which data is gathered from population or sample at one point in time from different elements of the population. Cross sectional design in mostly used and appropriate in qualitative and quantitative research studies. Total Population is 1084 which include 653 male faculty members and 431 female faculty members (PU, 2012) Population of the study consists of all the teachers working in Punjab University whether they are working in business schools or social sciences departments. The total number of population mentioned above is 1084 so this study was conducted by selecting a sample size of 285from the population (Krejcie & Morgan, 1970). Simple random sampling technique is used for the collection of data. 15 departments were selected and the questionnaire was distributed to the available faculty members.

Structured questionnaire is used in this study. The questionnaire consists of two sections. Section A provides the demographical information about the respondents such as gender, nature of job, marital status, designation, age, qualification, experience with current organization and total job experience. Section B comprises of the questions based on independent variables such as Knowledge about the Sukuk, Islamic spirit, Return on investment, Mechanism and Trust on issuing authority and dependent variable such as Investment in Sukuk. In the establishment of questionnaire, 5 point likert scale is used to get the responses ranging from 5 strongly agree 4 agree 3 neutral 2 disagree and 1 strongly disagree (Dawes, 2008).

It is primary but quantitative study so the structured and self-administered questionnaire was used for the collection of Data. Punjab University is the largest university of the Pakistan so it was impossible for the researcher to visit the all the departments and campuses located at different parts of the country so in this respect the researcher personally visited the departments which are directly and indirectly related to business studies located in new campus University of the Punjab. Total 300 questionnaires were distributed among 15 departments 20 questionnaires in each department. 285 questionnaires were received while 15 questionnaires were neither filled nor complete. Total 285 questionnaires were used for analysis.

Correlation Analysis

Correlations

		Knowledge about the Skuk	Islamic Spirit	Return on Investment	Mchanism	TrustonIssuingAuthority	InvestmentinSukuk
KnowledgeabouttheSukuk	Pearson Correlation	1	.679**	.580**	-.071	-.056	.314**
	Sig. (2-tailed)		.000	.000	.232	.346	.000
	N	285	285	285	285	285	285
IslamicSpirit	Pearson Correlation	.679**	1	.605**	-.119*	-.009	.291**
	Sig. (2-tailed)	.000		.000	.044	.874	.000
	N	285	285	285	285	285	285
ReturnonEquity	Pearson Correlation	.580**	.605**	1	-.029	.014	.244**
	Sig. (2-tailed)	.000	.000		.627	.809	.000
	N	285	285	285	285	285	285
Mechanism	Pearson Correlation	-.071	-.119*	-.029	1	.408**	.131*
	Sig. (2-tailed)	.232	.044	.627		.000	.027
	N	285	285	285	285	285	285
TrustonIssuingAuthority	Pearson Correlation	-.056	-.009	.014	.408**	1	.066
	Sig. (2-tailed)	.346	.874	.809	.000		.267
	N	285	285	285	285	285	285
InvestmentinSukuk	Pearson Correlation	.314**	.291**	.244**	.131*	.066	1
	Sig. (2-tailed)	.000	.000	.000	.027	.267	
	N	285	285	285	285	285	285

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Above table provides the correlation matrix of the study whereby investment in Sukuk is considered dependent variable and Knowledge about the Sukuk, Islamic spirit, Return on investment, Mechanism, and Trust on issuing authority are independent variables. The first independent variable is knowledge about the Sukuk which has positive relationship with the dependent variable investment in Sukuk, as indicated by the correlation coefficient of 0.314.

The relationship although is weak but is significant at 1% level of significance. The second independent variable is Islamic spirit which has positive relationship with the dependent variable investment in Sukuk, as indicated by the correlation coefficient of 0.291. The relationship although is weak but is significant at 1% level of significance. Third independent variable is Return on equity which has positive relationship with the dependent variable investment in Sukuk, as indicated by the correlation coefficient of 0.244, relationship although is weak but significant at 1% level of significance. Fourth independent variable is Mechanism which has positive relationship with the dependent variable investment in Sukuk, as indicated by correlation coefficient of 0.131, the relationship is however weak but is significant at 5% level of significance. The fifth independent variable is Trust on issuing authority has positive relationship with the dependent variable investment in Sukuk as indicated by correlation coefficient of 0.066. The relationship is weak and is insignificant. Knowledge about the Sukuk (I.V) has relatively stronger impact on investment in Sukuk (D.V), than trust on issuing authority (I.V) is although insignificant with regards to investment in Sukuk (D.V), while variable mechanism (I.V) although is significant but had weakest relationship with investment in Sukuk (D.V) among all independent variables, stronger then that was relationship of return on equity (I.V) and after that is variable Islamic spirit (I.V).

REGRESSION ANALYSIS

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.372[a]	.138	.123	.23729

a. Predictors: (Constant), Trust on Issuing Authority, Islamic Spirit, Mechanism, Return on investment, Knowledge about the Sukuk

Table shows that R^2 is 0.138 indicating almost 14% variations in dependent variable investment in Sukuk is explained by independent variables included in the model Knowledge about the Sukuk, Islamic spirit, Return on investment, Mechanism and Trust on issuing authority.

ANOVA

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.520	5	.504	8.951	.000[a]
	Residual	15.709	279	.056		
	Total	18.229	284			

a. Predictors: (Constant), Trust on Issuing Authority, Islamic Spirit, Mechanism, Return on Equity, Knowledge about the Sukuk

b. Dependent Variable: Investment in Sukuk

Table shows F statistics is 8.951 which indicate that model is good fit.

Table No 6.3 Coefficients

Coefficients[a]

Model		Un standardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.581	.584		2.710	.007
	Knowledge about the Sukuk	.192	.076	.201	2.532	.012
	Islamic Spirit	.141	.078	.148	1.812	.071
	Return on Equity	.042	.072	.043	.585	.559
	Mechanism	.229	.088	.159	2.586	.010
	Trust on Issuing Authority	.023	.109	.013	.214	.831

a. Dependent Variable: Investment in Sukuk

Table no 6.3 explains first independent variable of the study is knowledge about the Sukuk which provide β coefficient 0.192 along with t statistics of 2.532 indicating that knowledge about the Sukuk has significant and positive relationship with investment in Sukuk. This leads us to accept our first hypothesis that there is knowledge about the Sukuk has significant impact on investment in Sukuk, second independent variable of the study is Islamic spirit which provides β coefficient 0.141 along with t statistics of 1.812 indicating that Islamic spirit has significant and positive relationship with investment in Sukuk, which leads us to accept out second hypothesis which is Islamic spirit has significant impact on investment in Sukuk, third independent variable of the study is return on investment which provides β coefficient 0.042 along with t statistics of 0.585 indicating that return on investment has insignificant relationship with investment in Sukuk, which leads us to reject our third hypothesis which is return on investment has significant impact on investment in Sukuk. Fourth independent variable of the study is mechanism which provides β 0.229 along with t statistics 2.586 which indicating that mechanism has significant and positive impact on investment in Sukuk, which leads us to accept our fourth hypothesis that mechanism has significant impact on investment in Sukuk, our fifth independent variable of the study is trust on issuing authority which provides β 0.023 along with t statistics of 0.214 which indicates that trust on issuing authority has insignificant relationship with investment in Sukuk which leads us to reject our fifth hypothesis that is issuing authority has significant impact on investment in Sukuk.

CONCLUSION

Islamic financial institutions use different techniques to increase investment in Sukuk. These techniques significantly enhance the investment in Sukuk, This study is an attempt to achieve this objective about how to increase investment in Sukuk. Empirical results of this research clearly depicts that knowledge about the Sukuk has positive, significant and the strongest relationship with investment in Sukuk, Islamic spirit has positive, significant and stronger relationship with investment in Sukuk, Return on equity has positive and significant relationship with investment in Sukuk, Mechanism has positive and significant relationship with investment in Sukuk but this relationship although is weak. The relationship between trust on issuing authority and investment in Sukuk is positive but is insignificant.

This study explored the determinants of investment while making investment in Islamic financial products such as Sukuk. This research elaborates different types of Sukuk, salient features associated with these Sukuk, structures of these Sukuk, and practices and procedures of these Sukuk in Islamic finance industry.

References

Afshar, T. A. (2013). Compare and contrast Sukuk (Islamic Bonds) with conventional bonds, are they compatible?. *Journal of Global Business Management*, *9*(1), 44.

Ahmad, A., Saif, I., & Safwan, N. (2010). An empirical investigation of Islamic banking in Pakistan based on perception of service quality. *African journal of business management*, *4*(6), 1185.

Akhtar, M. F., Ali, K., & Sadaqat, S. (2011). Liquidity risk management: a comparative study between conventional and Islamic banks of Pakistan. *Interdisciplinary Journal of Research in Business*, *1*(1), 35-44.

Aktan, B., & Bulut, C. (2008). Financial performance impacts of corporate entrepreneurship in emerging markets: A case of Turkey. *European Journal of Economics, Finance and Administrative Sciences*, *12*(8), 1530-2275.

Al-Salem, F. (2008). The size and scope of the Islamic finance industry: An analysis. *International Journal of Management*, *25*(1), 124.

Ataullah, A., Cockerill, T., & Le, H. (2004). Financial liberalization and bank efficiency: a comparative analysis of India and Pakistan. *Applied Economics*, *36*(17), 1915-1924.

Chong, B. S., & Liu, M. H. (2009). Islamic banking: interest-free or interest-based?. *Pacific-Basin Finance Journal*, *17*(1), 125-144.

Dawes, J. (2008). Do data characteristics change according to the number of scale points used. *International journal of market research*, *50*(1), 61-77.

Drucker, P. (2014). *Innovation and entrepreneurship*. Routledge.

EI-Hawary, D., Grais, W., & Igbal, Z. (2004). Regulating Islamic financial institutions. *World Bank Policy Research Working Paper*, *3227*.

Hamid, A., & Nordin, N. (2001). A study on Islamic banking education and strategy for the new millennium-Malaysian experience. *International Journal of Islamic Financial Services*, *2*(4), 3-11.

Hassan, H. H. (2012). Comments on Discussion Papers and Notes submitted for the Harvard–LSE Workshop on Sukuk. *Retrieved on*, *12*.

Hisham Yahya, M., Muhammad, J., & Razak Abdul Hadi, A. (2012). A comparative study on the level of efficiency between Islamic and conventional banking systems in Malaysia. *International Journal of Islamic and Middle Eastern Finance and Management*, *5*(1), 48-62.

Iqbal, M., & Molyneux, P. (2005). Thirty Years of Islamic Banking: Theory and Practice.

Kayed, R. N., & Hassan, M. K. (2011). The global financial crisis and Islamic finance. *Thunderbird International Business Review*, *53*(5), 551-564.

Khan, F. (2010). How 'Islamic'is Islamic banking?. *Journal of Economic Behavior & Organization*, *76*(3), 805-820.

Khan, M. S., & Mirakhor, A. (1994). Monetary management in an Islamic economy. *Islamic Economics*, *6*(1).

Khattak, N. A. (2010). Customer satisfaction and awareness of Islamic banking system in Pakistan. *African Journal of Business Management*, *4*(5), 662.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, *30*(3), 607-610.

Kuran, T. (2008). The scale of entrepreneurship in Middle Eastern history: Inhibitive roles of Islamic institutions.

Mansoor Khan, M., & Ishaq Bhatti, M. (2008). Islamic banking and finance: on its way to globalization. *Managerial Finance*, *34*(10), 708-725.

Maurer, B. (2005). *Mutual life, limited: Islamic banking, alternative currencies, lateral reason*. Princeton University Press.

Moore, P. (1997). *Islamic finance: A partnership for growth*. London: Euromoney Publications.

Othman, A., & Owen, L. (2001). Adopting and measuring customer service quality (SQ) in Islamic banks: a case study in Kuwait finance house. *international journal of Islamic financial services*, *3*(1), 1-26.

Pollard, J., & Samers, M. (2007). Islamic banking and finance: postcolonial political economy and the decentring of economic geography. *Transactions of the Institute of British Geographers*, *32*(3), 313-330.

PU. (2012). *Fact Book 2012.* Lahore: Punjab University Press.

Qasaymeh, K. (2011). Islamic banking in South Africa: between the accumulation of wealth and the promotion of social prosperity. *Comparative and International Law Journal of Southern Africa*, *44*(2), 275-292.

Rammal, H. G. (2004). Financing through musharaka: principles and application.

Salarzehi, H., Armesh, H., & Nikbin, D. (2010). Waqf as a social entrepreneurship model in Islam. *International Journal of Business and Management*, *5*(7), 179.

Siddiqi, M. N. (1983). *Banking without interest* (Vol. 5). Leicester: Islamic Foundation.

Smolo, E., & Mirakhor, A. (2014). Limited purpose banking (LPB) and Islamic finance: Could LPB model be applied to Islamic finance?. *Humanomics*, *30*(2), 122-135.

Yudistira, D. (2003). Efficiency in Islamic banking: An empirical analysis of 18 banks. *Islamic financial architecture*, *479*.

Zaher, T. S., & Kabir Hassan, M. (2001). A comparative literature survey of Islamic finance and banking. *Financial Markets, Institutions & Instruments*, *10*(4), 155-199.

Zaman, S. H. (1984). Definition of Islamic economics. *Journal of Research in Islamic Economics*, *1*(2), 49-50.

QUESTIONNAIRE

Dear Respondent (s)

We are conducting a survey to investigate why people are not investing in Islamic bonds. We shall appreciate it if you could complete the following questionnaire. Any information in connection with this study that can be identified with you will remain confidential. In any report or publication no individual will be identified and only group data will be presented. If you have any question regarding this research. Thank You!

DEMOGRAPHIC INFORMATION

The following information is required only for statistical purposes. Please do not provide any personal information that helps in identifying you.

Department				
Gender			Male	Female
Nature of Job		Visiting	Contract	Pemanent
Marital status			Single	Married
Designation Lecturer		Assistant Professor	Associate Professor	Professor
Age	Less than 35	35-less than 40	40-45	Above 45
Qualification		Masters	M.Phil.	Ph.D.
Experience with current Organization	Upto2 years	Up to 5 years	Up to 10 years	10 years or more
Total Job Experience	Upto2 years	Up to 5 years	Up to 10 years	10 years or more

SECTION B

The Response Scale is as follow

1. Agree
2. Strongly Agree
3. Undecided or Neutral
4. Disagree
5. Strongly disagree

For statistical purpose only. Place a tick where appropriate.

KNOWLEDGE ABOUT THE SUKUK

The following statements are used to determine the knowledge of investors about the Islamic bonds while investing in Islamic bonds. Please choose a number from 1 to 5 to indicate your level of agreement with each statement

1 Strongly Disagree | 2 Disagree | 3 Neutral | 4 Agree | 5 Strongly Agree

1	Sukuk are Islamic bonds.	1	2	3	4	5
2	Sukuk provide better opportunities for investment.	1	2	3	4	5
3	Sukuk are administered on best practices	1	2	3	4	5
4	Issuing authority of Sukuk ensure full validity for issuing Sukuk	1	2	3	4	5

ISLAMIC SPIRIT

The following statements are used to measure the Islamic spirit of investors while investing in Islamic bonds. Please choose a number from 1 to 5 to indicate your level of agreement with each statement.

1 Strongly Disagree | 2 Disagree | 3 Neutral | 4 Agree | 5 Strongly Agree

1	Islamic bonds are structured and operated according to Sharia principles.	1	2	3	4	5
2	Islamic bonds are based on real economic activity not on debt instrument.	1	2	3	4	5
3	Islamic bonds are approved to be Halal by Sharia scholars.	1	2	3	4	5
4	The assets on which Islamic bonds are based are Sharia compliant assets.	1	2	3	4	5

RETURN ON INVESTMENT

The following statements are used to ascertain the return on investment in Islamic bonds. Please choose a number from 1 to 5 to indicate your level of agreement with each statement.

1 Strongly Disagree | 2 Disagree | 3 Neutral | 4 Agree | 5 Strongly Agree

1	Return on investment is not fixed in Islamic bonds	1	2	3	4	5
2	In Islamic bonds both profit and loss is shared according to pre-defined ratio between issuer and the holder.	1	2	3	4	5
3	Islamic bonds holder face least risk as compare to conventional bonds holder.	1	2	3	4	5
4	Islamic bonds give partial ownership in the asset on which Islamic bonds are based.	1	2	3	4	5

MECHANISM

The following statements are used to know the mechanism of Islamic Bonds. Please choose a number from 1 to 5 to indicate your level of agreement with each statement.

1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree		
1	Management and operations of Islamic bonds are simple to understand for current and potential investors.	1	2	3	4	5
2	Islamic bonds are not debt but joint ownership in the asset, business or project.	1	2	3	4	5
3	Islamic bonds are issued by statutes of IPO (Initial Public Offering)	1	2	3	4	5
4	Islamic bonds can be traded into secondary market (Money Market).	1	2	3	4	5

TRUST ON ISSUING AUTHORITY

The following statements are used to ascertain the trust of investor in issuing authority of Islamic Bonds. Please choose a number from 1 to 5 to indicate your level of agreement with each statement.

1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree		
1	Islamic bonds are issued under Sharia board of issuing authority	1	2	3	4	5
2	Islamic bonds issuer provides inherent right to the investors about the use of investment, nature of underlying asset and other particulars.	1	2	3	4	5
3	Issuer of Sukuk manages the funds with honest intent.	1	2	3	4	5
4	Sukuk issuer invests the investor's fund into legal business activities.	1	2	3	4	5

INVESTMENT IN SUKUK

The following statements are used to ascertain the desire of investors for investing in Sukuk. Please choose a number from 1 to 5 to indicate your level of agreement with each statement.

1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree		
1	I am willing to invest in Sukuk	1	2	3	4	5
2	I actively monitor the performance of Sukuk	1	2	3	4	5
3	I am looking for the opportunity to make shariah compliant investment	1	2	3	4	5
4	I will prefer to invest in Sukuk over conventional investment alternatives	1	2	3	4	5

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The Role of Microfinance in the Entrepreneurial Development in Pakistan

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ABSTRACT
This research was done with the prime objective to explore the role and effectiveness of microfinance in developing entrepreneurship. For economic growth and its sustainability, microfinance is deemed as one of the most necessary and operative mechanism. A sample of three hundred (350) respondents was selected based upon the basic criteria to be micro entrepreneurs using a Likert scale analysis. The facility of microfinance provision to young unemployed persons, unemployed women or poor persons has proved a tool for entrepreneurial development, reduce poverty through employment opportunity creation and a lead towards economic improvement and develop the nation. The need of entrepreneurship gets high importance on micro level due to the reason that upcoming innovations can save the resources and those resources can be utilized in more productive manner with better results.

Keywords: Microfinance, Entrepreneurship, Economic Growth, Empowerment

INTRODUCTION

Microfinance is reckoned as one of the most necessary and operative mechanism for entrepreneurial development, economic growth and its sustainability. Many researches and studies have concluded that microfinance has significantly improved living standards, empowerment and status in the society as it has increased the opportunities for self-employment or micro entrepreneurship. During the past 10 years, microfinance programs have been introduced in many developing economies like Bangladesh, India, Nigeria, Bolivia, Kenya, Nepal, China, Indonesia, Thailand and Pakistan.

Microfinance is considered to be one of the active measures may be taken to create employment opportunities, eradicate poverty and generate economic activity, to promote entrepreneurial skills among the individuals of younger generation which will significantly facilitate economic growth, development, expansion and sustainability in Pakistan. The implication of microfinance to entrepreneurial development encouraged various developing countries to adopt it because it has become the main source of financing entrepreneurship. Nonetheless, finance is still considered as one of the major hindrances to entrepreneurial development.

In the present situation, Pakistan is facing challenges in the field of provision of employment which has increased the unemployment rate to a great extent. Although, there are various factors contributing to the high unemployment rate but comparative to all, one of the major reason in Pakistan is the low income factor. This factor has given rise to issues like, poverty, unequal allocation of income and high unemployment that Pakistan is facing now a day. According to the current scenario, 50 million people are earning US Dollar 1 per day. It has been a long time that Pakistan is going through the challenges of increasing poverty and this issue has also been noticed by United Nations as UN has already included this issue in their Millennium Development Goal. Based on their analysis, it is assessed that out of every five persons, one person is a victim of poverty in Pakistan. In addition, it is important to note that there is a significant gulf between the rich and the poor which has increased the income disparities. Consequently, Pakistan comes under the category of those regions where there is unequal income distribution in the world. In order to deal with this issue, social programs alone would not make much difference; therefore, for the development of a welfare state, there is a need of defensible economic growth.

The assessed market value by microfinance to be targeted in Pakistan is based on having 25 to 30 million borrowers whereas, by 2010, the set target of the government was to achieve minimum 3 million borrowers and by 2015 it was raised to 10 million(Rauf & Mahmood, 2009).

Pakistan's Micro-finance division has developed over the previous decade and is presently serving more than 3.75 million customers through more than 50 MFPs. likewise; there have some advancement been made in the improvement of the products - enhancing past simply credit into micro-saving, micro-insurance and sanctions. These advancements are due to an immediate aftereffect of effective budgetary assurance and backing by various investors including the Government, Central Bank (SBP), Donors, PPAF, PMN, MFPs and different investors of the private subdivision. The sector has grown dramatically in the last 5 years, with total micro-credit portfolio standing at 25 billion in 2010 and around 93 billion in December 2015, and the number of active borrowers considerably increased to 3.757 million in December 2015 from 2 million in 2010 (MicroWATCH, 2015). Be that as it may, profitability and basic accomplishment markers of the division stayed powerless on the back of restricted range of operations. To add further, financial conditions including extensive inflation, power failure and common peace circumstance has hampered the reimbursement capacity of micro-entrepreneurs and prospective borrowers, compelling dominant part of the microfinance banks to combine their operations and concentrate on recuperations.

The major issue that micro-entrepreneur faces is shortage or non-availability of financial help to initiate or upgrade a business. This lack of finances renders efforts to solve the problem through managerial support – including enhancing entrepreneurial skills, proper selection of business and access to technology, infrastructure and markets –insufficient as both the credit facility and skill to managing business are equally vital. To tackle this problem, microfinance program groups enhancement in awareness as well as credit facilities to effectively intervene for development.

In Pakistan – a country with 192 million populations – MSMEs are limited to a few business families which operate traditional businesses in largely traditional markets (Taha, 2006).Although the MSMEs make up 85% of the entrepreneurial sector, they contribute just a miniscule 7% to the country's GDP(Mustafa & Khan, 2003). This limited contribution is due to traditional operations, low entrepreneurial vision and market intelligence as well as lack of strong business models.

REVIEW OF LITERATURE

In Pakistan, the microfinance constitutes a small amount to loan that micro entrepreneurs, individuals and groups, acquire to start their businesses while personal savings are also an important part of microfinance. Microfinance intermediaries use alternative methods instead of relying on collaterals. These methods include assessment of the entrepreneur's repayment potential by using cash flow analyses, based on cash flow streams generated by activities for which loan was sought.

In rural as well as urban areas, the primary concern of people is lack of opportunities for work as the people who have formal employment in developing countries are a minority. On the other hand, most of the people in the developing countries rely on earnings from occasional and low paid income, work on small or medium enterprises or running their own micro entrepreneurships. Micro entrepreneurships are small businesses mostly run from home and involving income making jobs like carpentry, street-trading or dairy farming etc. However, even such micro endeavors need finances which these resources less peoples gather by borrowing from friends, family members or local moneylenders. Formal bank do not provide financial services to these micro entrepreneurs as they consider such loans as insecure or not profitable while the local money lender heavily charge the people and their interest rates range from 10% to 50% a month and even more (Opportunity International, 2002) .

Saini and Bhatia (1996) also showed that there are instances when people with good entrepreneurial ability manage to boost a country's economy in spite of a scarcity of resources. They also indicated that constantly looking for resources and opportunities, these skills shape them into economic activity. The people with entrepreneurial abilities also believe that opportunities are also always there and only needed to be exploited. Hitt et al (2002) believes that a company's success is determined by capabilities more than any other resources. Jovanovic (1982) states that effective management is a factor which is more vital than capital and it can lead a company to success. They said a company's size does not matter in its success or failure. It can therefore be said that entrepreneurship is an act of changing thoughts and dreams into reality by using individual skills.

A study by Ajay and Lucky (2008) shows that the entrepreneurs with higher education and experience are more likely to be successful while Mehralizadeh and Sajady (2006) state that business success hangs on a number of the socio-economic factors including training, skills and education. David (2004) thinks that a few of the major factors that grow revenue in small business include ownership of the business, role model and high level of education.

Watjatrakul (2005) believes that both strategic and non-strategic resources are vital for the success of a firm and it is the strategic resources that enable organizations to maintain competitive advantage. The strategic resources are those resources which are imperfectly imitable, rare, non-substitutable and highly valuable. Claudia et al (2009) postulates that an entrepreneur's success is impacted by form of formal and informal support. Financial and strategic partnerships as well as industrial contacts and technology are sources of formal support while personal and community based networks form informal support (Linda et al., 2003).

Ledgerwood (1999) believes that microfinance institutions (MFIs) can provide their clients with a variety of products and services. Financial services are the most important of the services which these MFIs offer to entrepreneurs without tangible assets. These people usually belong to rural areas and are in most of the cases illiterate.

Apart from providing financial support, a need also arises to train the clients and provide them with skills required for production, business management and better access to markets so that they can make efficient use of the financial resource received. In view of this, some MFIs also give training in marketing, book-keeping and production to help develop entrepreneur's skills while some of them also offer social services –health care, education and literacy training. Both the enterprise development and social services can improve the ability of the low-income entrepreneurs to operate their businesses Legerwood (1999).

Advocates of micro-financing claim that small loans to the micro entrepreneurs can serve as a powerful tool for reducing poverty (Khan & Rahaman, 2007),this claim is corroborated by the UNCDF's (2009) which says that microcredit facility offered to farmers or small businesses is an effective means for enhancing economic avenues and bringing down the poor segments' vulnerabilities. It has been noted that microfinance facilitates the poor in meeting their basic needs and resultantly helps in improving their household income (Asiama & Osei, 2007). Arguing in favor of micro-financing, Pronyk et al (2007) and some other gender activists say it is a means to empower women as it supports participation of women in economy. Boyle (2009) also states that by supporting economic participation of women, microfinance also helps in uplifting well-being of households. Littlefield (Littlefield, 2005)claims that availability of credit greatly contributes in helping the poor to not only invest in their enterprises but also give literacy to their children, bring a positive change in healthcare situation and promote well-being, generally. Karlan and Zinman (2006b) support this through their South African study, which shows that recipients of microcredit turned out to be better off than those who did not receive it.

Khan and Rahman (2007) suggest that people who receive microfinance facility also empower themselves and transform into extremely active participants in economy. A significant positive relationship is also observed between credit recipients and income by Priya (2006). Her finding show that program participation results in increase in income by almost 10%.

Almost all studies that measure a microcredit program's performance address the effects of training programs in improving a household's ability to reap benefit of the opportunities of income generation (Otero, 1996).

However, Aguilar (2006), while studying the effect of microfinance programs on Malawi's rural farmers, reports that farmers, who borrowed from one MFI, were no better off than those who did not borrow. Augsburg (2008) also postulates that microfinance needs what is called a plus component to be successful; these plus components include training in certain areas including financial management and marketing as well as market development and managerial skills. Apparently many factors – characteristics of clients, structure of microfinance and functional arrangements – also influence the effect of microfinance, whose benefits are not always realized as they are context specific.

RESEARCH OBJECTIVE

The main objective of this study is to define and explore the effectiveness and role of microfinance in developing, nurturing and assessing the performance of micro entrepreneurship. Generally, microfinance is the only source to serve in a manner of financial sound strategy for new investors through micro and small loans that become a particular way to run small and micro businesses. In this study, microfinance is dealing with the entrepreneurs' who availed the microfinance loans and invested in entrepreneurial activity and thus and promotes entrepreneurship idea as the local player in growth engine of economy.

I. To evaluate the role of microfinance in entrepreneurial development in Pakistan
II. To measure the effectiveness of microfinance intervention in nurturing culture of micro entrepreneurship in Pakistan.
III. To identify and measure the improvement in the performance of the micro entrepreneurship if any due to participation in the micro entrepreneurship schemes

DATA & METHODOLOGY

In this first part, the survey has been conducted which consists of a methodically designed questionnaire and based on the view to draw relevant information with ease for the respondents and researcher. The survey comprises of close-ended questions on likert scale of 1 – 5 ranging responses from strongly disagree to strongly agree with a provision of any additional comments from the respondents. A quantity 350 filled questionnaires were collected from respondents.

Due to the time span limitation, Cluster sampling was considered to be the best option available among different types of sampling as the microfinance institutions selected for analysis purpose have clients which are geographically dispersed and it would be quite expensive in terms of cost to reach clients especially in the case of suburb areas which were several miles away. One way to group or cluster the clients is the division of areas and selecting a cluster from each area.

ANALYSIS AND DISCUSSION

The analysis of the study is based on primary data set collected by a sample survey which is similar to or the representative of population. The analysis focuses the objective of the study and the study attempts to explain the following hypotheses.

Hypothesis 1: There is a significant positive impact of provision of microfinance facility on the Entrepreneurial development in Pakistan.

Hypothesis 2: There is a significant positive impact of provision of microfinance facility on the performance of Micro Entrepreneurship in Pakistan.

Hypothesis 1: Impact of Micro Finance on Nurturing Entrepreneurship (Entrepreneurial Development)

The section of the study discusses the impact of microfinance in extending small/ micro level entrepreneurship. The section discusses the result of respondents in which they respond to different questions. These questions are the disaggregated part of first hypothesis on 'There is a significant positive impact of provision of microfinance facility on the Entrepreneurial development in Pakistan".

Table 1 : Descriptive Statistics on MF and entrepreneurship

	N	Mean	Std. Deviation
MF loans are good for nurturing Entrepreneurship	350	3.90	.999
Increase in income & savings encourages entrepreneurial culture	350	3.87	.877
Finding a best chance to secure self-employment	350	4.04	.934
MF opportunities help to conceive and implement own business idea	350	4.06	.897
MF opportunities provide a better support to deal with business risk	350	3.54	.977
MF helps to reduce the fear of unemployment	350	3.74	1.025
MFI's provides operational assistance and support to run the business	350	3.7971	.91563
Procedures of obtaining MF loan is easier than conventional banks	350	3.51	1.088
Provides a chance to use technical, professional knowledge & skills	350	3.95	1.013
Valid N (list wise)	350		

Tables 1 shows the result of descriptive statistics on the questions asked from respondents listed in annexure. The answer is scaled between 1 to 5 values.

- Microfinance loans are good for nurturing Entrepreneurship has a mean 3.90 value of and standard deviation of .999.
- Increase in income & savings encourages entrepreneurial culture has a mean value of 3.87 and standard deviation of .877.
- Finding a best chance to secure self-employment has a mean value of 4 .04 and standard deviation of .934.
- Microfinance opportunities help to conceive and implement own business idea has a mean value of 4.06 and standard deviation of 0.897.
- Microfinance opportunities provide a better support to deal with business risk has a mean value of 3 .54 and standard deviation of 0.977.
- Microfinance helps to reduce the fear of unemployment has a mean value of 3.74 and standard deviation of 1.025.
- Microfinance institutes provide operational assistance and support to run the business has a mean value of 3.79 and standard deviation of .915
- Procedures of obtaining microfinance loan is easier than conventional banks has a mean value of 3.51 and standard deviation of 1.088.

- Provides a chance to use technical, professional knowledge & skills has a mean value of 3.95 and standard deviation of 1.013.

The values of mean and standard deviation on the questions provides the basis to approve and accept the first hypothesis on the analysis and confirms that there is positive impact of provision of microfinance facility on the nurturing entrepreneurship (Entrepreneurial development) in Pakistan.

Hypothesis 2: Impact of Micro Finance on Micro Entrepreneurship Performance
This section discusses the impacts of microfinance on the performance on entrepreneurship performance. For the purpose of analysis nine questions were asked from different respondents on the issue if microfinance loans are supporting or having any impact on enhancing the performance of entrepreneurial ventures. Following are the descriptive results of respondents on each question.

Table 2 Descriptive Statistics on MF and Performance of Entrepreneurship

	N	Mean	Std. Deviation
MF helps increase in entrepreneurship profits	350	3.61	1.034
MF helps in creating entrepreneurial productivity	350	3.86	.863
MF creates ease in operations by improving liquidity position of entrepreneurship to deal with daily / weekly basis payments	350	3.57	.869
MF helps in enhancing use technology of entrepreneurial ventures	350	3.57	.984
MF supports in growth in assets of the entrepreneurship	350	3.81	.922
MF facilitates improved access to financing for expansion	350	3.78	.937
MF provides easiness in the burden of borrowing through convenient repayment schedule	350	3.55	1.047
The product quality / production facilities of the entrepreneurship has improved after acquiring MF loan	350	3.61	.948
After obtaining MF loan, financial standing of my business has improved	350	3.75	.959
Valid N	350		

Tables 3.10 show the result of descriptive statistics on the question asked above. The answer is scaled between 1 to 5 values.

- Microfinance helps increase in entrepreneurship profits has a mean value of 3.61 and standard deviation is 1.034.
- Microfinance helps in creating entrepreneurial productivity has a mean values of 3.86 and standard deviation is .863.
- Microfinance creates ease in operations by improving liquidity position of entrepreneurship to deal with daily / weekly basis payments has a mean values of 3.57 and standard deviation is .869.
- Microfinance helps in enhancing use technology of entrepreneurial ventures has a mean values of 3.97 and standard deviation is .984.
- Microfinance supports in growth in assets of the entrepreneurship has a mean values of 3.81 and standard deviation is .922.
- Microfinance facilitates improved access to financing for expansion as a mean value of 3.78 and standard deviation is .937.
- Microfinance provides easiness in the burden of borrowing through convenient repayment schedule has a mean value of 3.55 and standard deviation is 1.047
- The product quality / production facilities of the entrepreneurship has improved after acquiring MF loan has a mean values of 3.61 and standard deviation is .948
- After obtaining MF loan, financial standing of my business has improved as a mean values of 3.75and standard deviation is .959

The values of mean and standard deviation on the questions provides the basis to approve and accept the second hypothesis on the analysis and confirms that there is a significant positive impact of provision of microfinance facility on the performance of Micro Entrepreneurship in Pakistan.

CONCLUSION AND RECOMMENDATIONS

Government has not paid the due attention to the occurrence of Entrepreneurship in its policies, which it deserves. In the parallel world economy, MSMEs are playing crucial role in its activities. As compared to other economies, in Pakistan, generally, the owners of MSMEs (especially microenterprises) run their business conventionally. They lack the interest to adapt to the changes or any innovation in the strategies or system of production which brings the problem of reduced productivity. The need of entrepreneurship gets high importance on micro level due to the reason that upcoming innovations can save the resources and those resources can be utilized in more productive manner with better results. The government and MFIs should encourage entrepreneurship and should formulate friendly policies for entrepreneurship.

Entrepreneurship has got a new face due to microfinance intervention. Better results and productivity can be achieved through implementing entrepreneurial ideas in micro-enterprises by means of microfinance. Hence, the very blend of both, that are, microfinance and entrepreneurship can be effective tool for development which can lessen the rate of poverty and can empower people swiftly. The core lower class can benefit from it and can get better income and position in the society. Microfinance can make them start their businesses and can alleviate their weaknesses. Those who cannot easily access financial institutions are the major clients of microfinance; therefore, it will also reduce poverty by producing new entrepreneurs and as a result of it generating the opportunities for employment in Pakistan.

Most of the Microfinance clients are uneducated or less educated therefore; they are unable to prepare proper records of business and to do analysis of their business. A basic training program including accounting module can be introduced to teach profit and other ratios calculation and to separate personal money from the business money and to apply different strategies to the business.

State Bank of Pakistan (SBP) has augmented the limit of Microfinance loan up to an amount of Rs.5,00,000, yet the amount is too little so the limit at least be extended up to 1 million. Simultaneously, it is proposed that separate departments be established to offer assistance for micro and small startups and proper guidance be given as to how microfinance loan borrowers should utilize the loan in productive manner.

The government may also allocate a dedicated fund for micro entrepreneurial development and it should be provided through the Microfinance NGOs with the provision of audit by the Government department regarding the proper utilization. The funds provided by government should be treated as interest free loans to potential and willing entrepreneur payable in installments. Besides this, the government should encourage public-private partnership wherever necessary with a range of services and more financing options.

In addition to microcredit, support services should be provided by microfinance banks. For example, training, guidance and periodic reviews of loan usage can yield positive results in employment provision and entrepreneurial development and reduction in poverty.

References

Aguilar, V. G. (2006). Is Micro Finance reaching the Poor? An Overview of Poverty argeting Methods. www.globalnet.org

Ajay, Thapa, & Lucky, P. J. (2008). Determinants of Street Entrepreneurial Success. *The Journal of Nepleese Business Studies*, V (1).

Asiama, J. P., & Osei, O. (2007). Microfinanc in Ghana: An Over View. Research Department Bank of Ghana. Economic web Institute.

Augsburg, B. (2008). Microfinance Plus - Impact of the 'plus' on customers' income in rural India. Maastricht Graduate School of Governance, University Maastricht, the Netherlands.

Boyle, G. (2009). Retrieved from www.brazencareerist.com

Claudia, C. C., G, T. L., & Dawn, R. S. (2009). Understanding and Measuring Autonomy: An Entreneurial orientation Perspective. Entrepreneurship Theory and Practice, 33 (1), 47-69.

David, A. K. (2004). Entrepreneurship education & incubator: pre- incubators & sciences parks as enterprise laboratories.

Hitt, M., R, I. D., S, C. M., & Donald, S. I. (2002). Strategic Enterpreneurship: Creating a New Mindset. Oxford.

Jovanovic, B. (1982). Selection and Evolution of Industry. Econometrica, 50, 649-670.

Karlan, D., & J Zinman. (2006b). Observing Unobserable: Indentifying Information Asymmetries with a Consumer Credit Field Experiment. Working paper.

Khan, M. A., & Rahaman, M. A. (2007). Impact of microfinance on living standards, empowerment and poverty alleviation of poor people: a case study on micro finance in the Chittagong District of Bangladesh.

Ledgerwood, J. (1999). Microfinance Handbook: An Instituional and Financial Perspective. Washington DC: World Bank.

Littlefield, E. (2005). Microfinance - Where We Are Now and Where We Are Headed," Microfinance speech given at the International Year of Microcredit and Georgetown. Washington DC.

Mehralizadeh , Y., & Sajady, S. (2006). A Study of Factors Related to Successful & Failure of Entreprenuers of Small Industrial Business with Emphasis on Their Level of Education & Training.

MicroWATCH. (2015). A Quartrly update on Microfinance Outreach in Pakistan (38).

Mustafa, I., & Khan, F. M. (2003). Small & Medium Enterprises in Pakistan. *South Asian Journal*, 4 (4).

Opportunity International. (2002). Annual Report. www.opportunity.org.

Otero, M. (1996). Bringing Development Back into Microinance. *Journal of Micro Finance*, 1 (1), 8-19.

Priya , R. (2006). An Information Processing Review of the Subjective Value of Money and Prices. *Journal of Business Research*, 59, 10-11.

Rauf, S., & Mahmood, T. (2009). Growth and Performance of Microfinance in Pakistan. *Pakistan Economic and Social Review*, 47 (1), 99-122.

Saini, J. S., & B.S, B. (1996). Impact of Entrepreneurship Development Programmes. *The Journal of Entrepreneurship*, 5 (1), 65-80.

Taha, A. (2006). The Rise of the 'Gr& Entrepreneurs' in the Czech Republic & Their Contest for Capitalism. *Czech Sociological Review*.

Watjatrakul. (2005). Roadmap to Entrepreneurial: Powerful Strategies for Building a High-profit Business. AMACOM Div *American Management Association* ISBN 0814471900.

Yilmiz, M.H. et al (2016). Income Inequality and Its Measures: Evidence from OECD and European Countries. *Journal of Poverty, Investment and Development*, 20(1), 9-25.

RESPONSES TABLES / DESCRIPTIVE RESULTS

Impact of Micro Finance on Nurturing Entrepreneurship (Entrepreneurial Development)

MF loans are good for nurturing Entrepreneurship

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	2.8	2.9	2.9
	Disagree	28	7.9	8.0	10.9
	Neutral	50	14.2	14.3	25.1
	Agree	162	45.9	46.3	71.4
	Strongly Agree	100	28.3	28.6	100.0
	Total	350	99.2	100.0	
Missing	System	3	.8		
Total		353	100.0		

Increase in income & savings encourages entrepreneurial culture

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	1.1	1.1	1.1
	Disagree	20	5.7	5.7	6.9
	Neutral	75	21.2	21.4	28.3
	Agree	168	47.6	48.0	76.3
	Strongly Agree	83	23.5	23.7	100.0
	Total	350	99.2	100.0	
Missing	System	3	.8		
Total		353	100.0		

Finding a best chance to secure Self-Employment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	2.5	2.6	2.6
	Disagree	12	3.4	3.4	6.0
	Neutral	56	15.9	16.0	22.0
	Agree	153	43.3	43.7	65.7
	Strongly Agree	120	34.0	34.3	100.0
	Total	350	99.2	100.0	
Missing	System	3	.8		
Total		353	100.0		

MF opportunities help to conceive and implement own business idea

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	1.7	1.7	1.7
	Disagree	14	4.0	4.0	5.7
	Neutral	52	14.7	14.9	20.6
	Agree	158	44.8	45.1	65.7
	Strongly Agree	120	34.0	34.3	100.0
	Total	350	99.2	100.0	
Missing	System	3	.8		
Total		353	100.0		

MF opportunities provide a better support to deal with business risk

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	11	3.1	3.1	3.1
	Disagree	41	11.6	11.7	14.9
	Neutral	94	26.6	26.9	41.7
	Agree	155	43.9	44.3	86.0
	Strongly Agree	49	13.9	14.0	100.0
	Total	350	99.2	100.0	
Missing	System	3	.8		
Total		353	100.0		

MF helps to reduce the fear of unemployment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	11	3.1	3.1	3.1
	Disagree	28	7.9	8.0	11.1
	Neutral	90	25.5	25.7	36.9
	Agree	132	37.4	37.7	74.6
	Strongly Agree	89	25.2	25.4	100.0
	Total	350	99.2	100.0	
Missing	System	3	.8		
Total		353	100.0		

MFI's provides operational assistance and support to run the business

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	73	20.7	20.9	20.9
	Disagree	172	48.7	49.1	70.0
	Neutral	72	20.4	20.6	90.6
	Agree	27	7.6	7.7	98.3
	Strongly Agree	06	1.7	1.7	100.0
	Total	350	99.2	100.0	
Missing	System	3	.8		
Total		353	100.0		

Procedures of obtaining MF loan is easier than conventional banks

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	15	4.2	4.3	4.3
	Disagree	49	13.9	14.0	18.3
	Neutral	98	27.8	28.0	46.3
	Agree	119	33.7	34.0	80.3
	Strongly Agree	69	19.5	19.7	100.0
	Total	350	99.2	100.0	
Missing	System	3	.8		
Total		353	100.0		

Provides a chance to use technical, professional knowledge & skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	2.5	2.6	2.6
	Disagree	25	7.1	7.1	9.7
	Neutral	60	17.0	17.1	26.9
	Agree	138	39.1	39.4	66.3
	Strongly Agree	118	33.4	33.7	100.0
	Total	350	99.2	100.0	
Missing	System	3	.8		
Total		353	100.0		

Impact of Micro Finance on Micro Entrepreneurship Performance

MF helps increase in entrepreneurship profits

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	14	4.0	4.0	4.0
	Disagree	37	10.5	10.6	14.6
	Neutral	87	24.6	24.9	39.4
	Agree	146	41.4	41.7	81.1
	Strongly Agree	66	18.7	18.9	100.0
	Total	350	99.2	100.0	
Missing	System	3	.8		
Total		353	100.0		

MF helps in creating entrepreneurial productivity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	.8	.9	.9
	Disagree	26	7.4	7.4	8.3
	Neutral	62	17.6	17.7	26.0
	Agree	185	52.4	52.9	78.9
	Strongly Agree	74	21.0	21.1	100.0
	Total	350	99.2	100.0	
Missing	System	3	.8		
Total		353	100.0		

MF creates ease in operations by improving liquidity position of entrepreneurship to deal with daily / weekly basis payments

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	1.4	1.4	1.4
	Disagree	35	9.9	10.0	11.4
	Neutral	105	29.7	30.0	41.4
	Agree	166	47.0	47.4	88.9
	Strongly Agree	39	11.0	11.1	100.0
	Total	350	99.2	100.0	
Missing	System	3	.8		
Total		353	100.0		

MF helps in enhancing use technology of entrepreneurial ventures

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	**7**	**2.0**	**2.0**	**2.0**
	Disagree	**45**	**12.7**	**12.9**	**14.9**
	Neutral	**99**	**28.0**	**28.3**	**43.1**
	Agree	**139**	**39.4**	**39.7**	**82.9**
	Strongly Agree	**60**	**17.0**	**17.1**	**100.0**
	Total	**350**	**99.2**	**100.0**	
Missing	System	**3**	**.8**		
Total		**353**	**100.0**		

MF supports in growth in assets of the entrepreneurship

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	1.4	1.4	1.4
	Disagree	26	7.4	7.4	8.9
	Neutral	79	22.4	22.6	31.4
	Agree	159	45.0	45.4	76.9
	Strongly Agree	81	22.9	23.1	100.0
	Total	350	99.2	100.0	
Missing	System	3	.8		
Total		353	100.0		

MF facilitates improved access to financing for expansion

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	2.0	2.0	2.0
	Disagree	27	7.6	7.7	9.7
	Neutral	78	22.1	22.3	32.0
	Agree	163	46.2	46.6	78.6
	Strongly Agree	75	21.2	21.4	100.0
	Total	350	99.2	100.0	
Missing	System	3	.8		
Total		353	100.0		

MF provides easiness in the burden of borrowing through convenient repayment schedule

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	13	3.7	3.7	3.7
	Disagree	44	12.5	12.6	16.3
	Neutral	94	26.6	26.9	43.1
	Agree	134	38.0	38.3	81.4
	Strongly Agree	65	18.4	18.6	100.0
	Total	350	99.2	100.0	
Missing	System	3	.8		
Total		353	100.0		

The product quality / production facilities of the entrepreneurship has improved after acquiring MF loan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	2.5	2.6	2.6
	Disagree	35	9.9	10.0	12.6
	Neutral	93	26.3	26.6	39.1
	Agree	160	45.3	45.7	84.9
	Strongly Agree	53	15.0	15.1	100.0
	Total	350	99.2	100.0	
Missing	System	3	.8		
Total		353	100.0		

After obtaining MF loan, financial standing of my business has improved

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	11	3.1	3.1	3.1
	Disagree	26	7.4	7.4	10.6
	Neutral	70	19.8	20.0	30.6
	Agree	174	49.3	49.7	80.3
	Strongly Agree	69	19.5	19.7	100.0
	Total	350	99.2	100.0	
Missing	System	3	.8		
Total		353	100.0		

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Psychological Contracts and Employment Relationships (A Review Paper)

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ABSTRACT

A psychological contract comprises of a personal viewpoint about mutual commitments in employment relationships. Unlike a traditional service contract, the psychological contract remains unspoken in the employment relationship between employer and the employees. Employees anticipate, for example, working in a secure and clean environment; to work with qualified and regimented co-workers and to be appreciated for their good work, free from harassment etc. Employers, on the contrary, expect staff to be careful and dedicated; to be trustworthy; and to maintain or enhance the organizational image etc. This shady nature and often conflicting nature of psychological contract can often harm the health of employment relationship. This paper explores the nature of psychological contracts and their significance within the domain of employment relationships. The paper first reviews the general theory of psychological contract, its types and factors governing them. Next, a theoretical examining the research contributions of scholars who have contributed to the literature is being carried out. Finally, the paper thoroughly and critically analyzes the effects of breach or non-conformity of psychological contracts. Psychological contract plays a key role in manipulating workers job related commitment. It must be highlighted that effective observation, agreement and execution of psychological contracts could add to increased levels of workers commitment. Considering the literature studied, it becomes extremely important for the management to be responsive of, and to some degree control, the psychological contracts that the employees may hold. Offering the aggrieved employees a practical psychological contract diminishes the probability that the workforce will see the agreement as void. Increased levels of work independence is also found to reduce incidents of psychological contract breaches.

INTRODUCTION

A psychological contract is the unspoken part of employment relationship. It embodies a chain of shared prospects and requirements on part of the employer and the employee. According to the theory of social exchange, the relationship between an employer and employee in provisions of mutual talents exists as a shared desire to incorporate faith, dedication, and earnings (Mullins 2002). Therefore, psychological contract is central in selecting, defining and explaining considerations of this social trade relationship. Service agreements in either social or economic language are primarily psychological and intrinsically personal, including the foundation of the employment relationship (Millward and Brewerton 1999).

The specifics of the commitments and demands of all parties are tricky to classify, because they are modified periodically (Huczynski and Buchanan, 2001) and may differ from person to person and from organization to organization. One important feature of psychological contract is that exists between one employee and the organization and between all the employees and the organization (Huczynski &Buchanan 2001). The provisions and expectations should be fulfilled within the relation; or else the contract will start to break down. This distrust manifest in unexpected employee' departure or mass firings on the organizational level. This results in adverse conditions for both the organization and the employees. According to Thomas & Au, Ravlin (2003), any of the psychological contract affects both the sides. From the employees' perspective, it is the loss of trust in the corporate identity and the economic hardships. For the organization, the loss of talented and dedicated employees is often the worst possible scenario. Psychological contract has long been understood as an important part of a contractual obligation. Functionally, psychological contracts achieve three effects. Firstly, they diminish insecurity. As indicated by Raja, Johns & Ntalianis (2004), the mere presence of a contract (whether perfect or not) boosts the employee's thoughts of security and guarantees a conductive workplace environment. Secondly, psychological contracts dictate performance at a given task. The employee will achieve the performance for which they consider themselves duty-bound to achieve without having to be continuously supervised by a supervisor. Lastly, a psychological contract offers a good judgment for management in that the person under contract consider themselves "well settled" under the terms of the contract(Morrison & Robinson, 1997).

TWO TYPES OF PSYCHOLOGICAL CONTRACTS: TRANSACTIONAL AND RELATIONAL

Despite the distinctive nature of the psychological contract, it is understood that employees and employers have one of two general types of contracts; Transactional and Relational. Transactional contracts are short-term in character, recognition or intent and in general based on especially extrinsic relations. The employee may desire to carry out only the job sketched out in the attached job description for a salary or remuneration mentioned in the contract (Huczynski &Buchanan 2001). In the transactional agreement, the short duration means that the relations between the parties are short lived. For example, one anticipates to be remunerated in a specific time frame after the job is done; in most companies, salaries are dispersed weekly or monthly (Restubog, Bordia & Bordia 2009). Similarly, workforce with the transactional agreement frequently does not put forward any effort that is unlikely to be instantaneous or substantially satisfied. In addition, instant reciprocity is preferred by both the parties (employees and the employers) under transactional psychological contracts.

Relational contracts are long-standing, regularly reviewed and very individual contracts that involve such expectations such as devotion and loyalty from the worker in return for job safety and security offered by the organization (Mullins, 2002). Because of the long-term prospect of the relational psychological contract, the implications of the relations between employee and employer may not be visible instantaneously. For example, a member of staff may keep late hours to complete an essential business goal, not looking forward to be "reimbursed" for their work instantly. In theory, the relational psychological contract is extremely elastic (Raja, Johns and Ntalianis 2004). The employee feels at ease completing any quantity of everyday workload without the anticipation of instant remuneration or appreciation. Because of this elasticity, these contracts are normally preferred by companies. The drawback of relational contract is that the employee could form unrealistically high expectations from the employer. These expectations generally become a part of the psychological contract. According to Gilley & Gilley (2000), this usually results in a higher ratio of dissatisfaction of the permanent workforce.

One theme is common in both types of contracts. Though they are considered to be perceptual, it is essential to understand that psychological contracts are constantly reviewed by both the parties in the contract. The compensation offered is constantly evaluated against the goals assigned at both personal and organizational levels. Psychological contracts work in the same way as other undertakings or responsibilities (Sparrow & Cooper 2003). If in the judgment of all the parties involved, they are satisfied, the level of satisfaction increases proportionally. Job agreement and motivation are coupled with contract completion. Similarly, unsatisfactory or dishonored contract may have harmful outcomes. Staff who assumes that the agreement has been dishonored may display unconstructive outlook modifications in behavior, a break in work routine, turnovers, and other behavioral indicators (Chiang et al. 2012).

FACTORS GOVERNING PSYCHOLOGICAL CONTRACT

The factors governing the nature of a psychological contract include the employee's own character, aims and job experience. These individual personalities are the lenses from which people witness the purposeful information in the surroundings (Conway & Briner, 2005). In other words, what a person anticipates may be due, in large reason, to what he or she has witnessed. Thus, if somebody has ambitions of constructing a lasting relationship with a company, they may supply information in such a way so as to shape a relational psychological contract (Scott et al. 2002). Similarly, if an employee has a strictly held idea of a reasonable pay for a reasonable day's work, they might opt for a further transactional contract.

Two main areas of study are combined in the Human Resource and Organizational Behavior literature. One stream focusing on, psychological contract type, explains the type of employer-employee relationship – for example, whether it is based on concrete/tangible dealing or embedded in long term relationships. Psychological contracts are classified as either transactional or relational. A relational agreement is expected to streamline the progress of constructive individual and organizational results better than the transactional agreement (Mullins 2002). Psychological contracts made on relations have a propensity to reveal a high level of worker loyalty to the company. This judgment is in streak contrast to those employees depending on more tangible, distinct contract.

Psychological contracts are developed partially and then completed based on the feedback of both the HR department and employees(Conway & Briner, 2005). The organization's vision and mission statements, rules and regulations, and the volume and content of communication sent by superiors and peers may have a say in an employee's psychological contract. For example, executive perks such as the existence of internal career ladder might comprise embedded guarantee about the chance of promotion after an employee has undergone a certain period and has accumulated a certain skill set (Azim 2012).

Official guidelines and course of action guidebooks may sketch the circumstances for provisional service, routine work values and the infractions for which workers can be reprimanded. Last but not least, supervisors or peers may perhaps give their word and exchange a few verbal guarantees to staff that might assist in the formulation of a later agreement or the strengthening of the current one.

This development points out another development related to the topic at hand. Psychological contracts are evolving in such a way that they might become harder to administer and organize. In the early days, businesses were willingly capable of providing job safety in exchange for trustworthiness and offer a more attractive relational contract. However, because of down scaling and stresses of short-term consequences, few guarantees for long-standing service and psychological contracts are still available (Gilley & Gilley 2000). Furthermore, in view of the devastation of managerial structure and the elimination of many levels of management, organizations can no longer assure promotions and professional growth for employees. In response to these managerial inclinations, employees have come to anticipate a lowered standard of perks and services from the organizations (Sparrow and Cooper 2003).

Employees now insist on a challenging job, growth incident, and experience that can be transferred to other companies. These needs are frequently named “employability,” because they agree in principle that a worker preserves his or her abilities when a downsizing happens (Fang, Lee and Koh 2005). In such an event, the employee stands a chance to deal with the consequences of the event. In return, these employees offer hard work and originality to the company but not trustworthiness.

There is an evident theme of the development of non-traditional employment in which the employer-employee correlation is changing to a short-range (transaction-based) from a long-standing (relational-based) relationship, motivated by international business rivalry, downsizing, streamlining, and outsourcing (Sparrow and Cooper 2003). Such transformations in employment relationships probably are important factors in a choosing a side. Adding together the issue regarding the kind of contract in place, the importance of a psychological contract is decisive in an employment relationship.

BREACH OF PSYCHOLOGICAL CONTRACTS AND THEIR EFFECTS

A breach of the psychological contract is a perceived failure in fulfilling the commitments of the agreement and results in broken relationships. The breach of the psychological contract is a rash course of action whereby the member of staff receives a real or imagined assumption from the company which proposes that a responsibility within the deal has not been met (Raja, Johns and Ntalianis 2004). The infringement starts with the insight of a disagreement between a guaranteed result and the actual result. How the people understand the conditions of breach determines whether they think that a breach has occurred or not. Because the agreements are constantly being reshaped and continued, employees and employers make adjustments for many unintentional breaches. Confusion may be unseen or overlooked for a good reason (Mullins, 2002). However, when a breach takes a more severe form, such as a breach of undertaking or faith, the mind-set of disloyalty occurs. Such a breach of psychological contract has high costs for both the parties. The breach indicates a disparity in the accepted procedure of things. Experiences have shown that the infringement is expected to have an invasive negative impact on workers’ work attitude and behaviors (Azim 2012).

Raja, Johns & Ntalianis (2004) believe that the cost of a psychological contract breach has a higher negative impact on workers’ feelings and behaviors. Breach by the company result in a worker’s abandonment of dedication. The failure of dedication in either situation often results in an eventuality of departure from the company. It is advantageous that the most important work force to be dedicated, be concerned, and see the employment as a satisfying source of income. In other words, they must have a highly compatible relationship with the company. This point out that the vital information system workforce should be party to relational psychological contracts (Millward and Brewerton, 1999). On the other hand, employment relationships in contemporary business have undergone extensive improvements (Barling, Cooper & Clegg, 2008).

The breach of psychological contracts should also be understood in the context of employee retention. If employees think that they have not received an adequate contract, they might become unattached with their current organization. In other words, employees will leave the company if a better opportunity exists somewhere else. This is the most current problem for companies. Many think that the best way to attract this kind of employee is by contributing guidance and experience. The experience offered should be such that it could prove profitable in any number of situations that the employees may desire to follow (Millward and Brewerton 1999).

Apparent breach may stimulate a member of staff to quit. Restubog, Bordia & Bordia (2009) put down the analysis of such condition with an eye to employee turnover which argues that the turnover is frequently affected by distress, an incident that motivate workers toward a premeditated decision about their employment. As per Smithson and Stokoe (2005) the distress is then deduced and incorporated into the personnel's system of values which may activate a plan of action - the person departs. In this sequence, apparent commitment and breach of a psychological contract should be measured in upcoming turnover models.

While psychological contract stands at the base of the worker and company relationship (Rousseau 1995), workers frequently grieve that their company has been unsuccessful in sufficiently completing the agreement. Robinson and Rousseau (1995) state that 55 percent of the sample of their administrators thinks that their company has been unsuccessful in providing one or more guaranteed commitment in the initial two years of service relationship. These observations, factually right or wrong, usually cause decreased worker commitment, job happiness, motivation to stay with the business, sense of responsibility etc. Because of the prospective for these unconstructive ideas, it is very important to appreciate the circumstances under which awareness of psychological contract breach occurs.

The opinion that the psychological contract of an can be breached is an intrinsically individual experience. In a number of cases, it may perhaps occur because of a genuine violation of the agreement. For instance, an employer may evidently guarantee a new worker will be promoted within two years and for some reason promotion is not granted. In further cases, it is to a large extent less obvious whether a genuine breach has occurred or not (Gilley & Gilley 2000). Perhaps the employers made some fuzzy declaration such as employee have a propensity of gaining promotion quickly and frequently within two years, and the worker take this as a guarantee that he or she would be promoted within two years. When this promotion does not take place, the worker may think that a violation of the psychological contract has occurred.

In recent times, many companies have changed or bettered the technique they use to handle their employees. A number of these modifications is the result of research in human resource practices (Mullins, 2002). For instance, as the demand for skillful workers has increased exponentially, a lot of companies have introduced multi-scale salary and promotion packages in order to draw and keep key information system workers. To keep the attraction of the organization, many businesses now offer their workers monetary motivations attached to business performance.

On the other hand, these efforts have done the employees more harm than good. For instance, extensive amalgamations, layoffs, and reorganizations have reduced job safety and amplified career related doubt among workers(Smithson and Stokoe, 2005). As an outcome of the progressively more active industry atmosphere, a lot of businesses have been forced to rethink and alter the clauses of the psychological contracts they conclude with their workers.

In view of the current research, psychological contract includes a person's attitude toward the mutual responsibility that exist between the employer and the employee (Sullivan and Smithson 2007). The majority of the previous studies pertaining to psychological contracts are focused exclusively on workers' opinion. For example, Morrison and Robinson (1997) describe breach of psychological contracts as a failure of companies in fulfilling one or more their responsibilities spelled the psychological contract. Earlier studies propose that psychological contract violation is expected to have a persistent pessimistic impact on workers' mind-set and attitude. For instance, these studies point out that psychological agreement violation is inversely related to job happiness directly related to the desire to leave the organization and pessimistically associated the workers' own reports of their work and job responsibilities.

Nonetheless, psychological contract cannot always be evident in the worker's viewpoint. Indeed, the initial debate on the issue defined psychological contracts as the joint prospects held by employers and their employees regarding the conditions and circumstances of the service relationship (Mullins 2002).

Furthermore, regardless of the explanation, it turns out as the duty of the worker's manager (who acts as a representative on behalf of the company) to ensure that the psychological contract is properly executed. For the achievement of this objective, researchers have called for a closer measurement of the organization's approach of the psychological contracts. Despite of this recognition for study of the employer's viewpoint, it is very unclear how managerial representatives (administrators or top level managers) see the psychological contracts. This appears to be an essential error since study in other areas proposes that how companies move toward the service relationship is likely to have a joint impact on outlook of job duties and work performance.

The changes in employee demographics presents an increased women participation, showing that more families are managing both family and work roles (Zoharah and Aminah, 2010). Consequently, workers' expectations about their companies also represent a need for help in managing job and home stress (Conway and Briner, 2005). Workers may have an increasing concern about a company's commitment based on what has been assured by the company about work-family settlement. Conway and Briner (2005) point that earlier research on psychological contract largely ignored work-family issues. Psychological contract is a helpful instrument in realizing a worker's hope of acquiring a balance between work and home responsibilities (Smithson et al. 2004). Certainly, it has been established that workers come up with a constructive emotional contract if the company appears helpful in understanding the delicate balance between work and home. On the other hand, work-family settlement is hardly ever included in the psychological contract study and therefore demands much more importance than is granted to this critical issue (Smithson et al 2004; Ahmad and Omar, 2010).

Rousseau (1995) conceptualized psychological contracts as a person's faith about the rules and regulations of a mutual contract between the central individual and one more party. Unlike the traditional work-family strategy or agreement that positions out unambiguous conditions and circumstances, the work-family psychological contract is 'cognitive-perceptual' in nature. In other words, work-family psychological contract is unspoken and mirrors the individual's opinion about the company's requirement and worker's anticipation based on what has been guaranteed by the company about work-family settlement.

Workers who are not able to overcome job and family related stress suffer a decrease in productivity because of judgments linked to inadequate control over the nature of these things. They tend to have lesser loyalty to their organizations. Therefore, a company must offer work-family compensation as well as the voluntary option given to worker to plan work and choose how it should be carried out, as a sign that the business give importance to work-family combination (Zoharah and Aminah, 2010).

From the above discussion it is clear that the phenomenon of psychological contract and any real or perceived breach of any clause of said contract carries many implecations for both the employers and the employees. It is therefore important to understand what a breach actually is.

A breach occurs when one of the two parties in an association assumes that the other has shown neglect in fulfilling what was agreed or guaranteed (Rousseau, 1995). For instance, workers may suppose that the company is responsible for professional growth prospects. If the company does not offer professional development chances, it results in an agreement violation. The basis of breach is explained the theory of Social Exchange. It states that when one party offers a bit to another, it expects that the other party to reciprocate a similar form i.e. through some form of consideration or assistance.

However, not all breaches are considered to be harmful to the employee-employer relationship. If an organization evaluates that the employee is not up to the mark, the HR could recommend that the promised perks and privileges should he withheld for the period in which the employee either develops the skils required or improves the performance to the acceptable level. This might appear asa breach in the eyes of the employee but in legal and theoretical sense does not constitute as on. It is merely a matter of adjusting the internal equity of the employee.

The main purpose of the evaluating the merits and demerits of a breach in psychological contract is to achieve an improved understanding of the similarity and dissimilarity in the top level management's perceptions of the psychological contracts. The recent studies examine the model of harmony/difference that continues between managers and their subordinates with an aim to understand the fulfillment of the worker's psychological contracts (Fang, Lee and Koh 2005). By spotting areas of the psychological contracts where the difference is most prominent, companies can achieve a better understanding of where workers' opinions stand in contrast to the difference in opinions of their administrators. This information should give companies helpful knowledge concerning those areas where they want to do a thorough job of modifying the psychological contract in the favor of the workforce.

The relationship between the psychological contract violation and the loyalty of both executives and line staff is very strong. More importantly, the behavioral effects and workers' performance are adversely impacted at both staff and managerial levels. This analysis offers two important outcomes (Azim 2012). First, the attitudes toward any violations in psychological contract are apparent immediately. Secondly, the top management can decide what steps should be taken to address the dissatisfaction of the work force. This approach offers the best results if applied simultaneously with an increase in either monetary compensations or a raise on the career ladder.

Most researchers have observed the cost of violation of psychological contract is the manifestation of an extensive variety of worker behaviors and feelings (e.g., dedication, pleasure, and turnover. These studies state that workers are likely to restrain from inflexible behaviors and show unconstructive outlook as a way of reaction to contract violation. A further line of study has examined situational dynamics which propose that the influence the correlation between violation and worker outcome is staggering in proportion (Bellou, 2007). For instance, interaction impartiality diminishes the unconstructive impact of violation of psychological contract on worker behaviors. Lastly, a promising line of study illustrates the new areas of the psychological contract and the various ways of minimizing the breaches of the contract. As the arrangement and preservation of psychological contract appear from a particular trust and results in a cognitive evaluation (Morrison and Robinson, 1997), dispositional uniqueness are possible to be a vital factor in the contract-assembly dynamics.

CONCLUSIONS AND RECOMMENDATIONS

Psychological contracts are important instruments to gauge and evaluate behavior and 'mood' of workers. Workers may construct an opinion concerning a company's commitment about certain unspelled considerations by the company, such as or measures for work-family balance.

Difference in culture also varies the nature of psychological relationship between employer and employee. Different responses can be observed after the breach of the psychological contract and it is observed that a variety of work behaviors and feelings result as soon as a breach is perceived to have occurred (Barling, Cooper & Clegg, 2008). If the breach has occurred on a technical ground, less harmful effects are usually observed in employer employee relationship.

Psychological contract is universal in nature. Almost every employer-employee relationship carries an element f psychological contract regardless of social, economical and cultural backdrops. Most of the prior study in violation of psychological contract has been conducted in western countries where cultures are characteristically free spirit and low in authority space (Thomas & Ravlin, 2003).

There is a lack of data on the mechanics of the psychological contract structure in civilizations with a higher-power distance. That is, little is known about how progress affects the meaning and understanding credited to psychological contract and how employers and employees from diverse society assess the degree to which the psychological contract has been honored or dishonored (Rousseau and Schalk, 2000).

While quite a few Asian civilizations are collectivist, these societies display other fundamental characteristics in the place of work. In circumstance marked by a family centric society, workers see the business as a symbolic demonstration of a family unit and wait for nurturance, faithfulness and compassion from the organization. Therefore, a supervisor-subordinate relation will be seen as a comparison of a parent–child relationship (Restubog and Bordia, 2007).

To conclude, psychological contract is vital in attracting and retaining quality human resource. It is also a key component in the advancement of the knowledge of the organization from one generation to another. Today's organizations have a very different view on the subject. As a result, it is critical to identify the elements that uphold a constructive employment relationship between employer and employees.

It is important to realize that not all instances of violations of psychological contracts are understood as a breach. In some cases, employers try to adjust the clauses of the psychological contract to the evaluated efficiency of the employee. These instances are not uncommon in almost every industry. Employees may see these as a breach but in reality these are administrative efforts to reconcile the costs and benefits of employing a certain individual.

References

Aminah Ahmad & Zoharah Omar. (2010). Perceived family-supportive work culture, affective commitment and turnover intention of employees. *Journal of American Science, 6*(12), 839-846.

Azim, A., Ahmad, A., Omar, Z., & Silong, A. (2012). Work-Family Psychological Contract, Job Autonomy and Organizational Commitment.*American Journal Of Applied Sciences*, *9*(5), 740-747.

Barling, J., Cooper, C. L., & Clegg, S. R. (2008). *The Sage handbook of organizational behavior*. London: Sage Publications Ltd.

Bellou, V, (2007) Psychological Contract Assessment after a Major Organization

Change. *Employment Relations*, Vol. 29, No 1, 68-88pp.

Chiang, J. C., Chechen, L., Jiang, J., & Klein, G. (2012). CONSEQUENCES OF PSYCHOLOGICAL CONTRACT VIOLATIONS FOR IS PERSONNEL. *Journal Of Computer Information Systems*, *52*(4), 78-87.

contract. *Journal of Organisational Behaviour*. Vol 24, 451-471.

Conway, N., Briner, R. B (2005). *Understanding Psychological Contracts at Work*. Oxford University Press, UK.

Fang, X., Lee, S., and Koh, S. "Transition of knowledge/ skills requirement for entry-level IS professionals: An exploratory study based on recruiters' perception," *Journal of Computer Information Systems*, (46:1), 2005, 58-70.

Gilley, J. W., & Gilley, A. M. (2000). *Beyond the learning organization: creating a culture of continuous growth and development through state-of-the-art human resource practices*. Cambridge, Mass.: Perseus Books.

Huczynski, A.; Buchanan, D. (2001) Organizational Behaviour: An Introductory Text. Harlow: Pearson Education.

Millward, L. J., and Brewerton, P. M. "Contractors and their psychological contracts," *British Journal of Management*, (10:3), 1999, 253-274.

Morrison, E. W., and Robinson, S. L. "When employees feel betrayed: A model of how psychological contract violation develops," *Academy of Management Review*, (22:1), 1997, 226-256.

Mubin, Muhammad and Vohra, Mohsin and Ijaz, Shafqat and Rafique, Mehwish and Hassan, Taimoor, Cultural Mapping and Its Ascertainment: A Case Study of PTCL (April 24, 2013). *European Journal of Business and Management*, Vol. 6, No.14, 2014 . Available at SSRN: https://ssrn.com/abstract=2500838

Mullins, L. (2002) Management and Organizational Behaviour. London: Pitman Financial Times.

Psychological contract. (2005). In International Encyclopedia of Hospitality Management. Retrieved from http://www.credoreference.com.ezproxy.apollolibrary.com/entry/esthospitality/psychological_contract

"PSYCHOLOGICAL CONTRACT." *Encyclopedia of Health Care Management, Sage*. Thousand Oaks: Sage Publications, 2004. *Credo Reference*. 6 Oct. 2005. Web. 26 Dec. 2012. <http://www.credoreference.com.ezproxy.apollolibrary.com/entry/sageeohcm/psychological_contract>.

Raja, U., Johns, G., and Ntalianis, F. "The impact of personality on psychological contracts," *Academy of Management Journal*, (47:3), 2004, 350-367.

Restubog, S. L., Bordia, P., and Tang, R. L. "Effects of psychological contract breach on performance of IT employees: The mediating role of affective commitment," *Journal of Occupational and Organizational Psychology* (79:2), 2007, 299-306.

Restubog, S., Bordia, P., & Bordia, S. (2009). The Interactive Effects of Procedural Justice and Equity Sensitivity in Predicting Responses to Psychological Contract Breach: An Interactionist Perspective. *Journal Of Business & Psychology*,*24*(2), 165-178. doi:10.1007/s10869-009-9097.

Rousseau, D. M. *Psychological contracts in organizations: Understanding written and unwritten agreement*s, Sage, Thousand Oaks, CA, 1995

Scott, W. L., William, H. T., James, M. B., & Mark, C. B. (2002). Not seeing eye to eye: Differences in supervisor and subordinate perceptions of and attributions for psychological contract breach. *Journal of Organizational Behavior, 23*(1), 39-56. Retrieved from http://search.proquest.com/docview/224867567?accountid=35812

Shore, L. M., and Tetrick, L. E. "The psychological contract as an explanatory framework in the employment relationship," in C. L. Cooper, and D. M. Rousseau (Eds.),

Smithson, J. and Stokoe, E.H. (2005), Discourses of work-life balance: Negotiating "genderblind" terms in organisations. Gender, Work and Organization. 12/2: 147-168.

Smithson, J., Lewis, S., Cooper, C. and Dyer, J. (2004). Flexible working and the gender pay gap in the accountancy profession. *Work, Employment and Society* 18/1: 115-135.

Sparrow, P. R., and Cooper, C. L. *The employment relationship: Key challenges for HR*, Butterworth- Heinemann, Oxford, UK, 2003.

Sullivan, C. and Smithson, J. (2007), Perspectives of homeworkers and their partners on working flexibility and gender equity*. International Journal of Human Resource Management.* 18/3 March 2007

Thomas, D., Au, K., Ravlin, R. (2003). Cultural variation and the psychological.

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Performance Evaluation of Listed Commercial Banks In Botswana: The Camel Model

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ABSTRACT

The study evaluated the financial performance of three listed commercial banks in Botswana for the period 2011-2015 applying the CAMEL model. The study used the secondary data sourced from the annual reports of the listed banks. Results indicate that selected banks were highly leveraged and that their liquidity position was sound. The correlation analysis revealed that Earning per share had a significant positive correlation with liquidity ratio of total customer deposits to total assets and that leverage ratio was significantly negatively correlated to the ratio of equity capital to assets. Other CAMEL ratios were not significantly correlated to Earnings Per Share. The regression analysis showed that Capital adequacy, Asset quality, Earning ability and Managerial efficiency had no significant relationship with selected banks' performance measured in terms of Earnings per share. On the other hand, the Liquidity position of these banks was found to be significantly related to the performance of selected banks at 5% significance level. The findings also indicated that, overall, the selected banks performed well during the study period in terms of most of the parameters of CAMEL model with adequate capital and assets when compared to benchmarks. The earning capacity of the selected banks was also on the increase. The findings of this study will be helpful to the management of selected banks in making appropriate managerial decisions.

Key words: Capital Adequacy; Asset Quality; Management Efficiency; Earnings and Profitability; Liquidity; Bank's Performance

INTRODUCTION

Economic prosperity is a sign of success of a country and this is achieved through proper and efficient utilization of country's resources. In this context, banking sector is a major constituent that enables effective and appropriate utilization of financial resources of the country (Babar and Zeb, 2011). Commercial Banks play a dynamic role in the economic development of a country. They basically gather the idle savings of the people and make them available for investment purposes. They also create new demand for deposits by providing loans and purchasing investment securities. Banks also increase the mobility of capital (Saini and Sindhu, 2014). They are recognized worldwide as drivers of economic growth and job creation, thereby contribute towards alleviation of poverty. This shows that commercial banks are key to economic growth and are expected to be stable and financially sound. It is therefore, critical to measure the financial performance of the commercial banks and reflect on their performance. According to Babar and Zeb (2011), banking industry being an important pillar of the financial sector of an economy, its performance measurement cannot be neglected. It has been observed based on the standing of those countries that experienced crisis in their banking system that such instability can cause irreparable damage to country's economy (Ghasempour & Salami, 2016)

Prior to independence in 1966, the development of Botswana's financial sector was slow, with only two commercial banks in operation, both incorporated outside the country. By the end of 2008, the number has grown to seven commercial banks in the country and this implies positive signs of financial sector development. The profitability in the banking sector has been higher than other countries in Sub Saharan Africa and in Africa as a whole (Moffat, 2009). This study on the financial performance of commercial banks focused on three listed commercial banks in Botswana for the period 2011-2015. The CAMEL model was used to evaluate the financial performance of these banks with the view to assess the significance of their role in the growth and development of the economy of Botswana.

CAMEL MODEL

On November 13, 1979, the Federal Financial Institution Council adopted The Uniform Financial Institution Rating System, referred to CAMEL rating. Later in October 1987, the National Credit Union Administration adopted the CAMEL rating. Reliability, Profitability and Liquidity are critical in the assessment of performance of an organization and in that context, CAMEL model which underscores Capital Adequacy, Asset Quality, Management Quality, Earning Ability and Liquidity as criteria for assessment can be taken as a reliable tool to evaluate the soundness of financial firms ((Ghasempour & Salami, 2016; Aspal and Dhawan, 2016). The first studies on banks' performance came out in late 1980s and early 1990s using the Market Power model and Efficiency Structure model. With the development of various data analytical tools, evaluation of banks' profitability and financial soundness have grown in more advanced analytical models (Roman and Sargu, 2013). In recent years, the most commonly used approach to assess the financial soundness of financial institutions is the CAMELS framework (Baral, 2005). As Rostami (2015) indicated, the CAMEL model is a tool that is very effective, efficient and accurate and can be used as a performance evaluate in banking industries and to anticipate the future and relative risk.

The study adopted the CAMEL model for data analysis, which has 5 performance parameters viz. Capital Adequacy, Asset Quality, Management Quality, Earnings and Liquidity; thus excluding only the Sensitivity element. It is believed that the evaluation of the financial performance of banks should take into account the adequacy of capital, bank management, the earnings and their liquidity (Merchant, 2012).

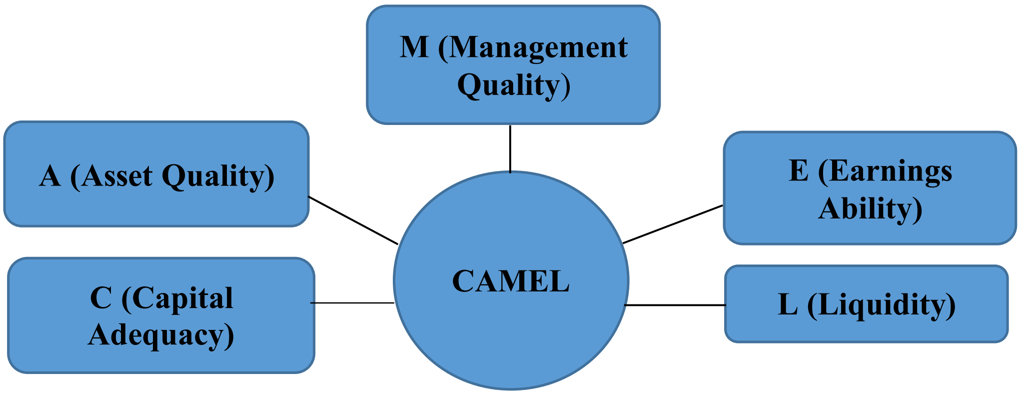

Figure 1: CAMEL Model

PERFORMANCE PARAMETERS OF CAMEL MODEL

The constituents of CAMEL Model are described as follows (Ahsan, 2016; Aspal & Dhawan, 2016; Baral, 2005; Desta, 2016; Gupta, 2014; Keovongvichith, 2012; Mayers & Rajan, 1998; Merchant, 2012):

Capital Adequacy: The financial soundness of banks is well reflected in their capital adequacy. It represents the level of capital that banks need to withstand risks such as credit, market and operational risks. It enables banks to measure its capacity and ability to meets its obligation to customers and to handle the losses without disturbing its normal functions. It is, therefore, essential that banks have adequate capital as it will serve as a buffer against uncertainties.

Asset Quality: The asset quality will assist the banks to appreciate the level of risk that they will face on their disclosure to its customers. This parameter will enable the bank to assess the performance of its assets. Banks try their level best to keep non-performing loans to a small percentage as the existence of large non-performing loans will detrimentally affect their profitability.

Management Quality: Management efficiency is a decisive component of CAMEL model that measures the strength of a bank. It refers to compliance with set standards, ability to respond to the changing environment as well as to the managerial capability and leadership of the bank. Basically, it reflects the level of effectiveness of bank management. The successful running of banks lies in the hands of Board of Directors who constitute the key persons of the bank management.

Earnings Ability: This parameter underscores the bank's existing and upcoming activities with regard to enhancement of its earnings capability. The earnings of a bank constitute income from all operations. By assessing earnings ability, one can check the bank's efficiency to cover all potential losses and its ability to distribute dividends.

Liquidity: Liquidity ratio measures the ability of the bank to meet its immediate obligations. Liquidity is very critical for banks and the confidence of its customers mainly rests upon the banks' ability to meet its immediate commitments. This emphasizes that banks should always maintain adequate liquidity level. It may be noted that increased liquidity can have adverse effect on banks. Whilst having more liquid assets can be seen as bank's ability to raise cash on short notice, it also constraints its ability to implement an investment strategy that offers protection to its investors.

BANKS SELECTED FOR THE STUDY

The banks featured in this study are the three largest and oldest commercial banks in Botswana, namely Standard Chartered Bank Botswana (SCBB), Barclays Bank Botswana (BBB) and First National Bank Botswana (FNBB). The three banks constituted a total of 79 branches and sub-branches between them in the year 2015, compared to a total of 35 for all the other banks (Bank of Botswana, 2017, 12). The total number of commercial banks in Botswana stands at ten (10) (Bank of Botswana, 2017), with the banking sector together with insurance and business services accounted for 14, 7% of the GDP in 2015, having risen over the years from 6% some 50 years ago in 1965 (Statistics Botswana, 2016, 16). This compares quite well with the country's leading foreign exchange earner (minerals) at 18,3% in 2015 (Statistics Botswana, 2016, 16).

The three banks featured in this study between them command substantial commercial banking activities in the economy of Botswana. CAMEL Rating is one of the widely used tools for judging capital adequacy, asset quality, earnings ability and liquidity of the financial institutions such as commercial banks, by the principal regulators all around the world. Financial ratios are often used to measure the overall soundness of a bank and the quality of bank management. The overall indication of the performance of all of the commercial banks operating in Botswana, as assessed by Bank of Botswana (2015, 39) in 2015 using the CAMELS instrument is that they were sound and stable, with only moderate weaknesses.

OBJECTIVES OF THE STUDY

The general objective of the study is to evaluate the financial performance of listed commercial banks in Botswana for the period 2011-2015, using the CAMEL model. The specific objectives are:

1. To measure the Capital Adequacy of selected banks and their impact on financial performance
2. To appraise the Asset Quality of the selected banks and their effect on the selected banks' financial performance
3. To assess the extent to which Managerial Efficiency influence the financial performance of the selected banks
4. To analyze the Earning Ability of the selected banks and see how they affect their financial performance
5. To measure the Liquidity position of the selected banks and observe their impact on their financial performance
6. To draw conclusions on the performance of the listed commercial banks for the 5-year period

TEST OF HYPOTHESIS

The study tested the following five (5) null hypotheses:

H1: Capital adequacy has no significant impact on selected banks' financial performance
H2: Assets quality has no significant impact on selected banks' financial performance
H3: Management efficiency has no significant impact on selected banks' financial performance
H4: Earning ability has no significant impact on selected banks' financial performance
H5: Liquidity of selected banks has no significant impact on their financial performance

Significance of the study:

Financial Performance of a business enterprise has to be evaluated on a regular basis. Lakew, Meniga and Gebru (2014) described performance measurement as the process of quantifying efficiency and effectiveness. Effectiveness is compliance with customer requirements, and efficiency is how the organization's resources are used to achieve customer satisfaction levels.

Tehrani, Mehragan and Golkani (2012) asserted that the evaluation of firms' performance can be a guide that will greatly assist and provide directions for future decisions regarding development, investment, management and control. The authors observed that financial evaluations/analysis is the oldest and important approaches used to measure performance of organizations using financial statements. Such an analysis can provide valuable information on corporate strength, its weakness and the quality of the firm's financial position.

This research on evaluation of the financial performance of listed Banks in Botswana using CAMEL model will enable stakeholders to have a good appreciation of the performance of listed banks in Botswana. The information is valuable as it provides in depth analysis on banks' performance, beyond what one could typically draw from the financial statements. Through such information, potential investors and other interested parties can make informed decisions on their investment choice amongst banks. The findings will be of great assistance to the management, as it will enable them to take proactive steps for the long-term growth of the banks. The Regulators will also find the information useful to come up appropriate rules and regulations. Finally, findings will also add value to the limited literature available on listed banks' performance in Botswana; thereby bridge the research gap that exists currently on the financial performance and soundness of commercial banks in Botswana.

LITERATURE REVIEW

The Financial Performance of financial Institutions in the Banking Sector has been assessed by various academicians, researchers and policy makers at various times. A review of those important studies that highlight the application of CAMEL model are presented below:
Dash and Das (2009) compared the performance of public sector banks in India with private/foreign banks under CAMEL model for a period of 5 years. Results indicated that private/foreign banks performed better than public sector banks on most of the CAMEL parameters. The study also noted that the two contributing factors for the better performance of private/foreign banks were Management Soundness, Earnings, and Profitability

Jha and Hui (2012) studied the financial performance of 18 commercial banks for the period 2005-2010 using CAMEL model. The results indicated that public sector banks were significantly less efficient; however, domestic private banks matched well in efficiency with foreign owned joint venture banks. The study also revealed that return on assets was significantly influenced by capital adequacy ratio, interest expenses to total loan and net interest margin, while capital adequacy ratio had substantial effect on return on equity.

Roman and Sargu (2013), conducted a study on 15 selected banks for the period 2004-2011 to assess their financial performance. The CAMEL method was adopted and the results underscored the strengths and vulnerability of the selected banks, highlighting the need to improve bank's financial soundness.

Lakhtaria (2013), researched on the performance of three public sector banks in India viz. Bank of Baroda (BOB), State Bank of India (SBI) and Punjab National Bank(PNB) using CAMEL approach for the period of three years(2010-2012) and ranked them as per CAMEL model. The results indicated that Bank of Baroda topped among all the three selected banks.

Trivedi (2013) appraised the financial performance of the only scheduled Urban Co-operative Bank in Surat City, The Surat People Co-operative Bank for a period of 10 years 2002-2012 using CAMEL model and descriptive statistics. The results indicated that overall state of capital adequacy and management efficiency were satisfactory and the overall state of assets quality was good. However, the overall state of liquidity was found unsatisfactory.

Voon (2013) researched on the financial performance of seven local banks and three foreign banks in Malaysia for the years 2007-2011 adopting CAMEL approach and concluded on the basis of results that foreign banks performed better than local banks.

Roman and Sargu (2013), conducted a study on 15 selected banks in Romania for the period 2004-2011 to assess their financial performance, The CAMEL method was adopted and the results underscored the strengths and vulnerability of the selected banks, highlighting the need to improve bank's financial soundness.

Ferrouhi (2014) analyzed the performance of major Moroccan financial institutions for the period 2001-2011 applying CAMEL model. Results obtained from the analysis enabled the researcher to rank the selected financial institutions using CAMEL average.

Karthikeyan and Shangari (2014) studied the financial performance of top six private sector banks in India for the period 2009-2013 adopting the CAMEL model. The findings showed that there was negative correlation between Capital Adequacy Ratio and Net Advances to Total Assets in Capital Adequacy Ratio. It also revealed that there was no correlation between ratios of Management Efficiency, Earning Quality and Liquidity.

Gupta (2014) evaluated the performance of public sector banks in India using CAMEL model for the period 2009-13. It was found that that there was a statistically significant difference in the ratios calculated of all the Public sector banks. This indicated that there was difference in the overall performance of these banks.

Liu and Pariyaprasert (2014) looked at the financial performance of 13 Chinese listed Banks for the period 2008-11. The study revealed that return on equity could be influenced by costs to income ratio, operating expenses to assets ratio and Loans to deposits ratio.

Mohiuddin (2014) looked at the financial performance of two major banks in Bangladesh using CAMEL parameters. It was concluded that the capital adequacy, asset quality, management capability and liquidity were found satisfactory.

Mulualem (2015) analysed the financial performance of 14 Ethiopian Commercial Banks for the period 2010-14 and used CAMEL factor measurements. Results indicated that capital adequacy, Asset Quality and Management Efficiency had negative relationship, whereas earnings and liquidity showed positive relationship with both profitability measures with strong statistically significance except for Capital Adequacy which was significant for Return on Assets and for Return on Equity. The findings also highlighted that by reengineering the banks' internal drivers, the Institutions could enhance the profitability.

Kaur, Kaur and Singh (2015) measured and compared the financial performance of leading five public sector banks in India for the period 2009-2014. They adopted the CAMEL approach and concluded that Bank of Baroda was leading in all CAMEL parameters followed by Punjab National Bank in Capital Adequacy, Management Efficiency and Earning Capacity and Bank of India in Asset Quality.

Karim, Zaheer and Ahmed (2016), studied the financial performance of ten commercial banks in Pakistan for the period 2007-2013 using CAMEL model, descriptive statistics, correlation and regression analysis. The results indicated that Total Deposit to Equity, Non-performing Loans to Gross Advances, Non-performing Loans to Equity, Admin Expenses to Interest Income Ratio, Gross Advances to Total Deposits Ratio were all significantly but negative correlated. On the other hand, Return on Assets and Return on Equity were significantly, but positively correlated. The Interest Income to Total Assets was statistically insignificant with a bank's performance, and that Interest Income was statistically significant with a bank's performance. The cash ratio showed insignificant correlation, whereas the regression result showed that the cash ratio was statistically significant with a bank's performance.

Ahsan (2016) analyzed the financial performance of three selected Islamic Banks in Bangladesh for a period of eight years 2007-2014, using CAMEL model. Results indicate that all the selected banks were in strong position on their composite rating system.

Mousa (2016) evaluated the performance of three selected Islamic Banks in Jordan for the period 2010-15 applying CAMEL model and noted that all the selected banks had adequate capital; their assets and earning capacity were growing in spite of the slowdown of the economy and regional instability.

Mulugeta (2016) analysed the performance of the Ethiopian banking sector for the period of 2010 to 2014 adopting the CAMEL rating system and ranked the selected banks on the basis of each parameter and also based of overall performance. The study concluded by stating that it might be necessary for bank management to take all the required decisions to enhance the financial positions of the bank. It was also noted that the selected banks had kept bad debts/non-performing loans under good control.

Desta (2016) analysed the financial performance of seven African Banks for three years (2012-14) and adopted CAMEL approach to assess the performance. As per findings, banks were rated as strong and satisfactory for capital adequacy ratio and earnings ability. Conversely, the selected banks were rated as less satisfactory, deficient and critically deficient on asset quality, management quality and liquidity.

Masood, Ghauri and Aktan (2016) analysed the performance of Islamic banks in Pakistan using CAMEL model and noted that two of the Islamic banks were showing satisfactory results, while others were on fair position. They also highlighted that there was need to develop financial markets for treasury operations for these banks.

Stephen, Apollos & Adegoke (2016) concluded on their study on the performance of Nigerian banks in the Post Consolidation Era (2005-14) that mergers and acquisitions have significant impact on the performance of emerging banks and the policies have led to increased returns on investment.

Iheanyi and Sotonye (2017) assessed the performance of banks in Nigeria using CAMEL rating. The data that was used was for a period covering 19 years and analysis was done through ordinary least squares. Their findings suggested that management efficiency, earnings and liquidity have no significant impact on the profitability of banks. They researchers also found that asset quality has a negative impact on the profit of the banks.

Zedan and Daas (2017) evaluated the performance and financial soundness of Palestinian Commercial Banks for the year 2015 using CAMEL rating model. Results were used to rank the selected banks and Bank of Palestine was ranked at the top with total components score of 16.

In conclusion, the review of literature indicates mixed results on the impact of CAMEL elements on the performance of banks. While some studies indicate positive impact on performance of banks, there are also cases where negative effects on profitability have been reported.

METHODOLOGY

The purpose of this paper is to explore performance of commercial banks in Botswana for the period 2011 to 2015 using CAMEL approach. The CAMEL approach is a management tool that is used to evaluate bank performance in terms of Capital adequacy, Asset quality, Management efficient, Earnings ability and Liquidity (Reddy & Prasad, 2011). The study has adopted an analytical and descriptive research design.

Literature indicates that a number of ratios are used to measure the five performance parameters of CAMEL model. The following model is developed for the study and takes into account the literature on CAMEL application to measure performance of Banks.

Table 1: CAMEL Parameters and Ratios for Bank Performance Analysis

CAMEL PARAMETERS	RATIOS	FORMULA
Capital Adequacy	Leverage Ratio	Total Debt /Total Equity
	Equity Capital to Assets	Total Equity/Total Assets
Asset Quality	Provision for Loan Loss Ratio	Provision for Loan Loss/Total Loans
	Ratio of Total Loans to Total Assets	Total Loans and Advances/Total Assets
Management Quality	Ratio of Expenses to Deposits	Total Interest Expense / Total Deposits
	Ratio of Loans to Deposits	Total Loans and Advances / Total Deposits
Earnings Ability	Return on Equity	Net Income / Total Equity
	Return on Assets	Net Income/ Total Assets
Liquidity	Customer Deposits to Total Assets Ratio	Total Customer Deposits to Total Assets
	Cash Ratio	Cash and Cash Equivalent to Current Liability

Capital Adequacy Ratios: The study focuses on two important ratios viz. Leverage Ratio and Equity Capital to Assets. The Leverage ratio provides a clear indication of what proportion of bank's finance was raised through debt and through equity. Theoretically, commercial banks are highly leveraged; hence they are expected to have higher debt than equity in their capital structure(Eakins & Mishkin, 2012). Equity ratio shows the extent to which the total assets of banks are financed by owners' investments. A high equity ratio is considered favourable as most of the bank's assets are financed by shareholder's equity which is considered to be cheaper than debt financing. A high ratio also gives a positive signal on the sustainability of the organization and low risk to the creditors.

Asset Quality Ratios: The asset quality evaluates the proportion of bad debts over total loans originated by a bank. Two ratios are used in the study to reflect on the asset quality among the selected banks, viz. Provision for Loan Loss Ratio and Ratio of Total Loans to Total Assets. The Loan Loss provision coverage ratio indicates the level of protection that the bank has against future losses. Higher the ratio, the better for the bank as it shows that the Bank can withstand future losses in a better way. The Total Loan to Total Assets ratio measures the bank's total liabilities as a percentage of total assets and displays the ability of the bank to clear its liabilities with its assets. The ratio indicates the financial leverage of the firm and shows what percentage of total assets was financed by creditors, liabilities and debt.

Management quality measures a corporation's profitability by revealing how much profit a company generate with the money invested by shareholders (Ferrouhi, 2014). The ratio of Expenses to Deposits shows the coverage of bank expenses to the deposits. The ratio of Loans to Deposits is used to assess the bank's liquidity. A high ratio indicates that the bank will have adequate liquidity to meet any unforeseen fund needs.

Earnings Ability is measured using Return on Equity and Return on Assets. Return on equity measures the bank's profitability by showing how much profit is generated with the use of Equity. The Return on Total Assets, on the other hand, measures the efficiency of the Bank in the management of its assets to generate profits during a period.

Lastly, **liquidity position** assesses liquidity risk. This can be determined by looking at the proportion of customer deposits to total assets. The cash ratio which is also a liquidity ratio measures the Bank's ability to pay off its current liabilities with cash and cash equivalents. High liquidity ratios are indicative of high liquid status of the business, which promises its creditors of repayment of their loans on time.

CONCEPTUAL FRAME WORK

The following diagram indicates the independent variables and dependent variable used in the study to measure the impact of the independent variables of Capital Adequacy (Leverage and Equity to Assets ratios), Asset Quality (Provision for Loan Loss and Total Loans to Total Assets ratios), Management Quality (Expenses to Deposits and Loans to Deposits ratios), Earnings Ability (Return on Equity and Return on Assets ratios) and Liquidity (Customer Deposits to Total Assets and Cash ratios) on the Dependent variable Earnings Per Share (EPS) of the selected banks.

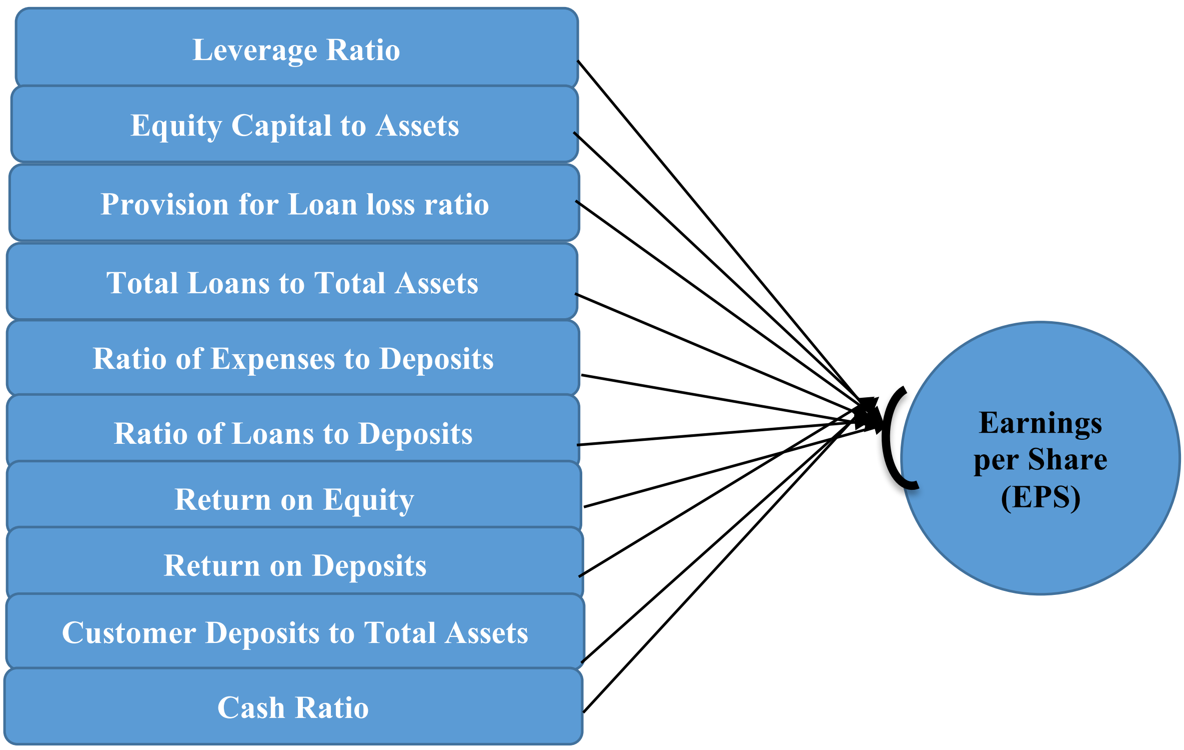

Figure 2: Diagram of Independent & Dependent variables

DATA AND SAMPLING

The population is all listed commercial banks in Botswana and we used non-probability sampling technique known as purposive sampling. This is a subjective sampling technique and allows focus to be on what the study requires and in this respect; elements from a pre-specified group are purposively pursued and tested (Neill, 2003). The data was obtained from annual reports of identified listed companied on Botswana Stock Exchange (BSE) for the post-recession five year period from 2011-2015. Based on the premise that listed companies are the biggest in terms of market capitalization, we focused on commercial banks that are domestically listed on BSE, viz. Barclays Bank of Botswana, First National Bank of Botswana and Standard Chartered Bank of Botswana. The period from 2011 to 2015 was specifically chosen to evaluate the post-recession period and was based on data availability on the selected CAMEL ratios.

DATA SOURCE AND MODEL FOR DATA ANALYSIS

Purposive sampling was chosen for the study, as it is a subjective sampling technique and allows focus to be on what the study requires. In this respect, elements from a pre-specified group were purposively pursued and tested (Neill, 2003). The financial items that we purposefully used to compile required CAMEL ratios and financial statements were extracted from the published annual reports of the three listed banks. This data included the dependent variable being Earnings Per Share (EPS) and the independent variables being ten CAMEL ratios and their abbreviations as shown below. A multiple regression model is developed to measure the relationship and is mathematically expressed in equation 1;

$$EPS_t=\beta_0+\beta_1LR_t+\beta_2TETA_t+\beta_3PLLR_t+\beta_4TLTA_t+\beta_5IETD_t+\beta_6TLTD_t+\beta_7ROE_t+\beta_8ROA_t +\beta_7TDTA_t+\beta_8CR_t +\varepsilon_t \quad (1)$$

Where;

EPS_t =Earnings per share

LR=Liquidity ratio

TETA=Total equity capital to total assets

PLLR=Provisions for loan loss ratio

TLTA=Total loans to total assets

IETD=Total interest expense to total deposits

TLTD=Total loans to total deposits

ROE=Return on equity

ROA=Return of assets

TDTA=Total customer deposits to total assets

CR=Cash Ratio

$\beta_0, \beta_1, \beta_n$=Coefficients

ε_t =error term

DATA ANALYSIS, AND DISCUSSION OF FINDINGS

This section presents the analysis and findings. The data was analysed using descriptive statistics, followed by correlation analysis and lastly regression analysis. The data covers a 5-year period from 2011-2015. Statistical Package for Social Sciences (SPSS) was used to perform the analysis.

Table 2: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Earnings per share	15	15.88	107.78	50.68	33.4745	0.839	0.58	-0.99	1.121
Leverage ratio	15	6.2860	11.8970	8.6193	1.6985	0.784	0.58	-0.335	1.121
Total equity to total assets	15	0.0775	0.1283	0.1062	0.0165	-0.493	0.58	-0.918	1.121
Provisions to loan losses	15	0.0058	0.0257	0.0142	0.0059	0.472	0.58	-0.203	1.121
Total loans to total assets	15	0.4813	0.8716	0.6410	0.0892	0.908	0.58	2.52	1.121
Total expenses to total deposits	15	0.0196	0.0401	0.0270	0.0071	0.852	0.58	-0.63	1.121
Total loans to total deposits	15	0.6548	0.9535	0.8206	0.0846	-0.421	0.58	-0.398	1.121
Return on equity	15	0.0560	0.5034	0.2946	0.1072	-0.44	0.58	1.112	1.121
Return on assets	15	0.0044	0.0449	0.0307	0.0114	-0.708	0.58	0.485	1.121
Total deposits to total assets	15	0.7840	0.8730	0.8237	0.0261	0.268	0.58	-0.604	1.121
Cash ratio	15	0.0179	0.2369	0.1033	0.0726	0.394	0.58	-0.958	1.121
Valid N (listwise)	15								

Descriptive statistics generated through SPSS are shown in Table 2. The dataset is comprised of a 5-year annual data for the three domestically listed commercial banks in Botswana from 2011-2015, which totalled 15 observations. The dependent variable is measured by Earnings per share (EPS). The EPS has a minimum value of P15.88 and a maximum of P107.78. Meanwhile the mean return is P50.68. The independent variables included CAMEL measures of capital adequacy, asset quality, management quality, earnings ability and liquidity.

Capital adequacy for the three banks was measured by two ratios, namely; leverage ratio and equity capital to total assets. The leverage ratio (LR), as measured by the ratio of total debt to total equity retained a mean value of 8.6193, underscoring that domestically listed banks maintain almost 9 times more debt than equity in their capital structure, hence highly leveraged. In contrast, the ratio of equity to total assets (TETA) depicted a mean value of 0.1062 or 10.6%, which was above the benchmark of 4-6% (Desta, 2016). This result confirms that the three banks are highly leveraged. As a result, we conclude that the three banks kept enough capital to cushion themselves against insolvency in the period under study, whilst ensuring that they use more debt to raise their profitability ratios. In retrospect, their capital ratios should be above the statutory requirement of 15% in Botswana. Banks in Botswana are required to maintain a capital adequacy ratio at or above 15 percent, which, in the context of the current macroeconomic and financial environment, is regarded as a safe and prudent level (Bank of Botswana, 2015).

On the other hand, asset quality was measured by provisions for loan loss ratio and ratio of total loans and advances to total assets respectively. The mean value for provisions for loan loss ratio was 0.0142. Further, asset quality as measured by Ratio of Total Loans to Total

Assets (TLTA) retained mean value of 0.641 and standard deviation of 0.0892. This outcome shows that nearly 64% of the assets of these banks are comprised of loans, which underscores their quality when juxtaposed with the returns.

Meanwhile management quality as measured by the Ratio of Expenses to Deposits and Ratio of Loans to Deposits retained mean values of 0.0270 and 0.8206 respectively. The ratio of Total Loans to Total customer Deposits (TLTD) should be less than or equals to 80% (Desta, 2016). On the other hand, about 82% of loans were generated from total deposits, which show a concern in terms of bank management with regard to asset transformation. On the other hand, average expenses were 2.7% of total deposits for the period understudy, which shows good expense management.

Earnings ability measures of return on equity and return on assets recorded means and standard deviations of 0.2946 (0.0307) and 0.10716 (0.0114) respectively. This shows that on average, the return on equity was a bit higher at about 29% when compared with the return on assets of 11%. This shows that the commercial banks have been able to generate more return for their shareholders and generated more return per Pula of invested assets, as was above 15% and 1% benchmarks respectively (Babar and Zeb,2011; Desta, 2016), hence showing better earnings ability over the five year period.

In terms of liquidity, the ratio of total customer deposits to total assets and cash ratio recorded means of 0.8237 and 0.1033 respectively. The ratio of deposits to total assets should greater than 75% (Desta, 2016). However, the three commercial banks recorded a liquidity ratio of about 82% which is higher than the benchmark; thus indicating a better liquidity position.

Table 3: Correlation analysis

		EPS	LR	TETA	PLLR	TLTA	TETD	TLTD	ROE	ROA	TDTA	CR
EPS	Pearson Correlation	1										
	Sig. (2-tailed)											
LR	Pearson Correlation	0.291	1									
	Sig. (2-tailed)	0.293										
TETA	Pearson Correlation	-0.318	-.993**	1								
	Sig. (2-tailed)	0.248	0									
PLLR	Pearson Correlation	-0.247	-0.067	0.062	1							
	Sig. (2-tailed)	0.376	0.813	0.825								
TLTA	Pearson Correlation	0.044	-0.263	0.244	-0.335	1						
	Sig. (2-tailed)	0.875	0.344	0.381	0.222							
TETD	Pearson Correlation	-0.105	.623*	-.575*	0.097	-.640*	1					
	Sig. (2-tailed)	0.709	0.013	0.025	0.732	0.01						
TLTD	Pearson Correlation	0.209	-0.285	0.237	0.16	.713**	-.686**	1				
	Sig. (2-tailed)	0.455	0.303	0.395	0.569	0.003	0.005					
ROE	Pearson Correlation	0.163	-0.046	0.034	-0.269	-0.425	0.409	-.548*	1			
	Sig. (2-tailed)	0.562	0.871	0.906	0.332	0.114	0.13	0.034				
ROA	Pearson Correlation	-0.102	-0.463	0.465	-0.185	-0.248	0.188	-0.396	.875**	1		
	Sig. (2-tailed)	0.717	0.082	0.081	0.51	0.373	0.503	0.144	0			
TDTA	Pearson Correlation	.572*	.693**	-.700**	-0.413	0.017	0.241	-0.072	0.05	-0.26	1	
	Sig. (2-tailed)	0.026	0.004	0.004	0.126	0.952	0.387	0.798	0.858	0.349		
CR	Pearson Correlation	-0.275	-0.017	0.005	-0.357	-0.042	0.03	-0.37	0.252	0.248	0.336	1
	Sig. (2-tailed)	0.321	0.953	0.987	0.191	0.882	0.914	0.175	0.366	0.372	0.22	
*. Correlation is significant at the 0.05 level (2-tailed).												
**. Correlation is significant at the 0.01 level (2-tailed).												

Correlation analysis

In order to detect multicollinearity among the variables, cross correlations were performed and the outcome is shown in Table 2. The total number of observations was 15. EPS was significantly positively correlated with the liquidly ratio of total customer deposits to total assets at 5% significant level, with coefficient of correlation of 0.572. The other CAMEL ratios were not significantly correlated with EPS.

On the other hand, the leverage ratio was significantly negatively correlated at 10% with ratio of equity capital to assets (-0.993). Both these ratios measure capital adequacy. Karthikeyan and Shangari (2014) studied the financial performance of top six private sector banks in India for the period 2009-2013 adopting the CAMEL model and the findings showed that there was negative correlation between Capital Adequacy Ratio and Net Advances to Total Assets in Capital Adequacy Ratio. The leverage ratio is, however, positively correlated with deposits to total assets with a correlation of 0.693. Karthikeyan and Shangari (2014) also revealed that there was no correlation between ratios of Management Efficiency, Earning Quality and Liquidity; which is contrary to our findings.

It was found that the ratio of provisions for loans losses, a measure of asset quality was not significantly correlated to any of the CAMEL ratios. On the other hand, Total loans to assets ratio was only significantly negatively correlated with total expenses to total deposits (-0.640*) and total loans to total deposits (0.713**), with the rest of the variables being insignificant.

Further, as expected, the return of equity was significantly positively correlated with the return on assets at 10% significant level (0.875). The return on equity was also statistically negatively correlated with total loans to total deposits (-.548) at 5% significant level. Meanwhile, the return on assets was only correlated with return on equity (0.875**).

The liquidity ratio of total deposits to total assets was statistically correlated with the earnings per share (.572*) and leverage ratio (0.693**), and negatively correlated with total equity capital to total assets (-0.700**). Lastly, Cash ratio appeared not to be statistically and significantly correlated with any of the variables.

Table 4: Regression Output

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	-1143.672	833.271		-1.373	.242		
	Leverage ratio	-14.288	50.390	-.725	-.284	.791	.003	317.428
	Total equity to total assets	1048.361	4528.758	.516	.231	.828	.004	241.645
	Provisions to loan losses	920.663	1490.479	.162	.618	.570	.301	3.319
	Total loans to total assets	55.944	140.529	.149	.398	.711	.147	6.815
	Total expenses to total deposits	-413.572	2381.750	-.088	-.174	.871	.080	12.541
	Total loans to total deposits	-77.592	185.896	-.196	-.417	.698	.093	10.714
	Return on equity	569.173	284.890	1.822	1.998	.116	.025	40.393
	Return on assets	-5209.767	3240.186	-1.778	-1.608	.183	.017	59.379
	Total deposits to total assets	1527.333	482.512	1.193	3.165	.034	.145	6.899
	Cash ratio	-329.179	119.768	-.714	-2.748	.051	.305	3.277

a. Dependent Variable: Earnings per share

Regression Analysis

The regression model measured the impact of the independent variables of Capital Adequacy (Leverage and Equity to Assets ratios), Asset Quality (Provision for Loan Loss and Total Loans to Total Assets ratios), Management Quality (Expenses to Deposits and Loans to Deposits ratios), Earnings Ability (Return on Equity and Return on Assets ratios) and Liquidity (Customer Deposits to Total Assets and Cash ratios) on the Dependent variable (Earnings Per Share (EPS) of the selected banks.

The regression output is shown in Table 3. Diagnostic tests were performed on the regression model. For example, the model was diagnosed for problems of serial correlation, multicollinearity and goodness of fit. The regression model presented an r-squared value of 0.918. This showed that 91.8% of the variation in the dependent variable (EPS) can be explained by variation in the independent variables.

Further, the model was tested for serial correlation using the Durbin Watson statistic. Nine independent variables out of the 10 were statistically insignificant at 5% significant level (sig-value or p-value > 0.05). However, a ratio of total deposit to total assets was statistically significant with a p-value of 0.034 and a positive coefficient of 1.193. This outcome means that a one unit increase in liquidity ratio as measured by total customer deposits to total assets will increase earnings per share by 1.19 units. Liquidity ratio in a bank measures the ability of the bank to pay off its current commitments (Ahsan, 2016). Liquidity is very critical for banks and the confidence of its customers mainly rests upon the banks' ability to meet its immediate commitments. A positive impact of liquidity on bank performance has also been confirmed in Ethiopia (Mulualem, 2015).

Hypothetical Testing:

The Hypotheses tested were as follows;

H1: Capital adequacy has no significant impact on selected banks' financial performance

Both the leverage ratio and TETA were insignificant at p values of .791 and .828 respectively. This outcome confirms that capital adequacy have no significant impact on bank performance. This outcome is contrary to Mulualem (2015), who analysed the financial performance of 14 Ethiopian Commercial Banks for the period 2010-14 and used CAMEL factor measurements. Results indicated that capital adequacy, Asset Quality, and Management Efficiency had negative relationship with both profitability measures.

H2: Assets quality has no significant impact on selected banks' financial performance

Assets quality as measured by provisions for loan losses and total loans to total assets was found to be insignificant with p-values of .570 and .711 respectively, which was still contrary to Mulualem study who found a negative relationship.

H3: Management efficiency has no significant impact on selected banks' financial performance

The same insignificant relationship was found with the management efficiency ratios of total expenses to total deposits and total loans to total deposits with p-values of .871 and .698 respectively.

H4: Earning ability has no significant impact on selected banks' financial performance

Earning ability calculated using Return on Equity and Return on Assets ratios showed insignificant relationship at 10% with p-values of .116 and .183 respectively.

H5: Liquidity of selected banks has no significant impact on their financial performance

The study, however, revealed that the Liquidity measured using Total deposits to Total assets and cash ratios showed significant relationship at 5% with p-values of 0.034 and 0.051 respectively.

Table 5: Summary of accepted/rejected hypothesis.

Hypothesis	Statement (at 5% significant level)	Result
H1	Capital adequacy has no significant impact on selected banks' financial performance	Accepted
H2	Assets quality has no significant impact on selected banks' financial performance	Accepted
H3	Management efficiency has no significant impact on selected banks' financial performance	Accepted
H4	Earning ability has no significant impact on selected banks' financial performance	Accepted
H5	Liquidity of selected banks has no significant impact on their financial performance	Rejected

SUMMARY OF FINDINGS

To sum up, the correlation analysis has shown that none of the CAMEL ratios except Liquidity ratio has any significant correlation with Earning Per share. The regression analysis underscores that nine out of 10 independent variables were statistically insignificant at 5% significant level. On the basis of the above findings, hypotheses 1, 2, 3, and 4 are accepted and hypothesis 5 is rejected.

CONCLUSION

The aim of the study is to evaluate the performance of listed commercial banks in Botswana using the CAMEL model for the period 2011-2015. The specific objectives were to assess the Capital Adequacy, Asset Quality, Managerial Efficiency, Earnings Ability and the Liquidity position of the selected banks and to measure their impact on the financial performance of the selected banks. In addition, the study aimed to reflect on the overall performance of the listed commercial banks for the 5-year period.

The study confirms that all the selected banks are highly leveraged indicating that the banks had adequate capital funds that would comfortably provide coverage against bankruptcy. It is worth noting that 64% of the assets of the selected banks were made of loans, which emphasized the quality when contrasted with returns. However, 82% of the loans were generated from deposits, which might be a concern for asset transformation. It is encouraging to note that average expenses during the period of study stood at 2.7% of the total deposits that indicates efficient control over expenses. The earning ability registered a good return to the shareholders, a rate that was above 15%, exhibiting strong earnings ability over the five-year period. The liquidity position of the selected banks during the period of study was also very sound.

The correlation analysis indicated that Earnings per share had a strong positive relationship with liquidity ratio of total customer deposits to total assets. The other CAMEL ratios, however, were not significantly correlated with EPS. On the other hand, the leverage ratio was significantly negatively correlated with ratio of equity capital to assets.

The regression analysis showed that nine independent variables out of the 10 were statistically insignificant at 5% significant level (sig-value or p-value > 0.05). Capital adequacy, Asset quality, Earnings Ability and Managerial efficiency had no significant relationship with selected banks' performance measured in terms of Earnings per share. On the other hand, the Liquidity position of these banks was found to be significantly related to the performance of selected banks at 5% significance level. Liquidity ratios measure the ability of the bank to pay off its current commitments (Ahsan, 2016). Liquidity is very critical for banks and the confidence of its customers mainly rests upon the banks' ability to meet its immediate commitments. A positive impact of liquidity on bank performance has also been confirmed in Ethiopia (Mulualem, 2015).

The findings also indicate that, overall the selected banks performed well in terms of most of the components of CAMEL model, similar to the findings of Mousa (2016) who evaluated the performance of three selected Islamic Banks in Jordan for the period 2010-15 applying CAMEL model and noted that all the selected banks had adequate capital, their assets and earning capacity were growing in spite of the slowdown of the economy and regional instability.

In conclusion, the findings of this study will be helpful to the management of selected banks in making appropriate managerial decisions. The results of the study will also assist both investors and shareholders to make informed decisions on their investment in banks in Botswana.

LIMITATIONS & DIRECTIONS FOR FUTURE RESEARCH

The study faced constraints in terms of getting data on other variables prescribed in the CAMEL model such as number of employees, which was not readily available from company websites. Further, the study focused only on major commercial banks that are listed on the domestic bourse. A study in future with much larger sample of commercial banks in Botswana with inclusion of all CAMEL ratios will provide a better picture on the performance of commercial banks in Botswana. Despite the aforementioned limitations, the study provides an in depth understanding of the financial performance of selected listed commercial banks in Botswana.

References

Ahsan, M. K. (2016). Measuring financial performance based on CAMEL: A study on selected Islamic banks in Bangladesh. *Asian Business Review*, *6*(1), 47-56.

Aspal, P. K., & Dhawan, S. (2016). Camels Rating Model For Evaluating Financial Performance of Banking Sector: A Theoretical Perspective. *International Journal of System Modelling and Simulation (ISSN Online: 2518-0959)*, *1*(3), 10-15.

Babar, H. Z., & Zeb, G. (2011). CAMELS rating system for banking industry in Pakistan. *Unpublished Master Thesis). Pakistan: Umea School of Business*.

Bank of Botswana (2015). Banking Supervision Annual Report 2015.Retrieved on 10/09/2017 from http://www.bankofbotswana.bw/assets/uploaded/BoB%20BSAR%202014%20Web.pdf

Bank of Botswana. Directory of Financial Institutions Operating in Botswana, June 2017.

Baral, K. J. (2005). Health check-up of commercial banks in the framework of CAMEL: A case study of joint venture banks in Nepal. *Journal of Nepalese Business Studies*, *2*(1), 41-55.

Dash, Mihir and Das, Annyesha, A CAMELS Analysis of the Indian Banking Industry (July 14, 2009). Retrieved SRN: https://ssrn.com/abstract=1666900 or http://dx.doi.org/10.2139/ssrn.1666900

Desta, T. S. (2016). Financial Performance of "The Best African Banks": A Comparative Analysis Through Camel Rating. *Journal of Accounting and Management*, *6*(1), 1-20.

Durbin, J & Watson, G.S. (1951). Testing for Serial Correlation in Least Squares Regression. II *Biometrika, 38*(1/2), 159-177

Eakins, S., & Mishkin, F. (2012). Financial Markets and Institutions . Massachusetts: Pearson Education: Inc.

Ferrouhi, E. M. (2014). Moroccan Banks analysis using camel model. *International Journal of Economics and Financial Issues*, *4*(3), 622-627.

Ghasempour, S., & Salami, M. (2016). Ranking Iranian Private Banks Based on the CAMELS Model Using the AHP Hybrid Approach and TOPSIS. *International Journal of Academic Research in Accounting, Finance and Management*

Sciences, *6*(4), 52-62.

Gupta, R.CA. (2014). An analysis of Indian public sector banks using CAMEL approach. *IOSR Journal of Business and Management*, *16*(1), 94-102. http://businessjargons.com/camels-rating.html#ixzz4khrdQ3gp

Iheanyi, I. H. & Sotonye, I. (2017), Assessing the performance of Nigeria's Bank Through the Camel Model, journal of Accounting and Financial Management, 3 (1), pp14-22, ISSN 2504-8856.

Ishaq AB, Karim A, Ahmed S, Zaheer A (2016) Evaluating Performance of Commercial Banks in Pakistan: "An Application of Camel Model". J Bus Fin Aff 5: 169. doi:10.4172/2167-0234.1000169

Jha, S., & Hui, X. (2012). A comparison of financial performance of commercial banks: A case study of Nepal. *African Journal of Business Management*, *6*(25), 7601.

Karthikeyan, P., & Shangari, B. (2014). Calibrating Financial Soundness among Selected Private Sector Banks in India by Using Camel Model. *International Journal of Management Research and Reviews*, *4*(4), 449.

Kaur, J., Kaur, M., & Singh, S. (2015). Financial Performance Analysis of Selected Public Sector Banks: A Camel Model Approach. *International Journal of Applied Business and Economic Research*, *13*, 4327-4348.

Keovongvichith, P. (2012). An analysis of the recent financial performance of the Laotian banking sector during 2005-2010. *International Journal of Economics and Finance*, *4*(4), 148.

Lakew, T. B., Meniga, M., & Gebru, A. (2014). A study on financial performance of multipurpose co-operative unions in Tigray Region, Ethiopia. *International Journal of Current Research,* 6(11), 9810-9815.

Lakhtaria, N. J. (2013). A Comparative Study of the Selected Public Sector Banks through CAMEL Model. *PARIPEX-Indian Journal of Research*, *2*(4), 37-38.

Liu, J., & Pariyaprasert, W. (2014). Determinants of Bank Performance: The Application of the CAMEL Model to Banks Listed in China's Stock Exchanges from 2008 to 2011. *AU-GSB e-JOURNAL*, *7*(2).

Masood, O., Ghauri, S.M.K., and Aktan, B. (2016). Predicting Islamic banks performance through CAMELS rating model. *Banks and Bank Systems, 11*(3).

Merchant, I. P. (2012). Empirical study of Islamic banks versus conventional banks of GCC. *Global Journal of Management and Business Research*, *12*(20).

Moffat, B. (2009). The Banking Environment in Botswana: An Overview. *Botswana Notes and Records, Botswana Society,* (41), 95-103.

Mohiuddin, G. (2014). Use of CAMEL Model: A Study on Financial Performance of Selected Commercial Banks in Bangladesh. *Universal Journal of Accounting and Finance*, *2*(5), 151-160.

Mousa, T.A. (2016). Measuring Financial Performance Based on CAMEL Rating Model on Islamic Banks in Jordan. *Journal of Advanced Social Research, 6* (11), 1-10

Mulualem, G. (2015). *Analysing Financial Performance of Commercial Banks in Ethiopia: CAMEL Approach* (Doctoral dissertation, AAU).

Mulugeta, T. (2016). *School of Commerce* (Doctoral dissertation, Addis Ababa, University).

Myers, S. C., & Rajan, R. G. (1998). The paradox of liquidity. *The Quarterly Journal of Economics*, *113*(3), 733-771.

Neill, J. (2003). Quantitative Research Design: Sampling & Measurement. *Analysis of Professional Literature, Class 5, retrieved March 3rd, 2015, http://www. wilderdom. com/OEcourses/PROFLIT/Class5QuantitativeResearchDesignSamplingMeasurement. htm# Sampling*.

Reddy, D. M., & Prasad, K. (2011). Evaluating performance of regional rural banks: an application of CAMEL model. *Researchers World, 2*(4), 61.

Roman, A., & Sargu, A. C. (2013). Analysing the financial soundness of the commercial banks in Romania: an approach based on the camels framework. *Procedia economics and finance*, *6*, 703-712

Rostami, Malihe (2015), CAMELS' Analysis in Banking Industry. *Global Journal of Engineering Science and Research Management, 2*(11), 20-26

Rozzani, N., & Rahman, R. A. (2013). Camels and performance evaluation of banks in Malaysia: conventional versus Islamic. *Journal of Islamic Finance and Business Research*, *2*(1), 36-45.

Saini, P., & Sindhu, J. (2014). Role of Commercial Bank in the Economic Development of India. *International Journal of Engineering and Management Research*, *4*(1), 27-31.

Sathyamoorthi, C.R, Mogotsinyana Mapharing, Shabane Ndzinge, Gobona Tobedza, Lillian Wally-Dima Performance Analysis Using Camel Rating: A Comparative Study Of Listed Commercial Banks In Botswana: *University of Botswana Faculty of Business Conference 2017:* Transforming And Growing Economies Through Sustainable Business Innovation: July 2017

Statistics Botswana. September 2016. Selected Statistical Indicators 1966-2016, 16.

Tehrani, R., Mehragan, M. R., & Golkani, M. R. (2012). A model for evaluating financial performance of companies by data envelopment analysis: A case study of 36 corporations affiliated with a private organization. *International Business Research*, 5(8), 8-16.

Stephen, O. O., Apollos, E. A., & JE, A. (2016). The Camel Rating Based Assessment of the Performance of Nigerian Banks in the Post Consolidation Era (2005-2014). *IIARD International Journal of Banking and Finance Research, 2* (2)

Trivedi, K. R. (2013). A camel model analysis of scheduled urban co-operative bank in Surat City–A case study of Surat people's cooperative bank. *IOSR Journal of Business and Management*, 48-54.

Voon, S. P. (2013). *Camel performance on domestic and foreign banks in Malaysia* (Doctoral dissertation, University Malaysia Sarawak,(UNIMAS)).

Zedan, K. A., & Daas, G. (2017). Palestinian Banks Analysis Using CAMEL Model. *International Journal of Economics and Financial Issues*, *7*(1).

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Measuring Knowledge Workers' Productivity in the Kingdom of Saudi Arabia Telecom Industry

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ABSTRACT

This study establishes and tests a framework for measuring knowledge workers' output in the Kingdom of Saudi Arabia (KSA) telecom industry based on the examination of capitalized labor and average revenue per user (ARPU) to measure value added intellectual coefficient (VAIC). Quarterly financial statements from 2008-2015 were used to measure an ARPU composite score of the only four publicly traded telecommunication companies on the Saudi Exchange (Tawadul). The four telecom companies comprise 32 cases which satisfied the required number of cases needed to detect a R^2 that is 50% or higher 80% of the time. A hierarchical regression was performed to measure capitalized labor (CLE), Pulic's VAIC, and its determinants' effects on ARPU composite score. The results showed a direct relationship between VAIC, its determinants, and ARPU composite score. The full model explained 78% of the ARPU composite score. CLE and CEE were significant with a combined R^2 of 29%. This study shows how ARPU is linked to functional-level strategies in telecom industry, and can be used as a KPI to measure the productivity of knowledge workers.

Keywords: ARPU, Capitalized Labor, Knowledge Workers, VAIC.

INTRODUCTION

There comes a time when an organization must rethink strategies to remain relevant in competitive markets. Commonly, an organization may achieve growth and profitability yet have trouble with new competitive and macroenvironment forces [13]. During growth and profitability period complacency or the attitude, "Don't try to fix something that isn't broken" can replace rethinking existing strategies. Contrary to this adage, Drucker stressed that the height of profitability and growth is the perfect time to take a renewed look at one's strategies [13]. The starting point for such revaluation is solid financial analysis that aims at the theory of the organization's business or how the organization makes its money.

Solid financial analysis focuses on the entire industry in which the organization operates, and goes beyond traditional financial measures such as ROE, ROA, and ROI. It includes key performance indicators (KPIs) that show links between an organization's strategies and the cost structure activities of its business model. These KPIs forecasts revenue growth based on value chain activities that creates the, productivity and efficiency necessary for a sustainable competitive advantage [41]. Contrary to traditional financial measures, KPIs have other roles that extend beyond the forecast of future revenue growth. In many instances, these KPIs are used by stakeholders to create public policy and corporate, business, and functional-level strategies respectively.

THEORETICAL BACKGROUND

ARPU: The Global KPI

Two key characteristics distinguish KPIs from traditional financial measures:

1. They are industry specific.
2. They typically measure revenue operations within an organization's cost structure.

For example, the telecom industry's common KPI is, the average revenue per user (ARPU) KPI which signals the effectiveness of strategic execution and provides a more accurate forecast than traditional financial measures when combined with revenue, cost, number of employees, or customers.

ARPU is the KPI of preference in the telecom investment community, companies, and governments globally [10,19]. The global acceptance of ARPU is due to its multifaceted functions to predict service revenue, evaluate consumer preferences, valuate spectrum capacity, compare new and existing telecom offerings, and forecast revenue [3,5,22,33,35,44,48].

ARPU is also used to determine network expansion and mediate between network and service provisioning of telecom technologies. There is an implied rule among telecom companies worldwide which applies to any expansion or deployment of advanced telecom technologies: Network capacity must exist before use. This universal rule makes it suitable for telecom companies to use ARPU to forecast the demand or adoption rate before strategic deployment of advanced technologies [48].

ARPU mediates between network and service costs, targeting the functional-level strategies of productivity and efficiency, because it also reflects the alignment between an organization's corporate, business, and functional-level strategies aimed at achieving productivity and efficiency (Kaplan & Norton, 2008). The alignment between these levels of strategy allows value creation to occur by achieving economies of scale or learning aimed at gaining a sustainable competitive advantage [23,32,41].

ARPU has a commonality with the value added intellectual coefficient (VAIC), which is an aggregation of an organization's human, structural, and employment capital that shows the overall efficiency of an organization's intellectual ability to create value [43]. The commonality between VAIC and ARPU is based on the universal rule of network capacity preceding use which translates into the cost of provisioning treated as an investment. This universal rule coincides with the concept that salary and wage expenses are treated as investments when calculating the value-added determinant of VAIC. This paper will extend the discussion on this universal rule as a building block for strategic deployment of advanced telecom technologies by capitalized labor.

Saudi Arabia's Ninth Development Plan

It is inherent in every country's economic plan to achieve full employment for its citizens, and the Kingdom of Saudi Arabia (KSA) is no different in this respect. However, the way KSA set out to aim for full employment makes it the ideal subject for this study. KSA lays out the plan for full employment in The KSA Ninth Development Plan [38], a quinquennial publication which essentially highlights the direction KSA aims to move the economy towards. The plan is a two-dimensional outline highlighting the intended use of the factors of productions within key strategic industries.

An excerpt in Chapter 10 entitled, "Manpower and Labor Markets" from the Ministry of

Economy & Planning makes the case of why KSA was selected for this study:

> *Thus, the drive towards a knowledge-based economy requires development of scientific-education and training programs, with the aim of creating "knowledge workers" through inculcation, throughout the various stages of education, with a culture of work, persistence and endurance, creativity and innovation [10]. (Section 10.3.1)*

Thus, the goal is to increase the training of the Saudi workforce to address the needs of the labor market. There is mention of the need to transition to a knowledge-based economy, with the creation of knowledge workers as the conduit to achieving this. The significant takeaway of this excerpt is the identification of scientific-education, training programs, and the inculcation of creativity and innovation as requirements needed to create knowledge workers. These requirements necessitate a work environment to deliver advanced technologies, and this is best characterized in KSA's telecom industry. From a global perspective, to deliver advanced technologies in telecommunications it requires human and structural capital acting in unison.

From a human capital viewpoint, the professionals who provide these innovative products and services must have hybrid skills such as project management, financial and business analysis, and a strong information systems foundation. The telecom industry in the KSA relies on internal software development as one of the conduits to foster convergence of these skills [15,19]. The role of internal software development is beyond the scope of this study, but the capitalization aspect is worth mentioning to support selecting the KSA telecom industry to examine the relationship between VAIC and ARPU.

Functional-Level Strategies and the Knowledge Worker

Before an in-depth critique of VAIC and ARPU, the role of strategy and the characteristics of the knowledge worker need explication to better understand the effects between ARPU and VAIC. The fundamental principles of strategy earn brief mention in the existing body of research on VAIC, only to disappear in the controversy over what VAIC measures [2, 7, 25, 39, 40, 43, 47]. The controversy surrounding VAIC stems from ambiguous results when VAIC is correlated with traditional financial measures such as ROA and ROE. Table 1 highlights a consistent pattern related to VAIC, the traditional financial measures, and the characteristics of the samples selected for analysis. To prevent this paper from slipping into the pit of VAIC ambiguity, it was categorized as a KPI confirming strategy at the functional level in a single industry.

Table 1 VAIC Mixed versus Homogenous Effects

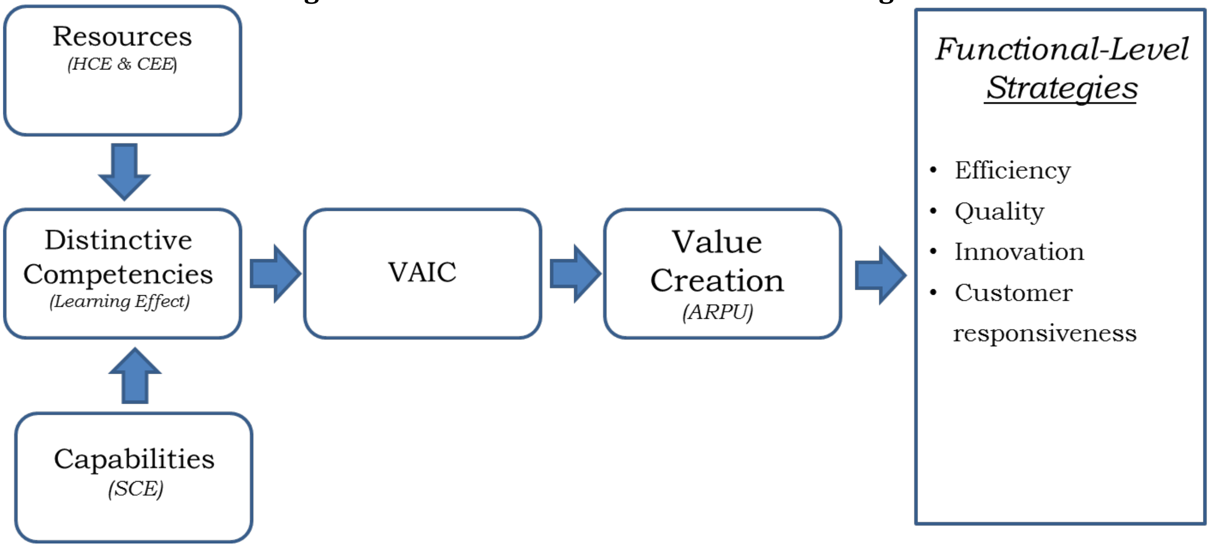
No#	Study	Sample	Dependent Variable	Independent Variable(s), Coefficients	t-statistic (Sig.)	R^2	Adj. R^2
1.	Clarke et al. (2011)	2,161 firms listed on Australian Stock Exchange from 2003 to 2008. Mixed	ROA	HCE =.210 CEE =.751 SCE =.007	11.91** 35.38** 0.439	---	.708
			ROA	VAIC $_t$ =.302 VAIC $_{t-1}$ = .214	13.03** 9.04**	---	.240
			ROE	HCE =.234, CEE =.502 SCE = .002	9.936** 17.69** 0.082	---	.478
			ROE	VAIC $_t$ =.229 VAIC $_{t-1}$ =.214	9.60** 8.36**	---	.293
2.	Calisir et al. (2010)	14 Information Technology & Communications firms on Istanbul Stock Exchange from 2005 to 2007. Homogenous	ROA	HCE=.033 LEV=.613 SZE=.177	--- --- ---	.600	---
			ROA	VAIC=.005 SZE=.068 LEV=.670	--- --- ---	.464	---
			ROE	CEE=.262 HCE=.028	--- ---	.496	---
3.	Komenic and Pokrajčić (2012)	37 multinational companies (MNCs) in Serbia from 2006 to 2008. Mixed	ROA	HCE =.338 CEE =.452 SCE =.119	4.11** 5.12** 1.40	---	.414
			ROA	HCE =.302 CEE =.476 SCE =.269	3.80** 5.60** 3.28**	---	.455
4.	Joshi et al. (2013)	11 Australian owned banks from 2006 to 2008. Homogenous	ROA	HCE =.077 CEE =.609 SCE =.238	.387 3.77** 1.26	.594	.285
5.	Chen et al. (2005)	4,254 firm years on the Taiwan Stock Exchange from 1992 to 2002. Mixed	ROA	VACA=19.34 VAHU=0.07 STVA=.129	98.73** 31.36* 5.39*	---	.842
			ROA	VAIC=.199	61.23*	---	.468
			ROE	VACA=34.31 VAHU=.169 STVA=-.027	65.07* 28.04* -0.42	---	.729
			ROA	VAIC=.396	57.73*	---	.439
6.	Javornik et al. (2012)	12,000 Slovenian companies from 1995 to 2008. Mixed	ROA	VAIC=.000 SZE=.003 LEV=-.002	1.81 12.15*** -5.26***	.013	---
			ROE	VAIC=.001 SZE=.000 LEV=.000	1.78 -0.80 -1.16	.003	---
			ROA	HCE=.000 SCE=.001 CEE=.002 SZE=.004 LEV=-.001	1.73 2.50* 3.56** 11.62 -5.25***	.017	---
			ROE	HCE=.000 SCE=.002 CEE=.135 SZE=.004 LEV=-.001	1.69 2.45* 3.65*** 3.60*** - 3.10***	.021	---

7.	Phusavat et al. (2011)	11 manufacturing firms on the Thailand Stock Exchange (SET 100) from 2006 to 2009. Homogenous	ROA	VACE=.588 VAHC=.006 STVA=-.125 InCE=-.139	6.47** 3.30*** -2.10** -1.73	.541	---
			ROE	VACE=1.311 VAHC=.010 STVA=.101 InCE=-.062	5.29** 1.88 0.62 -0.28	.541	---
8.	Rahman and Ahmed (2012)	30 companies (11 banks, 10 textiles, and 9 pharmaceutical firms) on the Dhaka Stock Exchange (DSE) between 2007 and 2008. Mixed	CSP (Change in Stock Price)	HCE =.595 CEE =.258 SCE =.051	-1.43 -3.11 1.13	.275	.191
9.	Firer and Stainbank (2003)	65 South African publicly listed companies for the 2001 fiscal year. Mixed	ROA	*L*MCAP=.113 *L*DER=-.046 *L*ATO=.299 *L*PC=.105 *L*VAIC=.415	.894 .700 2.070 .794 2.899	.326	---
10.	Firer and Williams (2003)	75 South African publicly listed companies for the 2001 fiscal year. Mixed	ROA	HCE =-.004 CEE =-.005 SCE =.261	-.023 -.291 1.674	---	.048
11.	Huei-Jen Shiu (2006)	80 Technology listed companies from 2003Annual Reports	ROA	HCE =.016 CEE =.515 SCE =-.0182 SZE =-.019 LEV = .047 ROE = .247	.870 3.25*** -1.56 -1.90* 1.29 <.0001***	---	.795

$^{*}p < .05.$ $^{**}p < .01.$ $^{***}p < .001.$

Functional level strategies aim to achieve productivity through efficiency, quality, innovation, or customer responsiveness [23]. Organizations set out to achieve a combination of these aims in pursuit of gaining a competitive advantage [24, 30, 36, 39, 41]. Figure 1 is a modified diagram taken from Hill and Jones to show how VAIC links to strategy at the functional-level [23]. Figure 1 extends resources and capabilities as determinants of distinctive competencies due in part to the learning effect, which simply implies there is an inverse relationship between labor productivity and cost based on the employee learning more efficient ways to work. Porter mentions this inverse learning effect with cost: "The cost of value activity can decline over time due to learning that increases its efficiency" [41]. Both Hill and Jones [23] and Porter [41] discussed this learning effect under the assumptions that knowledge work has a cost and knowledge workers who increase productivity by learning better ways to achieve efficiencies creates economies of scale.

Figure 1 VAIC Link to Functional Level Strategies



Achieving economies of scale requires the existence of knowledge work and knowledge workers inside the organization's cost structure for strategies at the corporate and business level to take root. Knowledge work is work that is productive or work that achieves productivity by efficiency, quality, innovation, or customer responsiveness. Drucker [14] and Drucker [13] characterized knowledge workers as employees who:

1. Own the means of production.
2. Consider themselves professionals.
3. Have specialized knowledge; they must have access to an organization.
4. Identify themselves by their knowledge.
5. Value learning with the sole intent of knowing their job better than anyone in their organization including their boss.
6. Believe their productivity requires that they are seen and treated as "assets" rather than "costs."

The characteristic that knowledge workers are seen and treated as assets coincide with Pulic [43] statement:

> *All the expenses for employees are part of human capital. What is new about this concept is that salaries are no longer part of the input. This means expenses related to employees are not treated as cost but represent an investment. (p.64)*

At the time of Pulic [43] article, VAIC was introduced as a new human capital concept. However, thirty-four years prior, Dr. Peter Drucker first mentioned that knowledge workers are to be seen and treated as assets rather than as costs. He mentioned this under the auspice of a foretold paradigm change within organizations that would alter the assumptions of management forever. This paradigm shift in management also debunks the argument that VAIC confuses employee cost with being an asset [2, 25].

Measuring Knowledge Workers

The most accurate way to measure the output of knowledge workers requires that organizations report employees' information on their financial statements—which potentially compromises an organization's strategic direction [16]. The was one of the arguments behind the 15-month delay by the US Securities and Exchange Commissions (SEC) in 2010 in deciding on the convergence between GAAP and IFRS or replacing GAAP with IFRS [6, 16]. An alternative, or workaround to this problem, could have been to use a proxy variable for the measure of knowledge workers' output, and regress it with a KPI that represents productivity, efficiency, quality or innovation [11, 28]. The framework for this study adopts this alternative by using VAIC's human capital determinant and ARPU as the KPI to measure knowledge workers' output.

The Relationship Between VAIC, ROA and ROE

It is almost impossible to pinpoint the number of knowledge worker in an organization, much less quantify their exact output in terms of revenue created. Traditionally, market or research analysts use the revenue per employee as an acceptable measure of employee output. A popular alternative is the Intangible Asset Monitor which require an organization's support in disclosing information that possibly compromises its strategic direction on planning [29, 49]. Contrary to both the traditional approach of revenue per employee and the Intangible Asset Monitor, VAIC represents a holistic measure of intellectual ability in an organization in terms of efficiency, without the need to identify the number of knowledge workers present.

According to Pulic [24], VAIC uses operating revenue, human labor, equipment, and structure costs to measure intellectual ability. Without the headcount of knowledge workers in the VAIC calculation, intellectual ability is measured based on converting labor and equipment costs into value represented by revenue growth. This revenue growth is generated from within an organization's cost structure. The conversion of human labor, equipment, and structure costs shows the nuts and bolts of how an organization makes its money or its theory of the business [14]. The theory of the business is premised on the link between operating revenue gained and customer value because of increased efficiencies and productivity at the functional level in the organization [28, 41]. Prior research that reinterprets ROA and ROE, using VAIC and its determinants of human capital efficiency (HCE), structural capital efficiency (SCE), and capital employed efficiency (CEE), confirm this assumption [7,30,34,40]. The knowledge worker fits into this assumption as the creator of the productivity and efficiency which leads to economies of scale by means of the learning effect [25, 41].

Based on this assumption, a high coefficient determination R^2 between VAIC and ROA or VAIC and ROE shows that a high degree of efficiency and productivity exists. However, under this same assumption, but with a low R^2 between VAIC and ROA or VAIC and ROE, can one assume efficiency and productivity are insignificant or nonexistent among all organizations in each market index or exchange? If yes, then VAIC is not a credible measure of overall efficiency. If no, then we have a new limitation of VAIC.

A New Limitation of VAIC

Limitations of VAIC in prior research questioned its ability to measure intellectual capital, the core of their argument being the VAIC calculation itself [25, 47]. Critics of VAIC first point out that Pulic [43] regulates human capital (HC) to an accounting entity on an income statement. The second point of criticism is that parts of VA, HC and structure capital (SC) vary between different industries and that it is not possible to compare capital and noncapital-intensive industries [25].

This first point of criticism mentioned is true in instances where no capitalized expenses (capex) labor from internal software development are present [15]. If capex labor costs from internal software development are part of functions performed by organizations, then the first point of criticism fails to recognize a fundamental value creation activity shown on traditional financial statements—especially in the global telecom industry, to include KSA [1,4]. Capex labor cost from internal software development is a value creation activity that reflects the conversion of human capital-intensive labor costs into assets on the balance sheet. Examples of capex labor costs from internal software development activities in the telecom industry are Enterprise Resource Planning (ERP), Customer Relationship Management (CRM), and Supply Change Management (SCM) systems implementations including organizational customizations and changes that add new functionality to existing systems. The key takeaway from capex labor costs from internal software development activities are that labor costs are capitalized with software and equipment. The labor costs are capitalized under the category of activities that automate existing manual processes or add new functionality to an existing system [15, 29].

The second point of criticism speaks to the previously mentioned questioned: If a low R^2 between VAIC and ROA or VAIC and ROE is reported, can one assume efficiencies and productivity are insignificant or nonexistent in a dataset of organizations from an entire market index or exchange? The instances from Table 1, where low R^2s between VAIC and ROA or VAIC and ROE occurred, the samples represented an entire market index of organizations across various industries. Prior studies that used an entire market index or exchange indirectly assume these organizations have the same or similar corporate, business, and functional level strategies—which is impossible.

Andriessen [2] highlights improve internal management with two key emphases: creating resource-based strategies and translating business strategies into action; the use of an entire market index to measure VAIC's association with ROA and ROE gives credence to the second point of criticism. However, the inability to compare capital- and non-capital-intensive industries further adds to the argument of a new limitation of VAIC because when an entire market index is used as a sample size to measure VAIC, it weakens the effect of functional-level strategic measures. Since VAIC is considered a value creation index, this weakness is expanded when corporate-level productivity and equity ratios such as ROA and ROE are measured against it.

VAIC is a representation of the value creation index comprised of customers, products, services, and the resources used to create the products or services [43]. In examining the VAIC to ROA and VAIC to ROE associations, clearly VAIC determinants are part of the value creation index equation that reflect cost of used resources within an organization's cost structure. However, how does ROA and ROE satisfy the other side of the value creation index equation of customers, products, and services? If we draw on the previously mentioned assumptions:

1. Realized value by customers is because of increased efficiencies and productivity at the functional level.
2. A low R^2 between VAIC and ROA or VAIC and ROE does not infer efficiencies and productivity are small or nonexistent among all the organizations in a market index.

The associations of VAIC and ROA and VAIC and ROE need a moderating effect to bridge the relationships between the value creation index, and ROA and ROE metrics. Thus, the new limitation of VAIC is:

> *When measured in terms of productivity and equity ratios such as ROA and ROE, given all organizations in a market index or exchange as a sample size, a moderating effect measuring customers' responses to the wide range of products and services in terms of revenue is needed.*

The variable or variables representing this moderating effect are beyond the scope of this study, but it makes the case for further study on this topic.

This new limitation does not take away from prior studies that examined VAIC's associations with ROA and ROE among organizations in the same industry. The tangible, intangible, and competitor interrelationships within these organizations' business units compensate for the absence of this moderating effect [40, 41]. This study removes the need of a moderating effect by examining VAIC's association with ARPU in a single industry. Furthermore, ARPU as a KPI is unanimously accepted in telecom industries globally; it can address the other side of the value creation index component comprised of customers, products and services [3, 22, 33, 44, 48].

The Seven Takeaways

There are seven takeaways from the literature presented in this paper which lays the foundation for testing the relationship between VAIC, its determinants, Capitalized Labor, and ARPU in the Telecom Industry in Saudi Arabia.

1. The aim of VAIC is to measure value creation to achieve a competitive advantage [25, 27, 30, 34, 43].
2. Functional-level strategies aim at achieving economies of scale or learning by means of efficiencies, innovations, quality, or customer responsiveness in any combination [23, 32, 39, 40].
3. Knowledge workers, as defined by their characteristics, are the architects of converting resources into value as realized by the customers [13-15, 23, 41, 43].
4. The Kingdom of Saudi Arabia's 9th Economic Development Plan aims to transform the economy of Saudi Arabia into a knowledge-based economy by creating knowledge workers [38].
5. The versatility of ARPU is evidenced by its wide used in the telecom industry as a metric for telecom policy decisions, and as a tool for forecasting service revenue, evaluating customer preferences, and comparing new and existing products and services [1, 12, 3-5, 22, 33, 44, 48].
6. Capitalized internal software development plays an important role in the telecom industry from an accounting and operations perspective. Capitalized internal software development cost is a balance sheet line item that reflects the capitalized costs of converting capital-intensive labor, software, and equipment into assets [15, 29][1]. From an operation perspective, capitalized internal software development represents expanding networks and services to deliver advanced technologies [42, 48].
7. When VAIC is measured in terms of ROA or ROE with a dataset of all organizations in a market index or exchange, it reduces prediction power [8, 9, 17, 18, 20, 26, 27, 37]. This is caused by converging strategies of organization in varying industries and the inability of productivity and equity ratios to capture the customers, product or services part of VAIC [43, 47].

Based on the underpinnings of these seven takeaways, the following hypotheses were composed to measure the intellectual capital ability of the telecom organizations in Saudi Arabia as a collective. Firm leverage and market capitalization are added as controlling variables [7, 9, 27, 46].

Measuring for effect

H1a. Human capital efficiency has a positive effect on ARPU.
H1b. Structural capital efficiency has a positive effect on ARPU.
H1c. Capitalized Labor efficiency has a positive effect on ARPU.

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[1] Capitalized internal software development costs are reported as part of an organization's assets normally sub-categorized under Property, Plant & Equipment (PP&E) as Construction in Progress (CIP) or Work in Progress (WIP).

H1d. Physical capital efficiency has a positive effect on ARPU
H2a. Intellectual Capital Efficiency has a positive effect on ARPU.
H3a. VAIC™ has a positive effect on ARPU.

Capitalized labor

H4a. Intellectual Capital Efficiency has a higher positive effect on ARPU when Capitalized Labor is included in value added.
H4b. VAIC has a higher positive effect on ARPU when Capitalized Labor is included in value added.

VAIC and ARPU vs. ROA and ROE

H5a. Intellectual Capital Efficiency has a greater coefficient determination (R2) of ARPU than ROA and ROE.
H5b. VAIC has a greater coefficient determination (R2) of ARPU than ROA and ROE.

METHODS AND DATA

Statistical Power and ARPU

This study takes the financial quarterly statements between 2008 and 2015 of Saudi Telecom (STC), Mobile Telecommunications Company Saudi Arabia (Zain), Etihad Etisalat (Mobily), and Etihad Atheeb (GO), four publicly traded companies on the Saudi Tadawul (exchange), to examine the VAIC and ARPU association. The four telecom companies comprise 32 cases which meets the required number of cases needed to detect a R^2 that is 50% or higher 80% of the time [21].[2] The data used to calculate the ARPU for the combined four telecom companies quarterly was collected from the KSA Communications and Information Technology Commission (CITC). The ARPU was calculated quarterly as:

$$\text{ARPU} = \text{Total Revenue from Sales} / \text{Total Subscribers} \qquad (1)$$

Measuring VAIC

The calculation for VAIC and its determinants was taken from Public (2004).

$$\text{VAIC} = \text{HCE} + \text{SCE} + \text{CEE} \qquad (2)$$

Where:
HCE = Human Capital Efficiency
SCE = Structural Capital Efficiency
CEE = Capital Employed Efficiency

On a granular level, calculating all three VAIC determinants, HCE, SCE, and CEE, uses value added (VA) as the basis for each input of human, structural, financial, and physical capital. VA is a key part of the VAIC calculation and represents, "how competent a company is in creating value added" [7]. Pulic [43] defines VA as:

$$\text{VA} = \text{OUT} - \text{IN}$$

Where:
OUT = Total Revenues
IN = Cost of goods or services sold

[2] Statistical power is rarely included in research for journal publications; however, it was included in this paper to highlight an equally effective alternative to selecting all companies in a market index as sample size for measuring the coefficient determination R^2 for VAIC on a given dependent variable.

In more detail, VA can be calculated as:

$$\text{Operating Expenses} + \text{Salaries and Wages} + \text{Depreciation and Amortization} \quad (3)$$

Given the breakdown of VA, the HCE variable can be further analyzed. The calculation of HCE is VA divided by HC, whereby HC is identified on financial statements as salaries and wages.

$$HCE = VA / HC \quad (4)$$

Structural capital (SC) represents all other costs, excluding salaries and wages and capital equipment, of doing business.

$$SC = VA - HC \quad (5)$$

The Structural Capital Efficiency (SCE) is calculated as:

$$SCE = SC / VA \quad (6)$$

Capital Employed and Capitalized Labor

Capital Employed (CE) reflects the money (financial capital) and the equipment (physical capital) identified on the balance sheet as the net book value of total assets.[3] The Capital Employed Efficiency (CEE) is calculated as:

$$CEE = VA / CE \quad (7)$$

It is important to mention that capitalized labor costs are included in this CE value,[4] but not part of the VA calculation outlined in Pulic [43]. Hypotheses *H1c*, *H4a,* and *H4b* will require that capitalized labor costs be added to the VA calculation as an another input (IN) [15].

The total of HCE and SCE represent the Intellectual Capital Efficiency coefficient (ICE) which is needed for hypotheses *H2a* and *H4a*.

$$ICE = HCE + SCE \quad (8)$$

Capitalized Labor Inclusion into VAIC

For inclusion of capitalized labor costs, which is reported as an asset on the balance sheet, we subtracted the Construction in Progress cost (CIP) from the CE. We treated CIP as an added determinant of VAIC and recalculated all variables affected as such.

CEE is recalculated without CIP inclusion in CE.

$$CEE_{cap} = VA / (CE - CIP) \quad (9)$$

Capitalized Labor Efficiency (CLE) is calculated in terms of VA

$$CLE = VA / CIP \quad (10)$$

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[3] Net book value of the total assets equal total assets minus total accumulated depreciation.

[4] Some capital expenditures represent assets not ready to be put in service once acquired that is construction in progress (CIP). CIP additions are assets that have not begun to depreciate, and therefore are, not a part of the VA calculation via depreciation.

ICE is recalculated to include capitalized labor which is not reported in the salaries and wages line item on the income statement.

$$ICE_{cap} = HCE + SCE + CLE \quad (11)$$

VAIC is recalculated to include capitalized labor as:

$$VAIC_{cap} = HCE + SCE + CLE + CEE_{cap} \quad (12)$$

Other Calculations

As previously mentioned, this research controlled for size and leverage effects on ARPU [7, 9, 27]. The calculations for size (SZ) and leverage (LV) are as follows:

$$SZ = \text{Ln (Market Capitalization)} \quad (13)$$

Where:
Ln represent the natural log.

$$LV = \text{Total debt / Total Assets} \quad (14)$$

The productivity and equity ratios of ROA and ROE are calculated as follows:

$$ROA = \text{Net Income / Total Assets} \quad (15)$$

$$ROE = \text{Net Income / Shareholder's Equity} \quad (16)$$

Procedures

The procedures in this research align with prior research in using multiple regressions. However, hierarchical regression was used because the focal point was the measure of knowledge workers in relation to ARPU. This research produced five hierarchical regression models. Three of the models, Tables 2, 5, and 6 included the addition of CLE. The remaining two models, Tables 3 and 4, excluded CLE. The independent variables selected were based on the correlation results, but the order of entry into the regression models was based on the established priori outlined in this research with size and leverage being the exceptions. The control variables of size and leverage were entered first to control for their effects on ARPU.

Table 2: (Model 1) ARPU = SZ + LV + HCE + SCE + CLE +CEE$_{cap}$

Hierarchical Step	Predictor Variables	Hypothesis or Reference
1	SZ and LV	Calisir et al., 2010; Clarke et al., 2011; Javornik & Marc, 2012; Shiu, 2006
2	HCE	H1a; Pulic, 2004
3	SCE	H1b; Pulic, 2004
4	CLE	H1c; Financial Accounting Standards Board, 1998; Hafiz, 2011
5	CEE$_{cap}$	H1d; Pulic, 2004

Table 3: (Model 2) ARPU = SZ + LV + ICE

Hierarchical Step	Predictor Variables	Hypothesis or Reference
1	SZ and LV	Calisir et al., 2010; Clarke et al., 2011; Javornik & Marc, 2012; Shiu, 2006
2	ICE	H2a; Pulic, 2004

Table 4: (Model 3) ARPU = Size + Leverage + VAIC

Hierarchical Step	Predictor Variables	Hypothesis or Reference
1	SZ and LV	Calisir et al., 2010; Clarke et al., 2011; Javornik & Marc, 2012; Shiu, 2006
2	VAIC	H3a; Pulic, 2004

Table 5: (Model 4) ARPU = Size + Leverage + ICE_{cap}

Hierarchical Step	Predictor Variables	Hypothesis or Reference
1	Size and Leverage	Calisir et al., 2010; Clarke et al., 2011; Javornik & Marc, 2012; Shiu, 2006
2	ICE_{cap}	H4a; Pulic, 2004; Financial Accounting Standards Board, 1998; Hafiz, 2011

Table 6: (Model 5) ARPU = Size + Leverage + $VAIC_{cap}$

Hierarchical Step	Predictor Variables	Hypothesis or Reference
1	SZ and LV	Calisir et al., 2010; Clarke et al., 2011; Javornik & Marc, 2012; Shiu, 2006
2	$VAIC_{cap}$	H4b; Financial Accounting Standards Board, 1998; Hafiz, 2011

RESULTS AND ANALYSIS

Data Preparation

As previously mentioned this study used the quarterly financial statements between 2008 and 2015 of the only four publicly traded telecommunication companies on the Saudi Exchange (Tawadul). Since the goal of this study was to present a framework for measuring knowledge workers—not to compare the VAIC between all four telecom companies—an average was taken of all factors by quarter. This process produced a sample size of 32 cases for the hierarchical regression, Pearson Correlation and ANOVA results.

Pearson Correlation and ANOVA

The Pearson Correlation results in Table 7 addressed hypotheses H4a, H4b, H5a, and H5b. For H4a we assumed a stronger effect of capitalized labor efficiency on the relationship between ICE_{cap} and ARPU than ICE and ARPU based on the accounting treatment of capitalized labor in the telecommunication industry. The ICE_{cap} and ICE correlation (r) of .77 and .63 respectively clearly indicates that ICE_{cap} has a stronger relationship with ARPU than ICE—which excludes capitalized labor from the calculation of VA.

The correlation (r) between both ICE_{cap} and $VAIC_{cap}$ is 1, and ICE and VAIC correlation (r), is also 1. This addresses H4b and shows that the correlation (r) of $VAIC_{cap}$ by default has a stronger relationship with ARPU than VAIC. Tables 4, 5, and 6 in conjunction with Table 7 confirm that $VAIC_{cap}$ had a higher coefficient determination R^2 of .63 than R2 of VAIC which is .49.

Table 7 also addressed H5a and H5b. ROE and ROA associations with ARPU shows coefficient (r) scores of .20 and .29 respectively in comparison to ICE and VAIC scores of .63 each. Furthermore, the ROE and ROA scores are not significant; therefore, no further analysis was needed with ARPU. The exclusion of ROE and ROA from further analysis was not done with size and leverage, because no research questions were developed for them. However, this same approach of exclusion was taken to address H1b–with SCE high correlation (r) of .98 with HCE, $p < .01$. The SCE positive effect on ARPU is accounted for in HCE, therefore it was excluded from the model.

Multicollinearity

The approach of removing independent variables that are highly correlated with other independent variables minimized the occurrence of multicollinearity in the results of this study [21]. In fact, none of the VAIC determinants in Table 9 had Variance Inflation Factors (VIF) above 5.3 when added to the regression model[5].

Table 8 is the ANOVA results between the regression and the residual at the entry of each VAIC determinant into the hierarchical regression model. Table 9 is the combined summary results of the hierarchical regression R^2 and change in R^2, and the ANOVA change in F ratio as each VAIC determinant was added to the hierarchical regression model. In Table 9 the change in F ratio at step two with the addition of HCE showed 7.43 with the R^2 increasing from 8% to 48% with a $p < .001$. This translates into an overall positive effect of HCE and SCE on ARPU. It also signals that 48% of the variation in ARPU output from the four companies combined is interpreted by HCE and SCE

The Coefficients

Table 4 shows the predictive variables at each step with size and leverage entered as control variables at step one. Size and leverage had no significance in the correlation and no significance in the first step of the regression. HCE was entered in step two, CLE at step three and CEE at step four. All three VAIC determinants remained significant throughout the steps with the exception being HCE in the fourth step. However, the impact of HCE in the fourth step did not translate into a change in direction and effect size. In fact, HCE contributed significantly to the regression model in step two, F (1, 28) = 21.71, $p < .001$ and accounted for 40% of the variation in ARPU. The addition of CLE to the model significantly explained another 22% of the variation in ARPU, F (1, 27) = 20.69, $p < .001$. Finally, when CEE_{cap} was added to the regression model and it significantly explained an additional 7% of the variation in ARPU, F (1, 26) = 9.37, $p < .001$. The fourth step produced the regression model:

$$ARPU = 10.06 + 3.56(Size) – 20.42(LV) + 3.90(HCE) + 16.53(CLE) + 1029(CEE_{cap}) \quad (17)$$

Given that the model explains 78% of the variation in ARPU when all five independent variables were included the fourth step, Size, LV, and HCE were not significant. However, CLE and CEE_{cap} were significant and explained a combined 29% of the variation in ARPU. Figure 2 shows how the predicted ARPU closely matches to the actual ARPU.

[5] Hair et al.'s (1998) multicollinearity rule of thumb is independent variables that are highly correlated with each other, whereby their coefficient (r) is .90 or higher, should be omitted if their VIF is above 5.3.

Table 7: Pearson Correlation Matrix

Measure	*M*	*SD*	ARPU	HCE	SCE	CEE	CLE	ICE	VAIC	ICE_{cap}	CEE_{cap}	$VAIC_{cap}$	ROE	ROA	Size	LV
ARPU	205.51	31.74	1													
HCE	8.33	1.57	.625**	1												
SCE	0.88	0.02	.648**	.978**	1											
CEE	0.07	0.02	.824**	.549**	.521**	1										
CLE	2.58	0.65	.755**	.377*	.410*	.746**	1									
ICE	9.20	1.60	.625**	1.00**	.979**	.549**	.378*	1								
VAIC	9.27	1.61	.630**	1.00**	.978**	.556**	.383*	1.00**	1							
ICE_{cap}	11.78	1.94	.768**	.951**	.944**	.702**	.646**	.951**	.953**	1						
CEE_{cap}	0.07	0.02	.821**	.550**	.520**	1.00**	.734**	.550**	.557**	.699**	1					
$VAIC_{cap}$	11.85	1.95	.771**	.950**	.943**	.706**	.648**	.950**	.952**	1.00**	.703**	1				
ROE	0.04	0.02	.199	.228	.282	.086	.207	.229	.228	.258	.082	.257	1			
ROA	0.02	0.01	.285	.336	.376*	.132	.167	.337	.337	.334	.131	.333	.653	1		
Size	16.48	1.30	-.288	.025	.051	-.540**	-.423*	.025	.020	-.121	-.538**	-.124	.078	.236	1	
LV	0.60	0.07	-.012	.034	.025	.097	-.074	.034	.035	.004	.101	.004	.206	-.036	-.012	1

****. Correlation is significant at the 0.01 level (2-Tailed). *. Correlation is significant at the 0.05 level (2-Tailed). *M* = Mean. *SD* = Standard Deviation. LV = Leverage**

Table 8: ANOVA

Step	*Model*	*df*	*SS*	*MS*	*F*	*ΔF*	*Sig.*
1	Size + LV	2	2592	1296	1.31	1.31	.285
	Residual	29	28639	988			
	Total	31	31232				
2	Size + LV + HCE	3	15102	5034	8.74	7.43	.000
	Residual	28	16129	576			
	Total	31	31232				
3	Size + LV + HCE + CLE	4	22100	5525	16.34	7.60	.000
	Residual	27	9131	338			
	Total	31	31232				
4	Size + LV + HCE + CLE + CEE_{cap}	5	24520	4904	19.00	2.66	.000
	Residual	26	6711	258			
	Total	31	31232				

LV = Leverage

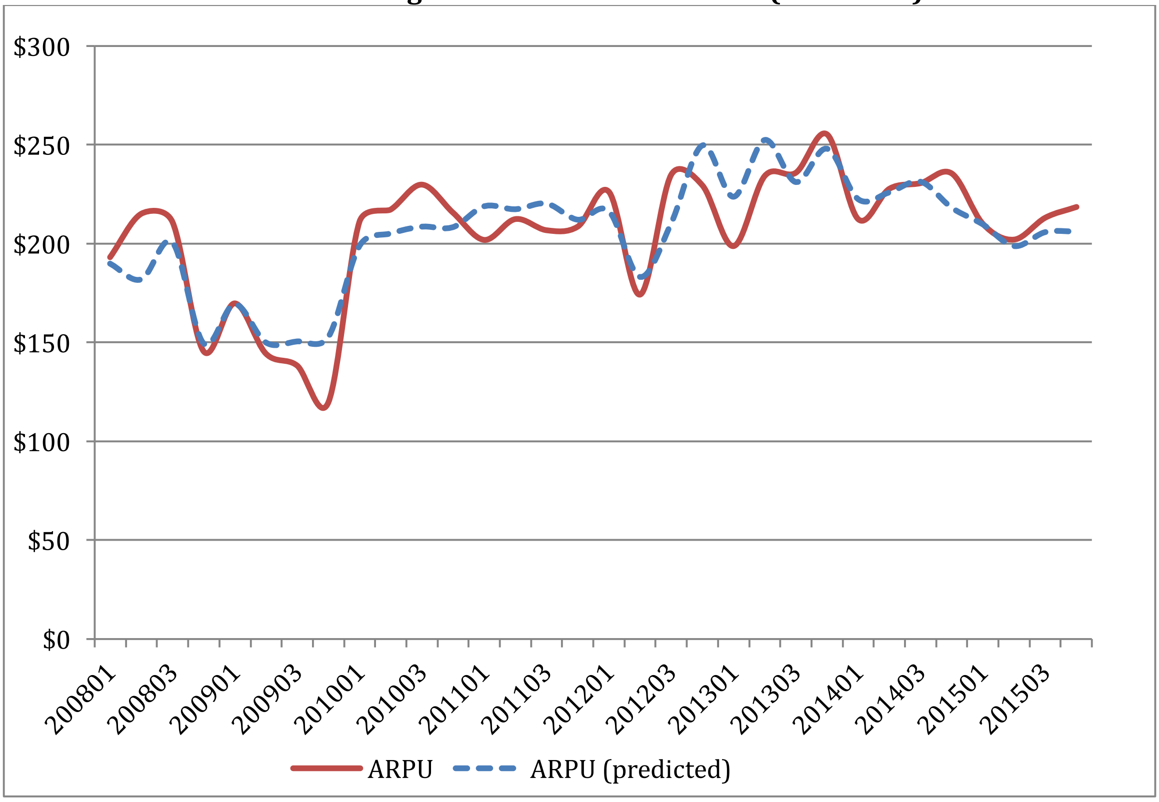
Table 9: Hierarchical Regression Model

Step and Predictor Variables	*R*	R^2	ΔR^2	ΔF	*sr*	B	β	*t*	*VIF*
Step 1:	0.29	0.08	0.08	1.31					
(Constant)						325.59			
Size					-0.29	-7.04	-0.29	-1.62	1.00
LV					-0.02	-6.75	-0.02	-0.09	1.00
Step 2:	0.70	0.48***	0.41	21.71***					
(Constant)						231.25			
Size					-0.39	-7.44	-0.30	-2.24	1.00
LV					-0.05	-16.20	-0.04	-0.28	1.00
HCE					0.66***	12.78	0.63	4.66	1.00
Step 3:	0.84	0.71***	0.22	20.69***					
(Constant)						80.43			
Size					-0.08	-1.26	-0.05	-0.44	1.29
LV					0.03	6.99	0.02	0.16	1.01
HCE					0.56**	8.19	0.41	3.51	1.23
CLE					0.66***	28.52	0.58	4.55	1.51
Step 4:	0.89	0.78***	0.07	9.37***					
(Constant)						10.06			
Size					0.23	3.56	0.15	1.20	1.78
LV					-0.10	-20.42	-0.05	-0.51	1.07
HCE					0.29	3.90	0.19	1.57	1.82
CLE					0.43*	16.53	0.34	2.45	2.28
CEE_{cap}					0.51**	1028.98	0.55	3.06	3.90

***p < .05. ** p < .01. *** p < .001. Note: sr = semi-partial correlation coefficient. LV = Leverage**

In keeping with the goal of this research, which is to measure knowledge workers, the most important predictor of ARPU was CLE. In Table 4, CLE had a partial correlation of *sr* = 43%, *t* = 2.45, *p* < .05 in the fourth step. It accounted for 22% of the variation in ARPU and a coefficient of 16.53. The CLE coefficient had such a high positive impact on the predicted ARPU that for every 1 Saudi Riyal invested in capex labor, ARPU increases by 16.53 Saudi Riyals over the combined four telecom companies.

Figure 2: ARPU versus ARPU (Predicted)



DISCUSSION AND CONCLUSION

Saudi Arabia's Transformation to a Knowledge Based Economy

KSA's *9th Economic Plan* calls for transforming its current economy to a knowledge—based economy—necessitating knowledge workers. This requirement makes it important that a framework to measure efficiency, productivity, customer responsiveness, and quality of output be established. Measuring knowledge workers' productivity in an organization is a daunting task given limited, or no access to reliable employee and job function information. In addition to scarce access, the wide variations in strategic plans adopted by organizations across an entire market index or exchange usually produce low or inconsistent results, as was shown in Table 1.

This study showed and tested a framework that overcomes the previously mentioned obstacles to measure knowledge workers based on three guiding concepts. First, VAIC and ARPU are KPIs that warrant alignment with functional-level strategies. In addition to ARPU's KPI status, it is also industry specific, applied solely in the telecom industry.

Second, the variations in strategic direction by organizations across an entire market index affect the predictive power of VAIC. VAIC is a value creation index comprised of customers, products or services, and resources. The resources are used to create both products and services, and extracted from an organization's financials. The customers, products, or services part of VAIC are addressed by way of strategic planning, implementation, and execution at the functional-level. Analyzing VAIC at the functional level and given that ROA and ROE are not measures that reflect intellectual ability in terms of customers, products, or services, explains why the low or inconsistent results shown by the prior studies in Table 1 occurred. The strategies adopted by the organizations in an entire market index, with the aim to positively affect ROA and ROE are not identical.

Finally, Drucker [13, 14] and Pulic [43] formed a consensus that knowledge workers should be seen and treated assets. This viewpoint is reflected with the inclusion of capitalized labor as an additional VAIC determinant in this study. The results of this study further support this viewpoint with capitalized labor explaining 22% of the variation of ARPU and a coefficient of 16.53. This is a clear depiction of human capital as a value creation asset—not an expense. The logical relationship between the characteristics of ARPU and knowledge workers is the link of functional-level strategies which achieve competitive advantage and aim to create productivity by way of efficiencies, innovation, customer responsiveness, and quality.

References

Alawi, A. (2016). *Saudi Telecom Sector*. Riyadh. Retrieved from http://www.aljaziracapital.com.sa/report_file/ess/SEC-288.pdf.

Andriessen, D. (2004). IC valuation and measurement: classifying the state of the art. *Journal of Intellectual Capital*, *5*(2), 230–242.

Aroudaki, H. (2012). On the monthly usage dynamic of prepaid subscribers – Hidden insights. *Journal of Database Marketing & Customer Strategy Management*, *19*(4), 262–274.

Binzaraah, A. (2014). *Saudi Telecom . Company - STC Recommendation Saudi Telecom . Company - STC* (Vol. 2014). Riyadh. Retrieved from http://www.riyadcapital.com/en/Images/STC_12-16-2015_EN_tcm10-6706.PDF

Bohlin, E., Caves, K. W., & Eisenach, J. A. (2014). Mobile Wireless Performance in the EU and the US: Implications for Policy (*). *Digiworld Economic Journal*, *93*(1), 35–58.

Butrell, A. (2010, April). Analysis - Accounting Standards: Convergence or Conversion. *Global Finance*, 52–53.

Turkish ITC sector. *Journal of Intellectual Capital*, *11*(4), 538–554.

Celenza, D., & Rossi, F. (2014). Intellectual capital and performance of listed companies: empirical evidence from Italy. *Measuring Business Excellence*, *18*(1), 22–35.

Clarke, M., Seng, D., & Whiting, R. H. (2011). Intellectual capital and firm performance in Australia. *Journal of Intellectual Capital*, *12*(4), 505–530.

Communication and Information Technology Commision, C. (2010). Market Definition, Designation and Dominance Report. Riyadh. Retrieved from http://www.citc.gov.sa/en/Reportsandstudies/Reports/Pages/MarketReport.aspx

Cooper, H. (2010). Research Synthesis and Meta-Analysis: A Step-by-Step Approach (4th ed.). Thousand Oaks: SAGE.

Devassy, P. (2014). *Saudi Telecom Sector*. Riyadh. Retrieved from http://www.alrajhi-capital.com /en/research/Telecom/KSA/Telecoms/June-2014.pdf

Drucker, P. F. (1999). Knowledge-worker productivity : The biggest challenge. *California Management Review*, *41*(2), 79–94.

Drucker, P. F. (2008). *Management*. (J. Marciariello, Ed.) (Revised). New York: HarperCollins.

Financial Accounting Standards Board. (1998). *Statement of Position 98 - 1 Accounting for the Costs of Computer Software*. Norwalk. Retrieved from http://www.fasb.org/jsp/FASB/Document_C/DocumentPage?cid=1176156442651&acceptedDisclaimer=true

Financial Accounting Standards Board. (2006). Preliminary views. Conceptual framework for financial reporting: Objective of financial reporting and qualitative characteristics of decision-useful financial reporting information. Norwalk.

Firer, S., & Stainbank, L. (n.d.). Testing the relationship between intellectual capital and a company ' s performance : Evidence from South Africa University of Natal Durban, *11*, 25–44.

Firer, S., & Williams, S. M. (2003). Intellectual capital and traditional measures of corporate performance. *Journal of Intellectual Capital*, *4*(3), 348–360.

Goldman, C. S., Knable Gotts, I., & Piaskoski, M. E. (2003). The Role of Efficiencies in Telecommunications Merger Review. *Federal Communications Law Journal*, *56*(1), 87–154.

Gruian, C.-M. (2011). The Influence of Intellectual Capital on Romanian Companies' Financial Performance.

Annales Universitatis Apulensis Series Oeconomica, *13*(16), 260–273.

Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate Data Analysis* (5th ed.). Upper Saddle River: Prentice-Hall Inc.

Harno, J. (2009). Techno-economic analysis of beyond 3G mobile technology alternatives. *Info*, *11*(3), 45–63.

Hill, C. W. L., & Jones, G. R. (2009). *Theory of Strategic Management with Cases*. (8th ed.). South Western - Cengage Learning. Retrieved from international.cengage.com

Hwang, M.-C. C. Sh.-J. C. Y. (2005). An Empirical Investigation of the relationship between intellectual capital and firms market value and financial performance. *Journal of Intellectual Capital*, *6*(2), 159–176.

Iazzolino, G., & Laise, D. (2013). Value added intellectual coefficient (VAIC): A methodological and critical review. *Journal of Intellectual Capital*, *14*(4), 547–563.

Jafaridehkordi, H., & Rahim, R. A. (2014). Intellectual Capital and Investment Opportunity Set. *European Online Journal of Natural and Social Sciences*, *3*(4), 1030–1041. Retrieved from www.european-science.com

Javornik, S., & Marc, M. (2012). The Efficiency of Intellectual Capital Investments as a Potential Leading Indicator. *International Business & Economics Research Journal*, *11*(5), 535–558.

Jones, A; Wali, A. M., Singh, A., & Muhammad, A. (2015). An examination of psychological ownership and job satisfaction relationship. *ELK Asia Pacific Journal of Human Resource Management and Organizational Behavior*, *2*(1), 16–65.

Jones, A. (2011). *The impact of intangible assets and economic profit on mergers and acquisitions in the communication industry.* Argosy University/DC. Retrieved from http://search.proquest.com/docview/1324105275?accountid=35493

Joshi, M., Cahill, D., & Sidhu, J. (2010). Intellectual capital performance in the banking sector: An assessment of Australian owned banks. *Journal of Human Resource Costing & Accounting*, *14*(2), 151–170.

Joshi, M., Cahill, D., Sidhu, J., & Kansal, M. (2013). Intellectual capital and financial performance: An evaluation of the Australian financial sector. *Journal of Intellectual Capital*, *14*(2), 264–285.

Kaplan, R. S., & Norton, D. P. (2008). *The EXECUTION PREMIUM: Linking Strategy to Operations for Competitive Advantage*. Boston: Harvard Business School Publishing. Retrieved from permissions@hbsp.harvard.edu

Kim, J., Lee, D., Ahn, J., Ahn, D. S., & Ku, B. J. (2008). Is HAPS viable for the next-generation telecommunication platform in Korea? *Eurasip Journal on Wireless Communications and Networking*, *2008*.

Komnenic, B., & Pokrajcic, D. (2012). Intellectual capital and corporate performance of MNCs in Serbia. *Journal of Intellectual Capital*, *13*(1), 106–119.

Malisuwan, S., Tiamnara, N., & Suriyakrai, N. (2015). A Study of Spectrum Valuation Methods in Telecommunication Services. *International Journal of Trade, Economics and Finance*, *6*(4), 241–246.

Marr, B., Schiuma, G., & Neely, A. (2004). Intellectual capital - defining key performance indicators for organizational ... *Business Process Management*, *10*(5), 551–569.

Mehri, M., Umar, M. S., Saeidi, P., Hekmat, R. K., & Naslmosavi, S. H. (2013). Intellectual capital and firm performance of high intangible intensive industries: Malaysia evidence. *Asian Social Science*, *9*(9), 146–155.

Ministry of Economy & Planning, T. K. of S. A. (2010). *The Ninth Development Plan*. Riyadh. Retrieved from http://www.mep.gov.sa/en/

Nazari, J. A., & Herremans, I. M. (2007). Extended VAIC model : measuring intellectual capital components. *Journal of Intellectual Capital*, *8*(4), 595–609.

Phusavat, K., Comepa, N., Sitko-Lutek, A., & Ooi, K.-B. (2011). Interrelationships between intellectual capital and performance: Empirical examination. *Industrial Management & Data Systems*, *111*(6), 810–829.

Porter, M. E. (1985). Competitive Advantage: Creating and Sustaining Superior Performance (First Free). New York: The Free Press.

PriceWaterhouesCoopers, (2008). a Saudi Joint Stock Company Interim Consolidated Financial Statements for the First Quarter 2008 Interim Consolidated Financial Statements for the (Vol. 2008). Riyadh.

Pulic, A. (2004). Intellectual capital--does it create or destroy value ? *Measuring Business Excellence*, *8*(1), 62–68.

Qu, P. (2014). Mobile communication service income prediction method based on grey buffer operator theory. *Grey Systems: Theory and Application*, *4*(2), 250–259.

Rahman, S., & Ahmed, J. U. (2012). Intellectual Capital Efficiency : Evidence from Bangladesh. *Advances in Management & Applied Economics*, *2*(2), 109–146.

Shiu, H. (2006). The Application of the Value Added Intellectual Coefficient to ... *International Journal of Management*, *23*(2), 356–365.

Stahle, P., Stahle, S., & Aho, S. (2011). Value added intellectual coefficient (VAIC): a critical analysis. *Journal of Intellectual Capital*, *12*(4), 531–551

Stordahl, K., & Elnegaard, N. K. (2007). Adoption rate forecasts and rollout strategies. *NETNOMICS: Economic Research and Electronic Networking*.

Sveiby, K. E. (1997). The new organizational wealth managing and measuring knowledge-based assets. San Francisco, CA: Berrett-Koehler.

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Fair Trade, an Alternative Integration Process: Case Study of Etchohuaquila, Navojoa, Sonora.

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ABSTRACT

Economic integration, which took place through the North American Free Trade Agreement (NAFTA) is creating winners and losers in our country. The winners are the transnational corporations and the large private agricultural producers; the losers are the indigenous communities, peasantry, cooperatives, and the small and medium-sized farmers in the areas which are the most poor of the country. The objective of this study is to analyze to the social producers, which are grouped in an area of common land called "Ejido Etchohuaquila", located in the municipality of Navojoa, Sonora Mexico which has been integrated to Fair Trade as an alternative markets, producing organic products. In addition to this study, we analyze the protocols that were fulfilled for joining this network. Furthermore we assess the community development in terms of social welfare and social cohesion, also we highlights the progress of this community that was one of the communities most impoverished region, without access to development before to become a member of the international circuit.

Keywords: fair trade, organic products, social and solidarity economy, sonoran agriculture, alternative markets, area of common land.

INTRODUCTION

The economic integration, carried out through the North American Free Trade Agreement (NAFTA), includes: Mexico, United States and Canada. This integration is generating winners and losers in our country. The winners' side is formed by the transnational corporations and big private producers; on the losers' side we can find indigenous communities, peasant groups, cooperatives, and small and medium producers in the poorest regions of the country.

This process of integration is widening the gap of inequality between economic sectors as well as in municipalities, states, the nation and even within the world powers. In addition, there is an intense use of chemicals for agricultural production, affecting not only the health of a large part of the population at regional and global levels, but also it is irreversibly affecting the environment. This integration process, which is dominant now, seems to be the only way for the regions to grow; however, a new integration process called Fair Trade is emerging in alternative markets. This seeks to establish a more solidary and collaborative work not only in the commercial circuit but also in the productive sector. Fair Trade is a concrete contribution to the fight against poverty, marginalization, social exclusion, climate changes and global economic crises.

The World Bank reports that more than 1 billion people still live on $1.25 a day or below the same (World Bank). The World Trade Organization (WTO) argues that trade must benefit the most vulnerable people and provide sustainable livelihoods by developing opportunities, especially for small producers and the people in disadvantage. The recurrent global economics crises as well as the persistent poverty in vast regions of the world confirm the need to implement a fair, supportive, and sustainable economy both locally and globally.

Fair Trade is the answer. In addition, it seeks the production of organic agricultural goods or, in this case, the care of the land as the central axis in agricultural activity. This process of alternative integration draws on experiences at the global level, such as Germany, Spain, France in the European Union, as well as the United States, Brazil, Argentina and Mexico. In the latter the experiences of Fair Trade are presented, in the great majority, in the southern region of the country, mainly in Oaxaca, Chiapas, Veracruz, among others. The products that excel, based on Fair Trade include the following: coffee and sugar, among others (Palafox 2014). In the Northern Region, there is no culture and experiences about fair trade, because of its productive vocation, since its private export agriculture that is developed in the states of Sonora, Sinaloa, Chihuahua and Baja California. However, both private and social producers have been identified in Sonora.

The objective of this work is to analyze the social producers, grouped in the collective community: Etchohuaquila, located in the municipality of Navojoa, which has been integrated to the Fair Trade. In addition to reviewing the protocols and principles that were fulfilled to be integrated into the Fair Trade network, and assessing the evolution of the community in terms of social welfare and social cohesion, which highlights the progress of this community, which was one of the communities in the region, without a clear development path before joining the international circuit. Once analyzed, both the protocols that are required to be part of Fair Trade, and the measurement of positive impacts on the collective Ejido community, will seek their replication in the communities of the region and in the future to design a comprehensive development policy Community level. The community of Etchohuaquila organized its production process, in a highly unfavorable environment, where there was no access to the water intake through irrigation channels, there was no guarantee for obtaining credits, in addition there was no minimum financial resource for the purchase of the most basic inputs for the work: it makes it a worthy space for the reflection and the case study of this organization.

The research questions are the following:
Is there a single integration process (NAFTA) like the one that has been adopted in this globalization process?
Will there be another way of integration, centered on the harmonious development of the human being and the care of the environment?

These questions lead us to the following hypothesis:
If a region is poor, marginalized, with high levels of delinquency, alcohol and drug use, with no opportunity for personal and family development, without an environment of social cohesion and social capital (as is the case of the Etchohuaquila community) and incorporated into the Fair Trade circuit, such variables tend to be modified in a radical and positive way, thus moving from a perverse circle to a virtuous one.

The structure of the work is divided into several sections: The first section will address the theoretical and methodological aspects, as well as the experiences on Fair Trade. At this point it is important to emphasize that fair trade does not have a consolidated theoretical body, such as that of classical integration models, like David Ricardo's model; the one of Specific Factors; the one of Heckscher-Ohlin under perfect competition, as well as imperfect competition, where monopolies and monopoly competition are located. The Fair Trade theory is a model without a finished theoretical structure; however, successful experiences have been presented, which will allow the construction of a theoretical body finished and consolidated in the near future.

In the second section, the protocols and principles necessary for a community to enter the Fair Trade circuit are developed.

The third presents the most important data and information of the town of Etchohuaquila, to show the situation before and after joining the Fair Trade circuit. In this section an interview made by journalist Manuel Robles of Proceso magazine is annexed, on August 21st, 1991, to some inhabitants of the village of Etchohuaquila in relation to pitcher Fernando Valenzuela and the life of the population. Finally, we present the conclusions to which this work has been carried out.

FIRST HEADLAND

Literature Review

Theories on International Trade

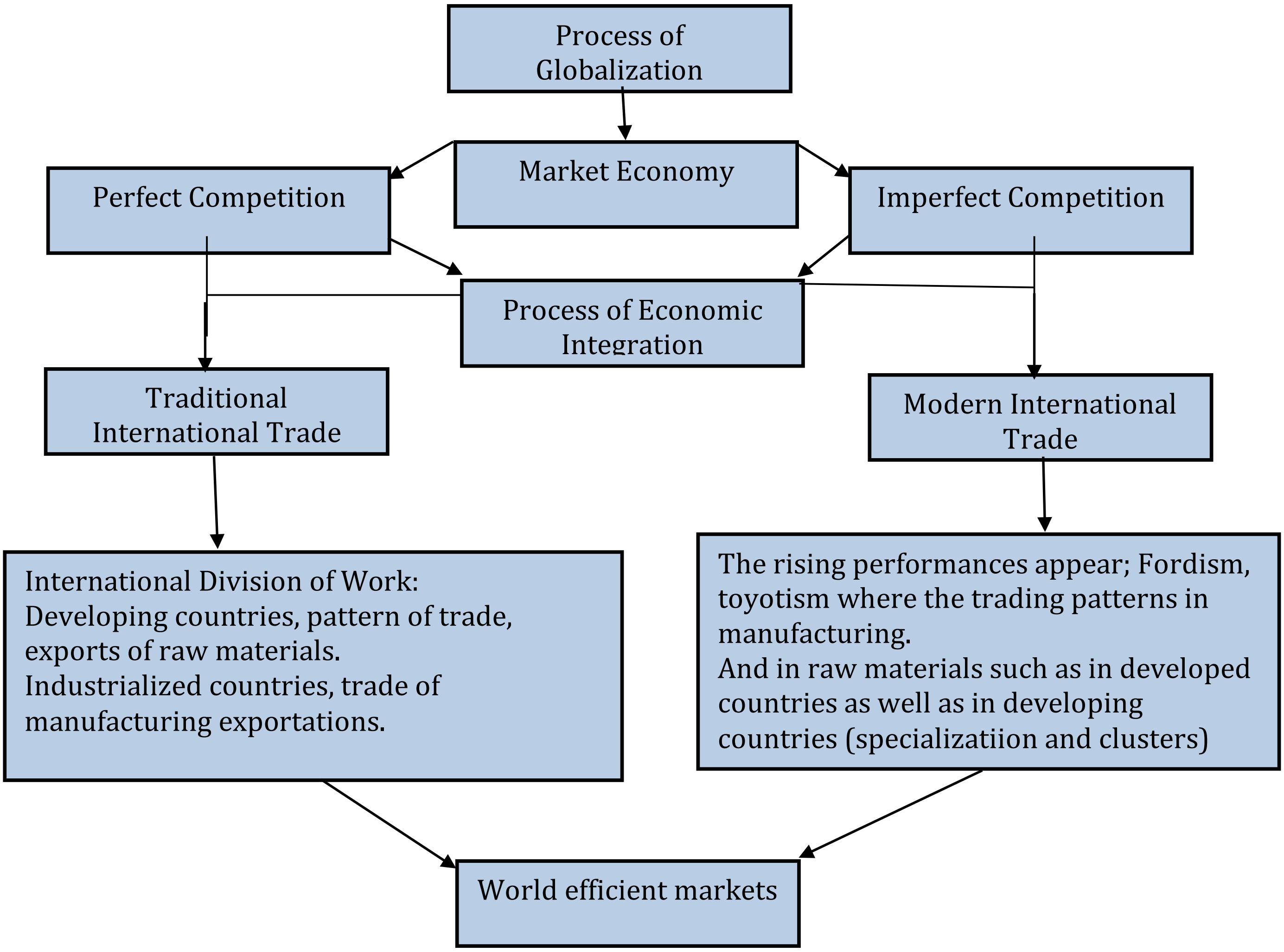
The theoretical foundations of the research are supported in two great strands. On one hand, there are the Classical Theories of International Trade with a theoretical background that have been developed in the last two centuries, whose scientific theoretical impetus was David Ricardo (1876). On the other hand, the incipient Fair Trade Theories that are supported in the Theories of the Solidary Social Economy headed by Coraggio (2006).

The theoretical support of International Trade is based on the Classical Theory of Work Value, developed by David Ricardo in his book "Principles of Political Economy and Taxation" (1817). This scientific approach focuses on the comparative advantages obtained in the production of a good in a given country; these advantages allow the development of international trade between nations (Krugman and Wells, 2006).

Thus, in the last years the world economy has been characterized by a market economy, and according to Adam Smith, in his book "The Wealth of Nations" (1776, 2001), there is an invisible hand, pursuing only the self-interest, ends up getting what interests society as a whole. The Classical Theories of International Trade highlight two theoretical phases of analysis. In the first phase (perfect competition), the pattern of international trade arises through the export of manufactured goods from developed to underdeveloped countries and the export of raw materials from developing to industrialized countries, so specialization and integration was determined by the technology and natural conditions of each country. This phase corresponds to that of a capitalism that is poorly developed in technological terms, through decreasing returns to scale or rising costs.

In the second phase (imperfect competition), a process of economic integration supported by economies on a scale is developed through increasing returns or decreasing costs, which generated a new pattern of international trade called intra-business and inter-business trade that was deployed in both industrialized and developing countries, generating oligopolistic structures and monopolistic competences, and on the other hand, new industrial districts or clusters in both spaces (Robinson, 1969) (see Chart 1).

Graph 1: Scheme of the process of globalization in the market economy and its processes of economic integration



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Theories of Fair Trade

The second theoretical aspect is the called Fair Trade Theory whose basis is Social Theory and Solidarity Theory, specifically Social Capital. According to the theorists Bourdieu (1980, 1997), Coleman (1990) and Putman (1993), Social Capital is the aggregate of present or potential resources, which are related to the possession of an enduring network of relations more or less institutionalized knowledge and mutual recognition, in other words: membership in a group that gives each of its members a social support, a credential that allows them to accredit each other's benefits in the various senses of the word. (Palafox, et al., 2012).

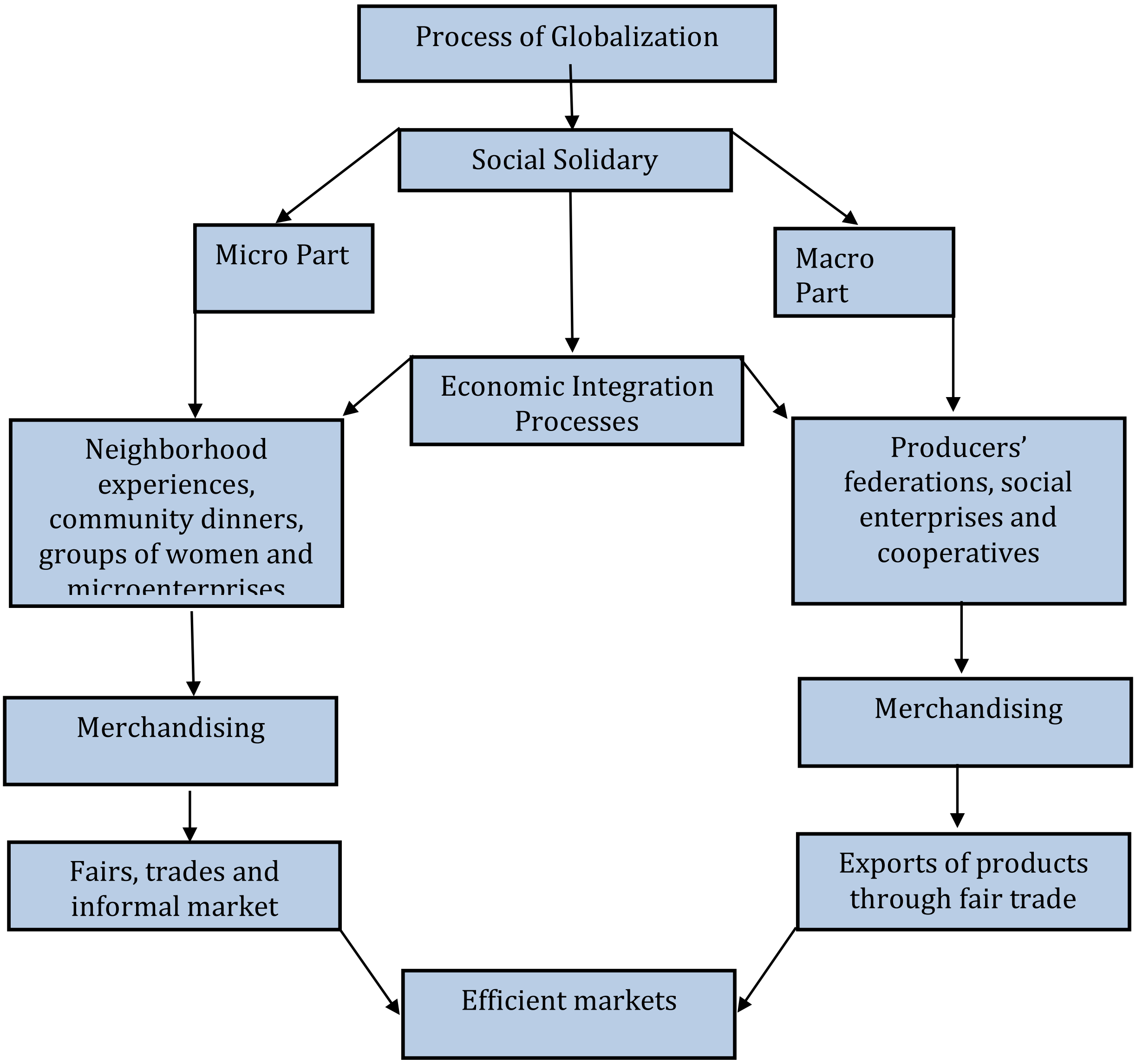
In addition, it is important to consider the approaches of the international organizations on Social Capital and Social Cohesion, in which the United Nations Development Program (UNDP) stands out; the Economic Commission for Latin America and the Caribbean (ECLAC); the Inter-American Development Bank (IDB), as well as the World Bank (WB), where the essential part of the theory rests on enduring networks between groups, with social support consistent with their solidarity and social cohesion.

Under this perspective of the theoretical analysis, Solidary Social Economy is a key element of Social Capital, which extends the possibility of contributing to regional economic development. Thus, Mutuberría (2003) comments that in recent years, a series of practices and discourses associated to the concept of Solidary Social Economy have been used in several regions of the world, as in the case of Canada (Montero, 2003), Mexico (Otero, 2006), Ecuador (Coraggio, 2009), Peru (Cotera, 2009), Argentina (Aguirre, 2008, Coraggio, 2010), Nicaragua (Fardiño, 2010) and Spain (Emmaus Social Foundation, 2010). The conceptualization of Solidary Social Economy is considered, in this analysis: the key factor in the construction of Social Capital, which makes possible the contribution to regional and local economic development.

These practices and forms of entrepreneurship, from a microeconomic perspective, are grouped in: small neighborhood experiences; community kitchens; women's groups; fairs and barter exchanges in some marginalized indigenous and urban communities. As Caracciolo and Foti (2003) point out: family enterprises and street workers have not yet had the opportunity to bring their interests closer together, and with other social sectors in the way of organizing, and thus be more consistent and efficient in their defense. However, they must also be considered within the social economy, since they depend on their own effort and work to get ahead.

In the macroeconomic view, the most important are: producer federations; social enterprises; cooperatives; some private producers in the development and application of the Fair Trade protocols, which in this case constitute the exports of products from these organizations to developed countries, under the mechanisms of the International Fair Trade networks, such as the International Association of (IFAT) and the European Free Trade Association (EFTA), which are responsible for ensuring that producers receive higher financial compensation while fulfilling the criteria based on the social economy of solidarity (See Chart 2).

Graph 2: Scheme of the process of globalization and the social economy of solidarity and its process of economic integration



Source: Self made

Fair Trade. An unconventional type of commercial exchange

In recent years, Fair Trade has been a marketing alternative for products and handicrafts from: producer organizations, families, workshops and cooperatives in Latin America, Africa and Asia. This trade alternative has been the answer to the problems of many small producers in these countries in order to place their products on the world market.

In this way, the concept of Fair Trade and what would translate into a practice of nonconventional or alternative trade, arose from the widening gaps of uneven development between North and South.

For Ceccon (2008), the beginnings of Fair Trade were born with the Alternative Trade Organizations (ATOS), which began operating in the 1940s in the United States and Europe. In the 1960s, in the United Kingdom, OXFAM stores were established in the United Kingdom through the sale of Chinese refugee handicrafts, which in 1964 were to be established as the first importer of Fair Trade in the Netherlands (Belgium and Holland) with the name of: World Fair Trade Organization (WFTO).

On the other hand, in Holland with the foundation in 1959 of the Agency: Aid and Development of the Catholic Youths, the ideological principles of the movement were spread, which contributed to the expansion of Fair Trade. Later in 1967, there would be created in this country two marketing organizations: The Alternative Trade Oraganisatie and Stichting Ideele (Lara, 2000).

Finally, in Spain, civil society would develop an information mechanism towards what Fair Trade is and the importance of the informed consumer towards the products they buy so that, in this way, the marketing mechanisms of products from Latin America, Asia and Africa to Europe could be carried out (De la Torre, 2004).

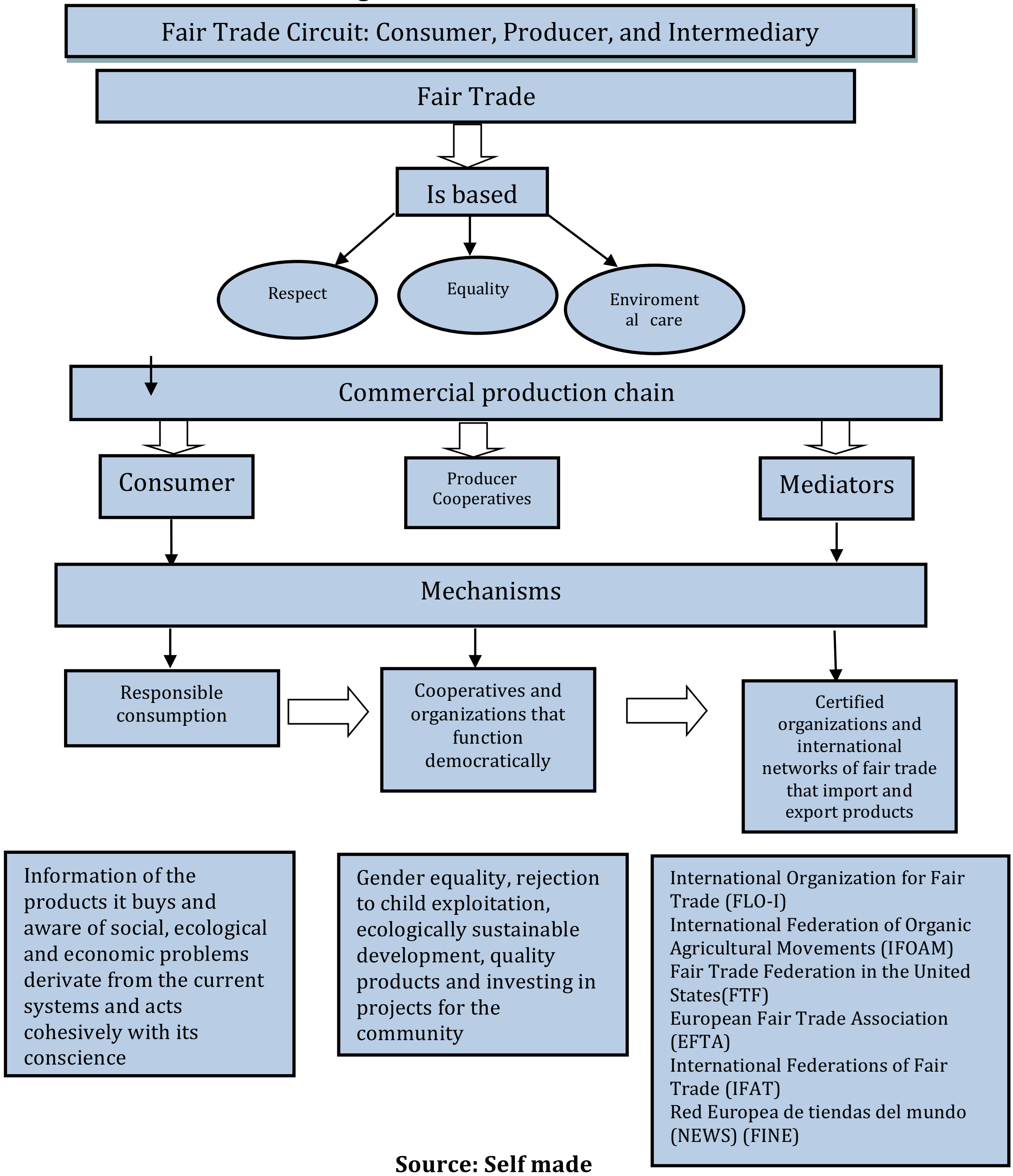
Fair Trade, according to various authors, is a fair and equitable trade that constitutes an alternative proposal to conventional international trade, based on guaranteeing to the producers of the south a fair compensation for their work and for the community (Inter-American Institute of Cooperation for Agriculture, 2007). Other authors see Fair Trade as a strategy in the fight against poverty, since the concentration of wealth and the capacity to achieve development goals distanced the North of the South (Church, Jaime and Castillo 2004, Watkins and Flower, 2002).

Fair Trade is promoted by various non-governmental organizations, that is to say, it derives from the movements of civil organizations that are born in Europe, and whose main motto is to pursue a work with dignity, respecting the human rights, the rejection to the child exploitation, the equality between men and women, and the process of being both the relationship between producers and distributors and consumers. Likewise, Stiglitz and Charlton (2006) developed a commercial strategy that allows the poorer countries of the world to trade more freely and more justly.

The authors consider that developing countries must obtain a higher valuation of natural resources under their soil, and apply a social entrepreneurship, under the scheme of a "Fair Trade" that seeks self-sustainable and business-viable alternatives to meet social needs of the society.

In order to meet the above mentioned objectives: Fair Trade carries out a series of procedures throughout the entire productive-commercial chain; producers, mediators and consumers play an important role in order to have qualitative and quantitative results (see Chart 3).

Figure 3: Fair Trade Circuits



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SECOND HEADLAND

Principles and Fair trade protocol

In this section are developed: the principles and required protocols for a society to enter the Fair trade circuit.

Before to develop the protocols is important to highlight the 10 principles governing the Fair trade: opportunity for disadvantaged producers; transparency and y responsibility; fair business practices, fair price; not child labor and forced labor; not discrimination; freedom gender; freedom of association; good terms of work; develop of opportunities and capacities; promotion to Fair trade.

The Fair trade is a strategy to alleviate poverty and sustainable development. The objective is to create opportunities for producers who are in economic disadvantage or marginalized by the conventional trading system.

The Fair trade requires management of organizations and transparent trade relations. The organizations of Fair trade encourage participation of their employees, members or producers by the collective process to make decisions, and/or formal and informal.

The organizations of Fair trade, trade taking into account social welfare, economic y environment of marginalized producers and do not maximize their profits at their expense. They maintain long-term relationships based on: solidarity, trust and mutual respect that contribute to the promotion and growth of Fair trade. Payments are made in advance in the pre-harvest and pre-production phases. Fair trade recognizes, promotes and protects the cultural identity and traditional knowledge of producing families, as reflected in their craft designs and food products.

A Fair Price, in the local or regional context is one that has been agreed through dialogue and participation. It not only covers production costs but also allows for socially fair and environmentally responsible production. It offers a fair payment to producers, takes into consideration the principle of equal pay for equal work, both women and men. Those who trade fairly ensure timely payment to their partners and, where possible, support farmers to gain Access to financing in the previous phases of growing and harvesting. Fair trade organizations offer training to their producers to establish a fair price for their products.

Fair trade organizations respect the United Nations Convention on the Rights of the Child, as well as local and country laws on child labor. They also ensure that there is no labor exploitation during production processes.

Fair trade organizations exercise control to: if there is participation of children in the production processes of articles, it does not adversely affect their welfare and safety or interfere with their education.

Fair trade organizations do not discriminate: in recruitment process, remuneration, access to training, promotion, and termination or retirement by race, caste, nationality, religion, disability, gender, sexual orientation, membership of organizations, political affiliation, age, legal status or HIV/AIDS.

Fair trade organizations respect and promote the right of their workers to partner in trade unions or any other form of association and collective bargaining.

Fair trade means that the work of women is valued and rewarded. Fair trade organizations offer development opportunities to women and take into account their social, health and safety needs, when they are pregnant or breastfeeding.

Trough Fair trade, healthy and safe practices are promoted in the workplace, with the objective of reducing health risks and promoting the social well-being of workers. Fair trade organizations comply with local and national laws; as well as with the conventions of the International Labor Organization (ILO).

Fair trade seeks to maximize the impact on the development of producing families. Both producer organizations and importing organizations are involved in the process of developing knowledge and skills of producers and the entire Fair trade chain.

Fair trade organizations raise awareness about Fair trade and the possibility of a bigger justice in world trade. They offer customers information about the organization, its products and under what conditions are manufactured, always respecting the ethical codes of advertising and marketing.

Fair trade actively promotes better environmental practices and responsible production methods. These practices include the use of sustainable raw materials, waste management, organic farming and the sustainable use of packaging.

Certified products, such as Fair Trade Certified offer the rigorous social and environmental guarantees that many retailers and buyers demand today. Fair trade empowers consumers to support producers and farm workers, and this will have a positive impact on agricultural communities through their daily purchases.

The Fair trade certification model is designed to ensure fair trade practices at all levels of the supply chain. To sell your product certified by Fair Trade Certified, you must become a certified Fair Trade producer. When requesting and successfully completing the certification process, including a rigorous audit conducted by SCS (Scientific Certification Systems, Inc., is a trusted company, leader in certifications, audits, testing and elaboration of external standards in matters of environment, sustainability and food quality), and producers will gain this distinctive recognition. Fair Trade USA partnered with SCS because of the proven experience as well as its track record in innovation in the world of certification. SCS is a globally recognized certification body; as well as a standards developer with almost three decades of experience. SCS and Fair Trade USA share the common goal of helping businesses and consumers support workers and communities around the world while protecting the environment.

Scientific Certification Systems, Inc, like Flocert, is the exclusive partner of Fair Trade USA, through this partnership, expanding common goals of helping businesses and consumers to support workers and communities around the world; while protecting the environment. When requesting and successfully completing the Fair trade certification process, a rigorous audit by SCS is included in order to obtain this distinctive recognition.

PROCESS OF CERTIFICATION

The steps to obtain the Fair trade certification are described below:
The certification typically takes two to three months to complete, depending on the performance of the operation seeking certification.

1. Request, fill and send the application form to SCS at fairtrade@scsglobalservices.com with a copy for Fair Trade USA (producers@fairtradeusa.org).
2. Authorize the proposal. When the application is approved, SCS issues a work order and an Evaluation Services Agreement.
3. Schedule the Audit. SCS provides an audit plan and requests the documents before scheduling the on-site audit.
4. Submit to the audit. The on-site audit includes review of documents, interviews with workers and field observations. Findings are reported at the closing meeting. Audit report is submitted within 20 business days.
5. Corrective actions. All matters cited in the Nonconformity Report (NCR) are addresed in

Corrective Action Plans (PACs) within 30 days. PACs provide clear evidence that an implementation has occurred.

6. Decision, SCS issues certification decision based on PACs prepared by client.
7. Certification. SCS provides a Fair trade certification registration number, a certificate and the label to be applied to the product. Certificates are valid for 3 years, and surveillance audits are performed annually. 2000 Powell Street, Ste. 600, Emeryville, CA 94608 USA | +1.800.326.3228 main | +1.510.452.8001

Source: www.scsglobalservices.com/es/certificacion-de-comercio-justo

THIRD HEADLAND

Case study

Etchohuaquila is a small town in the municipality of Navojoa in the State of Sonora, Mexico. It i located approximately 560 km from the border with the United States. He became known around the world for being the birthplace of Fernando Valenzuela (El Toro), who was pitcher of great baseball leagues for the most part with Los Angeles Dodgers in the eighties. It is a town located between the municipalities of Navojoa and Cajeme whose main activities are the agriculture and sale of regional dishes.

A part of the interview made by journalist Manuel Robles of Proceso magazine on August 21, 1991, is annexed to some inhabitants of village of Etchohuaquila in relation to pitcher Fernando Valenzuela and the life of the population. The article is called; HUNGER, THIRST AND DEBTS AFFLICT TO ETCHOHUAQUILA, THAT DOES NOT WANT TO NEVER HEAR OR SPEAK OK “THE TORO”.

The inhabitants of this region had put their illusions in the sporting character of great leagues of baseball Fernando Valenzuela, nevertheless the dream is finished and now no one wants to hear about him.

In the midst of a devastating panorama of houses of adobe, Wood and cardboard, in which entire families are crowded, bitterly points out the second cousin of Fernando Valenzuela “everything is in promises”. Narrates “nobody wants to speak or hear more of this character before the pressing situation of an indebted and unaccredited land. Apart from the fact that nothing has been planted, the bank is killing us and the situation is getting worse and worse, and in their desperation the shareholders have requested the help of president Carlos Salinas de Gortari, before the useless efforts made before the state government.

“Last year, on two occasions, the shareholders traveled to Mexico City to ask president Salinas de Gortari for irrigation water for the town, which allowed them to expand their crops, currently only 150 of the 3,122 hectares of land, main cause, they say, of the backwardness of the population.

He also points out that in a letter which they say delivered at the National Palace on January 9, 1990, the peasants asked to share with them the water flow that gives other lands in the area Alvaro Obregon dam, 59 houses for them and one more for rural teachers, who have nowhere to sleep. A shareholder finishes pointing out “We are in crisis”.

This poor land of the municipality of Navojoa, of 700 inhabitants, located about 40 kilometers from Obregon City, seemed to wake up with the success of Valenzuela in baseball of the major leagues, thus the town was inscribed in the national map, were blessed lands indicated the population.

The inhabitants of Etchohuaquila – named after a cactus that abounds in the region – were sure that the people would cease to be the poorest of the municipality and the state. They imagined they would have access roads, streets, water, mercurial light and even a baseball stadium for 1,500 people, who would carry the name of its hero: Fernando Valenzuela. The illusion ended; there was never asphalted road, no traced streets, no mercurial light, much less a stadium.

The author's appreciation of the region is that "the land looks like a lifeless village abandoned to its fate and suffocated by the heat, which at this time of the year becomes 40 degrees Celsius. The place is reached by a gap of four kilometers long that begins in Foundry, a delegation of the municipality of Navojoa, to one side of the highway Obregón City-Navojoa. However it has some public services, such as electricity and running water, but its inhabitants complain that water causes disease, mainly children.

"We are really fucked, we do not have help of nobody, neither of the government nor of" "El Toro", says Félix Muñoz, briefcase in hand.

He explains that his efforts to obtain irrigation water for the population have failed, and that a well has to be drilled, whose equipment costs 490 million pesos. He adds that the credit has been requested from various institutions, such as Banrural, Fund of Guarantee and Promotion for Agriculture, Livestock and Poultry (FIRA) and until the Pronasol,

"this year, due to the outstanding debt that they have with Banrural, for 185 million pesos, which has resulted in other problems. He mentions, for example, the fact that the bank did not grant them the credits of loan for the planting of maize, because they have their "wallet expired" and that their debt grew 22 to 40 million pesos, due to default interest "No there are no tortillas here, "complains the land representative, who insists that the main problem of the people is the lack of water to cultivate the land".

Actually it has a total population 633 inhabitants, 328 are men and 305 are women. The age of the population is divided into 240 minors and 393 adults, of whom 57 are older than 60 years. In addition 284 people are indigenous households and 107 people from 5 years and older speak only the indigenous language. The majority of the population (628 people) has medical attention and is affiliated to the Mexican Social Security Institute.

In the village there are a total of 160 households of which 136 have homes, 86 have a dirt floor and approximately 23 have a single room. Besides, 121 of the total households have sanitary installations, 134 are connected to the public water supply and 132 have access to electricity. In the village there are 30 illiterates of 15 years and over and four young people between the ages of 6 and 14 do not attend school. Of 15 year old of young people of that population: 23 people do not have education, 260 have incomplete education. Also 115 have a basic education and 38 have finished the college. Only 41 young people between the ages of 15 and 24 have attended to school. So the average schooling of the population is 6 years.

The agricultural vocation of the region

Bio space

The planting of organic vegetable gardens began with the social project called "Bio space", located in Etchohuaquila, Navojoa, Sonora, which will generate about 2,800 wages during the harvest. The Project sought that the indigenous communities, mayos, settled in that community and in nearby will have stable and paid jobs. In addition, the project will encourage the creation of micro economies in localities, but above all, complying with the basic principles of Fair trade. The objective is to contribute to the development of the country, mainly generating jobs among the indigenous mayos and therefore foreign exchange rate for Mexico and Sonora, and improve the quality of life of these people.

The Land structure is made up of three social agribusiness companies
UCA Biosphere of Etchohuaqulia
UCA Horti Park
(3) Asparagus Etchohaquila

There are eight shade mesh nets with twenty-six hectares for the production of organic vegetable gardens; also a plant for the packaging of organic vegetable gardens and the establishment of one hundred hectares of planting of asparagus.

This social Project has benefited 23 populations of the Mayan ethnic group:
25 workers in Bacapaco, 73 in Buaraje, 24 in Camoa, 15 in Musuabampo, 6 in Chirojobampo, 48 in Cohuirimpo, 16 in Ej. M. La Madrid, 6 in El Recodo, 20 in El Sanial, 18 in El Siviral, 294 in Etchohuaquila, 90 in Etchoropo, 8 in Fundición, 82 in Guadalupe de Juárez, 14 in La Escalera, 27 in Los Buidbores, 39 in Masiaca, 37 inMoroncarit, 74 in Rancho Camargo, 6 in Rancho del Padre, 38 in Santa María del Buaraje, 77 in Sifón and 7 in Tesia. In total 1,044 members.

Size of the company.
26 acres of shadow mesh home.
8 Organic crop ships.
Production program.

The production includes the following products: Tomatoe (Ball and Rome), Cherry in Cluster, Grape, Bell Pepper, Cucumber, Bean, Baby blue, Pea, Mini bell, Prolific Habanero.

Total production, in 2013, amounted to 150,000 boxes. In 2014 increased to 300,000 boxes. Annual sales are $56 million pesos.

The process of packing and cutting vegetable gardens generates 500 jobs in the high season, which covers the period from January to March, where 3 to 5 thousand boxes of the different products are produced daily. In the months of June to September, it is called as low season and work on average 100 people in packing and cutting, which substantially decreases the work. In addition, 90 percent of the workforce is women; since by the type of product its handling requires a delicate treatment.

Regarding the commercialization, there was a contract for the production and commercialization of organic vegetable gardens with the company: “Organic of the Cape”. The contract signing contemplated the company’s contribution: the amount of $880,000, the delivery of seeds and organic inputs amounting to a total of $1.3million. Nowadays the commercialization of the products is done through the company: “Fair trade”, which is in charge of distributing an average of 240 thousand boxes to the different markets.

Packaged products are shipped to: Nogales Arizona, Los Angeles, California, where they have the collection center and the company distributes them to different markets, but most of them remain in the United States, the rest goes to Europe and Japan.

Talking about prices, they vary internationally because they are organic products: in the case of tomatoes, their price varies from 16 to 24 dollars the box, but the base is 20 dollars per box; however, there are other products whose price is above $35 per box. So, the total of the production is destined to the export market, reason why it counts on the certification of the United States, and is at the same time Protection to the Worker; the products are labeled "Puimos Lab. Fair Trade". This accomplishment implies grater benefits for the workers, since the commercialization company grants economic resources to guarantee that it counts on better services and decent spaces in its work.

Since 2014, in which the workers were certified, they integrated a Committee to determinate how and in what will be applied the resources obtained, amounting to 35 thousand dollars.

In the options are: the installation of clinic-hospital, gymnasium, sports areas, housing areas, scholarships to the children of the workers; as well as other alternatives.

CONCLUSIONS

Although the trade agreement in Mexico has increased total exports benefiting certain sector of the economy since the country is the second largest exporter of cars in Latin America, only below Brazil; exports from the aerospace industry increased by 140% in the last 5 years; is the world's sixth exporter of medical, surgical, dental and veterinary tools and equipment; is the number one exporter of flat screens; is the world's number one producer of organic coffee; is the second producer of onions, chickpeas and tomatoes; is the number one exporter of refrigerators and third exporter of vacuum cleaners.

On the other hand has generated large losers, especially the agricultural sector that has not been able to integrate into the global production process. For example, there has been a notable increase in agrifood imports. In 1995 we imported from the United States $3.254 billion dollars and we export $3.85 billion dollars of these products. In the first decade of the 21st century, our imports soared to 7,145 million dollars and our exports amounted to 5 thousand 267 million. If our agrifood balance with the United States in 1995 exceeded 581 million dollars, it became deficit for 5 148 148 million.

Since NAFTA began, Mexico has provided $78 billion dollars' worth of food.

In Mexico, where one of every four people lives in rural areas, there is a lacerating reality: most of the people living there are poverty and a large number of them are living in extreme poverty. This situation is particularly dramatic among indigenous peoples.

In 1990, the average annual import to Mexico of the ten basic crops (maize, beans, wheat, sorghum rice, etc.) was 8.7 million tons. For the year 2000 reached 18.5 million tons, 112 percent increase. Of maize the most we imported before the treaty were 2.5 million tons, in 2001 we already imported 6 million 148 thousand tons.

Currently, Mexico imports 95 percent of soybeans and dependence on rice reaches 58.5 percent, wheat at 49 percent, maize at 25 percent. We also import 40 percent of the meat we consume.

As a result of unfair competition from foreign imports, the real value of the country's products has collapsed. Between 1985 and 1999 corn lost 64 percent of its value, and beans 46 percent, without this in any way meant a lowering of food for consumers, since between 1994 and 2002 the basic basket has increased by one 257 percent.

All of this has further impoverished the inhabitants of the Mexican countryside. Of the 8.2 million Mexican working in it, the majority are in extreme poverty, according to Sedesol. Two out of three people living in the countryside are indigent. In 1992, 35.6 percent of the rural population was in food poverty, today to 2016, it is 52.4 percent. In 1992, 41.8 percent were in poverty of skills, now 50 percent.

Bibliographic References

Bourdieu, P., (1980; 1997), "*Capital cultural, escuela y espacio social".* Madrid, siglo veintiuno.

Coleman, J., (1990), *"Foundations of Social Theory".* USA, Harvard University Press.

Coraggio, J., (2006), *"Informe de distribución de la riqueza y la asociación público-privado en la economía social"*. Buenos Aires, Instituto de Estudios y Acción Social.

Krugman, P. y R. Wells, (2006), *Macroeconomía; introducción a la economía.* Barcelona, Reverte.

Mutuberría, V., (2003), "*El debate en torno a la Economía Social; discusiones fundamentales desde la perspectiva de los países centrales y la perspectiva de los países de la periferia".* En Mutuberría (ed). X encuentro internacional de economistas sobre globalización y problemas del desarrollo, organizado por ANEC, 3-7 de marzo del 2003, La Habana, Cuba.

Palafox

Putnam, R., (1993), *"The prosperous community: social capital and public life"*, USA, The American Prospect. No. 13.

Ricardo, D., (1817), *"Principios de Economía Política y Tributación".* Londres, John Murray.

Robinson, J., (1969), *"Economía de la competencia imperfecta".* Barcelona, Martínez Roca.

Smith, A., (1776; 2001), "*La Riqueza de las Naciones".* España, Alianza

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Collaborative Learning Environment

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ABSTRACT
The purpose of this research paper is to analyze the effects of collaborative learning environment across different cultural settings. Learning in a collaborative environment teaches us how to quickly adapt and be successful in new areas of interest. Perseverance is one of the main skills that aids learners a lot as they move forward towards achieving their goals. Strong sense of efficacy can enhance accomplishment in different ways. Self-discipline, self-direction and self-motivation are few abilities that must be prioritized by learners. Learners need to pay attention to every detail in order to evaluate given evidences and find out if those evidences actually relate with a conclusion. Details may include trends, cause and effect relationships between different variables, concrete examples and sequence of events. Understanding different relationships such as power-authority and learner-teacher within higher education are highly important for academic and professional success.

INTRODUCTION

Collaborative learning helps learners in developing effective cognitive approaches primarily with the help of social interaction. These learning approaches promote and reassure the idea of being effective in achieving desired goals. Individuals are unique and express themselves differently from each other. Collaborative learning also plays a pivotal role in cognitive development of individuals. Every individual will always have a slightly different perspective even towards a common scenario. Cultural attributes can play an important role in affecting learners' perceptions. Zhu (2011) explained that culture overall itself is a very dynamic process. Thus, one must take into account the cultural background factor of learner to understand how they respond in learning. Culture helps in shaping individual's behavior, perceptions and values. Determinants such as effort or obligations are related to what a person wants to achieve. According to Zhu (2011), group discussion is considered to be one of the important activities in collaborative learning environment which enables learners to develop effective strategies of cognitive learning through written and oral communication.

POWER-AUTHORITY RELATIONSHIP

Power and authority are two different concepts but interrelated. Power comes from the possession of information and knowledge. Authority comes from the responsibilities and tasks delegated to a position holder. Every employee has a different kind of power and authority in their respective field. For instance, educators, have power in terms of delivering right content in the form of lectures, in their field of expertise. On the other hand, consultants are using their extracted knowledge from the social work and medical sectors to guide students in a much professional manner. Educators have different kinds of power such as reward power, legitimate power, expert power, referent power, and coercive power as well. The work of (Weimer, 2009) claims that learners tend to learn faster when teachers give them rewards in the form of extra credit or positive feedback. Learners do know that educators have authority over them. Educators tend to decide what learners must study, which assignments are important for them to focus on and what standards they must have so that they can achieve desired results. According to Weimer (2009), this type of power is also known as a legitimate power. Weimer (2009) further suggests that expert power comes from the teacher's knowledge. Learners willingly accept what teacher teaches them is because they recognize that teacher has proficiency in that respective field. Learners mostly do as the teachers say because they have a positive regard for them. Weimer (2009) refers to this concept as the referent power.

Weimer (2009) added that some educators may use their coercive power to make learners learn. Coercive power can be in the form of penalties for late submissions. Learners, in general, respond to this power of teacher as they always want to avoid this type of punishment. Teachers make their moves on the basis of these power. Differences here come in the form of educator's area of expertise. Educators are using their knowledge to directly and indirectly influence the action of people in the surroundings. They could be learners, colleagues or peers. However, authority of information and knowledge is independent of any position. Power can always help in reinforcing the authority.

LEARNER-TEACHER RELATIONSHIPS

Every learner has a different strategy of learning and accomplishing their goals. Learner-teacher relationship is not merely about obedience and acceptance; it is mostly defined by questioning and analysis. This relationship is considered to be inclusive, however, the onus is more on the shoulders of teachers. Supportive and strong learner-teacher relationship helps learners adapt, understand, learn and achieve their goals faster comparatively. Few learners tend to grasp the concepts and taught material quickly while on the other hand, there will be those who must be taught repeatedly by using different methods to be able to comprehend the lectures. Proper communication serves as a connection between every learner and teacher. Gehlbach (2015) states that exploring personality traits, shared preferences as well as common morals and values can be a source of strong social glue. Some of the traditional learners prefer a canonical approach in this relationship. This does not necessarily mean that learners require teachers to focus on their traditional ideas of being very informal. In fact they must prefer interaction with their learners and promote healthy discussions.

One needs to accept the fact that every person holds different viewpoints and has a unique way of understanding. Some appreciate a formal along with an informal relationship with the educators within the boundaries of respect. We all tend to believe that sound relationships between a teacher and learner will always have a positive impact on learner's performance. In contrast to this, some learners think that if teachers are being too strict on the rules and guidelines but do not provide sufficient feedback, it hampers the learner's capabilities to grow in the future. Timely feedback is an essential element to make sure that learners are on the right track of performance. According to (Goodwin & Miller, 2012), if feedback is provided weeks after the completion of any assignment, learners do not learn much from it. Therefore, for education purposes, timely feedback is always preferable which helps learners in grasping the right concepts. High performance has a positive impact on learner's attitude and behavior as well. Simultaneously, it also helps in making individuals feel more confident about themselves in the professional world.

SIGNIFICANCE OF GOALS AND WAYS OF DETERMINING PROGRESS TOWARDS GOALS

Noddings (2007) mentions that learner's aims and objectives can be used by them to reflect upon, measure and evaluate their goals. Zhu (2011) stated that learner's preferences and satisfaction for collaborative learning are important variables which may influence his learning. Simultaneously, learners want to learn theoretical as well as practical approaches for their career development. Learner's end goal is eventually climb up the ladder of success and to contribute significantly in higher education. People usually opt for tracking their progress on the daily basis; however most of them focus on the end result. Jeary (2016) suggested that learners must challenge themselves in those areas of life where they need improvement and figure out how that will contribute towards a positive outcome.

Coutinho (2007) examined a relationship between two variables i.e. metacognition and achievement of goals. Chick (n.d.) explains that metacognition involves critical awareness of one's learning as well as thinking. Achievement of goals describes that every learner has a goal towards learning in a learning environment. Metacognition is equally important in extracting information and learning, hence, it is considered as a strong variable to predict academic success. Coutinho (2007) discussed another factor, known as performance goal being a sub category of achievement of goals, depicts that learners are competitive and strive hard to compete with others to avoid giving an impression of being incompetent. Researchers have found out that performance goals are interrelated with academic success via metacognition. This is also because of the fact that in this highly competitive society, learners are relating their future goals with academic success.

CONCLUSION

People tend to think and act differently from each other. According to (Guild, 2001), learners across the world are not always same. These strong differences are mainly because of individual's background, different ways of learning as well as different experiences they face in their respective lives. The way people write, behave, speak is mainly a reflection of their own thoughts. People from different backgrounds will bring in their own point of views and analysis to different situations. However, few discussions in a learning environment might be quite challenging because of degree of sensitivity of certain topics in different parts of the world. Beliefs have a strong role in the depiction of one's thoughts and ideas. Some people look for motivation internally to learn and some look for external rewards to keep going. People in some cultures dissect the whole situation and try to find out the root-cause of it where as others try to focus on a certain part of the problem and get started with the solution right away. However, sometimes these different ways of learning have more to do with an individual's personality and less to do with the culture. However, culture and learning styles have always been interrelated. Learning behaviors as well as patterns are always a mixture of nature and nurture. Past experiences help us in formulating our own beliefs and that contributes towards how an individual sees the world. Another factor to be taken into account from this research is that even though we might have the same innate capabilities, still our understanding and ways of organizing resources and implementing our thoughts into actions will be a lot different. In collaborative learning environment, even when we have been taught by the same professors, given the same resources to utilize; however, we still comprehend the questions and given information in our own unique way.

References

Chick, N. (n.d.). *Metacognition*. Retrieved from Center for Teaching: https://cft.vanderbilt.edu/guides-sub-pages/metacognition/

Coutinho, S. A. (2007). The relationship between goals, metacognition, and. *Educate, 7*(1), 39-47.

Firestone, W. A. (1987, October 1). Meaning in Method: The Rhetoric of Quantitative and Qualitative Research. *Sage Journals*, 1-6.

Gehlbach, H. (2015, May 27). *When teachers see similarities with students, relationships and grades improve*. Retrieved from The Conversation: http://theconversation.com/when-teachers-see-similarities-with-students-relationships-and-grades-improve-40797

Goodwin, B., & Miller, K. (2012, September). Research Says / Good Feedback Is Targeted, Specific, Timely. *Educational Leadership, 70*, 82-83.

Guild, P. B. (2001, October). *Diversity, Learning Style and Culture*. Retrieved from John Hopkins School of Education: http://education.jhu.edu/PD/newhorizons/strategies/topics/Learning%20Styles/diversity.html

Guskey, T. R., & Sparks, D. (2000). *Evaluating Professional Development.* California: A Sage Publications Company.

Jeary, T. (2016, January 21). *Personal Development*. Retrieved from Measure Your Progress to Achieve Your Goals: http://www.success.com/article/measure-your-progress-to-achieve-your-goals

Noddings, N. (2007). Aims, Goals, and Objectives. *Encounters on Education, 8*, 7-15.

Weimer, M. (2009, December 22). *Different Sources of Power that Affect the Teacher-Student Relationship*. Retrieved from Faculty Focus: http://www.facultyfocus.com/articles/teaching-and-learning/different-sources-of-power-that-affect-the-teacher-student-relationship/

Zhu, C. (2011). Online collaborative learning: Cultural differences in student satisfaction and performance. *Journal for Educational Research Online, 3*, 12-28.

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SOCIETY FOR SCIENCE AND EDUCATION

Ethical Aspects in Cyber Security

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ABSTRACT
Cyber Security (CS) industry increases every year employment chances as well as the requirements at staff working in this field and at education. In January 2013, Cyber Security Strategy has been prepared by European Commission and it is decided that vocational and academic trainings in cyber security field should be improved also by including of topics in the curriculum like ethical, social and psychological ones. Ethics helps to distingue right from wrong, and good from bad. It analyzes the morality of human behaviors, policies, laws and social structures, in this paper we consider Ethic aspects in Information Security (IS)/ Cyber security (CS) being one of our research and development domain. A European project aimed at improving CS courses and knowledge of students in Ethics is presented.

Keywords: Information Security, Cyber Security, Cyber Security Professionals, Ethics

INTRODUCTION

The companies and public offices have taken some cyber security precautions in order to strengthen security within information technologies field. Cyber Security (CS) industry increases every year the both employment chances as well as the requirements at staff working in this field and at education.

In January 2013, Cyber Security Strategy has been prepared by European Commission to take precautions against the cyber-attacks which are performed continuously to companies, public offices and other strategically important offices. Within the context of this strategy, it is decided that vocational and academic trainings in cyber security field should be improved. One of the improvements should be the including of topics in the curriculum like ethical, social and psychological ones or to.

Ethics helps to distingue right from wrong, and good from bad. It analyzes the morality of human behaviors, policies, laws and social structures (Bray, 2005; Bynum and Rogerson, 2003). It is based on ethical principles of theories like **consequentialism** and **deontology.** **Consequentialist approaches** assume that actions are wrong to the extent that they have bad consequences. **Deontological approaches** assume that people have moral duties that exist independently of any good or bad consequences that their actions can have (Johnson, 2006).
Ethical principles are linked with legislation, but legislation is not a substitute for morality. So, it is important that individuals and organizations consider not only the legality but also the morality of their actions.

“As we probe the implications of a world closely connected electronically and increasingly dependent on these electronic connections, it is important that we not sit passively by, watching and predicting what it will all mean, rather than actively engaging in shaping it. We should be asking what form we want these electronic connections to take. Who should have control? What values should the system embody or promote? Who should have access? What social or 1995 introduce personal interests should these connections serve?" (Computers, Ethics and Social Values, the section "The Net World").

In this paper we consider Ethic aspects in Information Security (IS)/ Cyber security (CS) being one of our research and development domain. A European project aimed at improving CS courses and knowledge of students in Ethics is presented.

IS and CS are very closely related terms and are used sometimes interchangeably.

Richard Kissel gave following definitions for IS and CS (https://www.quora.com/Whats-the-difference-between-cyber-security-and-information-security).

Cyber Security is defined as the ability to protect or defend the use of cyberspace from cyber-attacks. It deals with protection of cyberspace and use of it against any sort of crime.

Information Security is the protection of information and information systems from unauthorized access, use, disclosure, disruption, modification, or destruction to provide confidentiality, integrity, and availability.

Because most of the information today is saved electronically and most of the cyber-attacks are executed to disclose confidential information and harm its integrity there is sometimes confusion between these terms.

CS has as purpose to protect goods and resources of organizations from the organizational, human, financial, technical point of view, so that to allow them to continue their mission. Organizations must ensure that no significant prejudice is caused to them.

CS is a process involving the entire society, and everyone should be involved in supporting it and the development of a cybernetic code of conduct for the appropriate use of information and communication technology and in spreading an authentic security policy providing the standards for the users of cybersecurity (partners, entities, suppliers).

DEVELOPING A CYBER SECURITY STRATEGY

Within a cyber security process, it is important to correctly identify the goods and the resources which must be protected, so that the scope of the security necessary for an efficient protection is precisely determined. This requires a global approach of security, which should be multidisciplinary and comprehensive.

A cyber security strategy is necessary due to:

a. society's dependence on cyberspace, which means that security, resilience and trust in information and communication field represent a problem of national interest,
b. economic role and possibilities of information and communication technologies to maximize benefits and exploit their opportunities,
c. the fact that cybernetic attacks, especially those committed against critical information infrastructure, could represent a threat to the national security,
d. the necessity of protection of confidentiality, integrity and availability of data and information systems, in order to enhance security, resilience, authenticity and trust in

the field of information and communication technology (Himma, 2007; Laurie et Graeme, 2002),

e. objectives like the protection and promotion of human and state of law rights,
f. attention on the protection of critical information infrastructure within the public and private.

Often a cyber security strategy tends to focus on the technical, procedural and institutional measures, such as risk and vulnerability analyses, early warning and response, incident management, exchange of information, creation of bodies in the field of cybersecurity, such as *Computer Emergency Response Teams* (CERTs) and *Computer Security Incident Response Teams* (CSIRTs), which contribute to the intensification of international cooperation and other measures in order to ensure protection of cybernetic space.

A cyber security strategy should have as priorities also criminal justice or other measures that should be taken against cybercrime and which are not always included.

Referring ethics in CS strategies, a set of basic principles relating to ethical behavior, responsibility and transparency, incorporated in an adequate legal framework, and a practical set of procedures and norms are required which must be applied both at national level and at the level of the international community, and must be compatible with international directives in force.

Ethics— moral principles that govern a person's behavior should be a critical part of any cybersecurity strategy. Without clear ethical standards and rules, cybersecurity professionals (CSP) have difficulties to fight against criminals to protect systems and data.

ETHICS RESPONSIBILITIES OF CS PROFESSIONALS AND ORGANISATIONS

CS professionals (CSPs) are individuals who maintain systems and IS/CS.

They have a professional responsibility to assure the correctness, reliability, availability, safety and security of all aspects of information and information systems. This responsibility has a moral dimension: professional activities in computer security should protect people from morally harms but not causes such harms, and protect not *v*iolate people's moral rights.

In case of safety-critical systems, the decisions of information security professionals could have a great importance for life or death.

Moral responsibilities of CSP professionals as part of their profession are reflected in codes of ethics used by various organizations for computer and CS. These codes of ethics are not always explicitly detailed, i.e. the code of ethics of the Information Systems Security Association (ISSA), an international organization of information security professionals and practitioners, only states that members should "[p]perform all professional activities and duties in accordance with all applicable laws and the highest ethical principles" but does not go on to specify what these ethical principles are or how they should be applied and balanced against each other in specific situations (International Telecommunication Union, 2009).

CSP professionals, as well as other computer professionals who have a responsibility for computer security, should be trained in information security ethics.

The training helps professionals:

- to get clear about interests, rights, & moral values that are at stake in computer security,

- to recognize ethical questions and dilemmas in their work,
- to balance different moral principles in resolving such ethical issues (Bynum et Rogerson, 2003).

Referring Ethics in organizations, aside from their employees, businesses must fulfill certain ethical and legal requirements in the event of a security incident, particularly a data breach. Time is undoubtedly a key factor in responding to cyberattacks. However, notifying customers and clients about any serious, immediate implications, such as stolen data and credentials, is also an integral part of the incident response process. When a company not informs the customers after a catastrophic breach, they remain vulnerable.

When a company's data is compromised, it may face lawsuits, reputational damage and questions about its ethical standards. Delaying public announcement can strength these consequences. Those responsible for overseeing information security practices within organizations, such as CISOs and supporting executive management, must be engaged and lead by example to develop a culture of high ethical standards.

Cyber security is a critical issue for all businesses and will become more important as more devices are connected to the Internet.

Rapid technological developments have provided vast areas of new opportunity and potential sources of efficiency for organizations but have also brought unprecedented threats.

An effective cyber security strategy should be oriented to the risks faced by each organization, and should be based on the results of a risk assessment.

Organizations could be attacked deliberately due to a high profile and having valuable data (or there is some other publicity benefit in a successful attack).

Virtually every Internet-facing entity will have exploitable vulnerabilities unless it has been specifically tested and secured.

Cyber criminals observe weakness and try to exploit it. Therefore, all organizations need to understand the cyber threats.

Effective cyber security can protect critical assets of organizations, customer details and operating systems and help them to win new business by providing assurances of their cyber security commitment to their supply chain, partners, stakeholders and customers.

In order to achieve real cyber security, today's organizations have to r**ecognize that special software alone is not enough to protect them from cyber threats**.

The three fundamental domains of effective cyber security are:

- people,
- processes and
- technology.

ISO 27001

- is the internationally recognized best-practice standard for information security management.
- forms the backbone of every intelligent cyber security risk management strategy. Other standards, frameworks and methodologies need ISO 27001 to deliver their specific added value.
- will help organizations to protect their information assets in cyberspace, comply with their regulatory obligations, and thrive by assuring customers and stakeholders that the organization is cyber secure.

ETHIC PROBLEMS OF CS IN EDUCATION

Ethical aspects of using information technologies (IT) and teaching CS in education, particularly those related to production of national information resources and ensuring access to these resources are discussed in some papers (Voronkov, 2002).

People with different jobs, age groups and educational backgrounds from different countries, have different cultures in using resources available through the global computer network. This makes complicate the developing of universal standards of behavior and a system of ethical norms, which could be widely recognized in the World Wide Web (Voronkov, 2002).

By using Internet browsers there is no effective way to control the quality of such publications or to adopt particular standards and earlier mistakes requiring the development of ethical guidelines?

Woodbury (2002) believes that the “net ethics” should contribute to promoting ethical standards and increase the probability of ethically acceptable behavior of software developers and Internet users. It means that the question of quality of information sources is acquiring greater importance. The quality of information sources used in education should be of particular concern. Their reliability must be ensured.

Referring **psychological issues** additionally to individual experience in using computers, at every transition to a new objective or program with the use of computer technology it is necessary

- either to assign a special preparatory stage,
- or to allocate time and place in the educational process itself where the student could master this technology as applied to the subject he or she is studying.

Otherwise to employ computer technologies as a means of teaching can be less effective.

It is not always possible to determine the cause of the failure to achieve expected results from the use of computer technologies in the educational process when such failures occur. Such negative results can be explained by the fact that the specific learning situation cannot produce the kind of results we hoped for.
Causes could be:

- the employed technologies have limited capabilities and cannot produce the desired effects
- the incompatibility between the content of learning and the use of computer technology.

To find a **psychologically valid explanation** of the failure and to continue effectively using computers in teaching it is necessary:

- to examine the technological resources employed, the particulars of the educational

material (its objectives and tasks),
- to compare the subject and the capabilities of the employed technologies,
- to find out if and where the technologies can be successfully used.

Another important aspect of computer technology application in education is the **use of direct and mediated forms of activity**. The logic of the psychic development of human being syndicates that first, as a rule, man masters some activity and only later this activity can become mediated. For instance, first a child learns to communicate and only after he/she has mastered the skills of communication, this ability can be used as an educational means. There are similar data on the development and use of games and other forms of activity (Hanson et Palm, 2005).

Numerous psychological studies show that the direct mastering of an activity is subject to the certain logic of development. For instance, without mastering direct communication individuals cannot learn to play. If an individual cannot play, he or she will not be able to join in an organized educational process. The peculiarities of mastering computer technologies in education have not received much attention in the literature (Voronkov, 2002).

Thus, **the use of computers in education is rather ad hoc today and has little grounding in scientific analysis**. Neither is there evidence of attempts at introducing psychological control over it.

Another psychological issue is the question of the **collective and individual modes of education**. Considering the effectiveness of learning, the choice between the modes depends on the student's psychic age and on the subject to study. In one case frontal teaching is more effective, in another – work with micro-groups (a group is divided into several teams); still another case would require individual tuition.

RESEARCH RESULTS ABOUT TEACHING ETHICS IN CS

Students are taught in education the skills necessary to get them through life i.e. reading, writing, mathematics and basic social skills as parts of education. In the last years schools have integrated computer courses into their main curriculum but they are not being taught about the threats they face when using these technologies.

Research results show that fundamentals of computer science should be the higher priority but there are aspects of CS that are independent of computer science. Students are taught never to share their personal information online or to click on unfamiliar links. Cyber threats are always changing, and the students need to be taught about social engineering i.e. obtaining confidential information by manipulating and/or deceiving people.

Students have access to mobile phones, media players, televisions and game consoles, most of which can access the Internet so it is almost inevitable that they will be faced with cyber threats at multiple points in their lives. A cyber security-based curriculum could help to develop a digitally secured future workforce.

Referring formation of CSP, outside of university courses and industry certifications, there is little standardized training or formal accreditation required working as a CSP.

Computer science students, or students specializing to become a computer professional need to have, in addition a required course or some modules in computer ethics. Ethics could be a form of social and humanistic studies of CS aimed at a theoretical understanding of ethical aspects of CS or aimed at developing practical professional tools in this domain. Optimally a course in computer ethics would integrate both dimensions (Brey, 2000).

In teaching a course in computer ethics, one may of course emphasize either the more fundamental or the more applied dimension of computer ethics. In a professional program for CSP students, a course in computer ethics that is mostly applied, and that focuses on problems and dangers in CS is more adequate.

Regarding privacy, for example, it would both teach general moral theory on privacy, specific moral analyses of informational privacy, and the various ways in which privacy considerations come up in contempt rary. Computer systems and their uses, existing privacy law and policies, and professional responsibilities for CSP and ways in which professionals may deal with them.

This is necessary because they face daily ethical dilemmas unique to their line of work. Cybersecurity professionals are the technological gatekeepers in their respective organizations, entrusted with great responsibility and the high levels of access needed to carry out their roles effectively (Tavani, 2004).

How an individual manages this authority comes down to his or her own ethical yardstick, which is why organizations must carefully select security experts who exhibit sufficient standards and technical competency. But in this context, more should be done also through international projects in CS.

PROJECTS

The European project Cyber Security (www.) with partners from Education, Research, and Industry/ Business supports the European Cyber Security Strategy.

The partner'countries of the project Cyber Security have a strong strategy which is the sum of all national and international measures taken to protect the availability of information and communications technology and the integrity, authenticity and confidentiality of data in cyberspace.

Referring cyber security in VET, the project partner countries also Germany does not have any body responsible for educational and professional training programs for raising awareness with the general public, promoting CS courses and ethics in CS. There are no CS courses in vocational schools, this is a gap in the present, nor is a cyber security discipline included in the curricula of professional courses. So, one of the objectives of ERASMUS + Project cyber Security to disseminate cyber security issues in formal and non-formal education and fostering the development and skills of teachers and trainers will contribute to make progress in introducing cyber security in HE and VET.

Through short research in European Practices and Education, development of a curriculum in cyber security education including Ethical aspects, organizing seminars and conferences in schools, VET and HE institutions, development and distribution of a Book about cyber security, the project will contribute in improving knowledge and skills of students and teachers in avoiding cyber attacks. The cooperation with industry assure a practical character of the project outcomes (Hamburg and Bucksch, 2016).

CONCLUSIONS

Without codified CS ethics guidelines in place at the industry and training of students and at employer levels, it is difficult to develop the most ethically response to a given incident.

An integrated module of ethics in CS course it is also crucial to cultivate ethical teachings among students and the security professionals of tomorrow. By promoting awareness of CS ethics at the early stages of learning and professional development, it will support that future white hats stay on the right side of the ethical divide.

References

Brey, P. 2000. Disclosive Computer Ethics. Computer and Society, 30:4. pp. 10-16

Brey, P. 2005. The Importance of Privacy in the Workplace. In *The Ethics of Privacy in the Workplace*, ed S. O. Hansson, S., Palm, E.. Brussels, Peter Lang. pp. 97-118

Bynum, T., Rogerson, S. 2003. Computer Ethics and Professional Responsibility: Introductory Text and Readings. Blackwell.

Hamburg, I., Bucksch, S. 2016. Approaches for bridging research an industry. In *Archives of business research 4*, no. 1, pp. 209-215

Hansson, S., Palm, E. 2005. The Ethics of Privacy in the Workplace. Brussels, Peter Lang.

Himanen, P. 2001. The Hacker Ethic: A Radical Approach to the Philosophy of Business. New York, Random House.

Himma, K. (ed.), 2007. Readings on Internet Security: Hacking, Counterhacking, and Other Moral Issues. Jones & Bartlett.

International Telecommunication Union 2009. Cybersecurity: The Role and Responsibilities of an Effective Regulator. *The 9th ITU Global Symposium for Regulators*. Beirut, Lebanon. pp.16

ISSA: ISSA Code of Ethics. In *Information Systems Security Association Website.* http://www.issa.org/codeofethics.html (2005). Cited 14 Mar 2006.

Johnson, D. 2009. Computer Ethics, 3rd edn. Upper Sadle River, Prentice Hall.

Laurie, Graeme T. 2002. Genetic Privacy: A Challenge to Medico-Legal Norms. Cambridge UK, Cambridge University Press.

Voronkov, Y. 2002. State-of-the-Art in Ethical and Legal Aspects of ICTs n Education. In *Analytical Survey ETHICAL, PSYCHOLOGICAL AND SOCIETAL PROBLEMS OF THE APPLICATION OF ICTs IN EDUCATION.* Unesco.

Woodbury, Cook, M. 2002. Computer and Information. Ethics, Volume 1. Stipes Pub.