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Incidence of Energy Poverty in Nigeria: A Critical Assessment

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ABSTRACT
Despite abundant energy sources in Nigeria, three major strategic challenges militate against its efficiency. The aftermath of this inefficiency is health risk, increasing energy prices, low socioeconomic status of the population, increased National debt burden, and rising inflation and massive unemployment. This study is set out to consider an apt remediation for this state of affairs. Using random sampling, households are surveyed in six states of Nigeria and Abuja Federal Capital Territory across the six geopolitical zones. Electricity tariffs, Energy gaps between the high and low income earners, energy spending needs and incomes against a fixed threshold were investigated. A comparison from the income earned shows that above 10 percent of income earned are spent on energy; that both the high and low income earners are energy poor, but the low are more severely hit. The results show that the energy poverty from high energy cost and inefficiency fuels income inequality.

Keywords: Energy Poverty, Energy Efficiency, Energy Security

INTRODUCTION

Nigeria, a country with vast oil and gas reserve, abundant sunlight and significant hydropower potential is worst hit in the paradox of Energy poverty and incessant energy price hike and energy insecurity. Energy poverty appears to be one of the most striking with per capita electricity consumption falling below 150kwh ,Simire,[15] This situation is causing untold widespread poverty among the about 175 million inhabitants, for decade's hence economic bleakness. In the energy ladder, a great number of Nigerians are climbing down the energy ladder – moving from electricity, gas and kerosene to fuel wood and other traditional biomass energy forms. A sizable number of about 112 million people can be said to depend solely on wood as a source of fuel for cooking thus contributing to the buildup of greenhouse gases (GHGs) that cause climate change.

This paper conceptually defines energy poverty in Nigeria to mean a condition characterised by poor quantity and quality of energy services, in terms of accessibility, affordability, sustainability. It focuses on the amount of personal monthly income committed towards energy consumption. It includes payment for fuels (for driving cars and powering generating sets and other heating regimes) .Under this condition, one is said to be energy poor when more than 10% of his monthly income is used for satisfying energy regimes and when there is no sustainable, modern, affordable and reliable energy services. It also holds that firewood as a

source of energy is not only for rural areas, but it is also the energy of choice for the semi urban and urban poor who could not afford modern, clean energy services.

Energy poverty has been a persistent problem for almost every Nigerian with no end to high energy prices in sight. This is because, a household is said to be in fuel poverty if it needs to spend more than 10% of its income on fuel to maintain a satisfactory heating regimes. Fuel poverty is largely down to three factors- income, energy prices and energy efficiency U.K.parliament ,[13]. Higher fuel prices have led to the doubling of fuel poverty in Nigeria. There are expectations of higher increases, if not cut in the bud. Government actions through energy efficiency policy are the smart way to cut "energy hurricane" in the bud.

Therefore, the only cushion to reduce energy bills and fuel poverty is a policy towards energy efficiency. Prices of fuels, gas and electricity have increased for most of the last decade in Nigeria with little prospects and hope of sustained reversal in these trends. The many reasons for these increases in prices and fuel poverty is the declining output in fuel refining or the death of the Nigeria refineries, sabotage and the system of neo- liberal capitalism that encourages the ruling cabals to import fuel into the country in order to make profits. Since rise in energy price   have impacts on the citizens, industry, economic growth and inflation, therefore, it would cause fuel poverty and add to economic uncertainty. The last (2012) subsidy schemes lead producers to sell crude overseas rather than to local refineries and therefore add to increasing volumes of refined products imports. The cost of energy is blamed for the collapse of textiles and auto manufacturing industries in Nigeria (Shaad and Wilson,[14]. The level and cost of fuel utilization and energy price rise in an economy are directly indicative of the level of development of the economy. In order to ensure optimal, adequate and reliable and secure supply of fuel that can bring down energy prices, therefore, it is pertinent to put in place a coordinated, coherent and comprehensive fuel and energy policy for the country.

This paper measures the depth of energy poverty in Nigeria, and proposes way forward to checking the paradox of energy poverty in the midst of abundant energy resources.

THE PROBLEM

Despite abundant energy sources in Nigeria, three major strategic challenges militate against its efficiency. These comprise the disruptions to its supply, environmental damage during production and usage, and persistent energy poverty. The aftermath of this inefficiency in energy exploitation is health risk, increasing energy prices, low socioeconomic status of the population, increased National debt burden, with attendant rising inflation and massive unemployment. Equally, persistent shutdown in power generation sources, high cost of energy distribution and bad debt loss from   ineffectual collection procedures are aftereffects of this ineptitude

It was in the light of the foregoing issues that the present study was designed towards investigating and clarifying the impacts, causes and problems of energy poverty on the economy of Nigeria. It is poised to unravel why Nigeria as a nation with abundant fuel and energy resources is still wallowing in energy poverty, caused by excessive energy price hike which may add to poverty, inflation and economic uncertainty.

The paper is divided into four sections. After the introduction, Part two discusses theoretical underpinnings of Energy price in Nigeria, part three talks about fuel poverty which is caused directly or indirectly as a result of energy price hikes. Method of   analysis and discussion of

results from primary data to ascertain the true position of energy poverty is carried out in section five. Part six houses the policy recommendation and conclusion for the study.

THEORETICAL UNDERPINNINGS OF ENERGY PRICING

A lot of theories by different schools of thought have been propounded on the different approaches to energy pricing among the few ones are;

The Market Based Approach.

This approach also known as the world parity, border price or opportunity cost approach is anchored on the traditional economic principles of demand and supply. Odoko etal [10] sees price of petroleum to be determined thus;

$$Pp = f(pw + CR + Tc + Dc + Oc)$$

Where
pp = pump price of petroleum product
Pw = world price of crude oil at international markets
Cr = Cost of refining fuel
Tc = Transportation cost
Dc = Distribution cost
Oc = other cost in the course of production (taxes etc)

The underlying principle of this approach is synonymous to market demand and supply interplay like any other normal economic commodity in an imperfect condition. According to Odoko et al. [10], in the case of an oil producing country, pricing using this approach is based on the principle of opportunity cost which is the world price already determined by forces of demand and supply. That domestic price will be the border price, less freight and other relative charges. This approach eliminates the arbitrage opportunities engendered by lower domestic prices, vis- a vis international prices ,Odoko et al [10]. Smuggling of fuel due to lower domestic prices as a result of subsidy could also constrain domestic supply in the long run and cause resource misallocation or inefficiency in use.

The Exhaustible Resource Theory

This school of thought championed by Hotelling (1931) in his works argues the need to price oil and other fossil resources so that the temporariness of this existence will come to bear. This school holds that price becomes a user cost, or depletion charge to show for exhaustion of resources which access is denied of the future generation.

Capital Replacement Approach.

The capital replacement school of thought advocates the need for petroleum products pricing bearing in mind the cost of production and refining. This approach argues that petroleum products should be priced in such a way that all the costs of production are recovered. This theory is critiqued in that petroleum pricing are not mutually exclusive. According to Odoko et al [10] it is possible for equilibrium price in the market based approach to be consistent with that of capital replacement approach if prices reflect the true market cost and there are no divergences between international and domestic prices.

A blend of all the petroleum pricing approaches will be more acceptable in Nigeria. However, a pricing policy that seeks to equalize domestic and international prices which does not consider the capacity of consumers to pay and does not provide variety of social benefits that can compensate for the effects of high prices is unhealthy to the economy.

The argument that supports petroleum pricing that considers capacity of consumers to pay interest of future generation, guarantees the highest social revenue, that does not make asset too cheap and avoid wasteful consumption is more acceptable. In this case pricing (based on cost of production) margin accruing to government should be made to decline so that consumers will at least enjoy some leverage given that the resources are tapped from Nigeria and not alien.

ENERGY PRICE RISE IN NIGERIA.

The pricing of petroleum products and energy has always evolved passion and controversy in the nation's body polity (Odoko et al [10] . The pricing of fuel transcends to energy such as electricity, since electricity are powered through fuels (gas, Petroleum, coal etc). The dragging debate on this issue has been centered on the question of whether the pump price of fuel should reflect the full cost of production. However, other contending arguments are that subsidy on petroleum products are a burden on government as it will impede development. Another argument is that appropriate pricing of petroleum products without subsidy will enhance adequate supply and distribution and this will generate available savings for government for infrastructural development. Most passionate is the argument that given the critical role of oil in the Nigerian economy, pricing domestically –consumed crude at export parity is insensitive to the plight of Nigerians, majority of whom live below the poverty line and the wide wage differentials between industrial and developing countries and differentials in exchange rate. Electricity bills are consistently reviewed upwards even with the incessant power outages. This trend, which would have been revised, is due to unavailability of gas supply to power thermal turbines.

The cost of petroleum products in Nigeria which makes up the actual cost of product is determined by the summation of all relevant cost components which include crude oil exploration, field development, production, refining, distribution and marketing. The current pump price of petroleum in Nigeria (as at 2012) is N97.00/litre. This price which is established by regulation is inclusive of subsidy. With the removal of subsidy by the federal government which according to SUPA (2010) can be determine as actual cost of petrol sales price therefore fuel price has gone very high and this has invariably affected the economy and caused energy poverty.

For imported fuel as in the case of Nigeria (which export crude and import refined petroleum products due to none functioning of refineries) there is usually unnecessary additional cost in the form of cost of transportation from the source country to Nigeria, changes such as port charges, taxes and export duties at source country, cost of insurance and transportation of products, cost associated with international crude oil sales, cost of brokerage for agents.

Energy Poverty in Nigeria

The trend in prices of fuel be it black market or legal pump prices have led to energy poverty doubling in Nigeria. As seen by the further increases by the removal of fuel subsidy by government in 2011. Massive increase in money from consumers pocket to pay for fuels is sucking the life out of the economy. With this increasing rise in energy prices caused by inefficient fuel supply, it shows why our economy is not doing well of late, even when we have abundant energy resources and oil; we still import fuel to supplement the demand.

Road fuels, cost of powering electricity generators have been more volatile for decades and the long term trend has been consistently upwards. Premium motor spirit (PMS) or petrol is the most widely demanded and utilized petroleum product in Nigeria.

Wood fuel which is most common fuel in rural areas is getting more expensive as it takes much time to gather and contributes to deforestation. Cooking can be said to be a major energy need in Nigeria, because it involves both the rich in urban cities and the poor in rural villages.

For the middle class of the rural and urban, kerosene used for cooking is in high demand and expensive, most times in short supply as consumers queue in long lines on end without getting any. While cost of gas for cooking and driving of electricity turbines which in ordinary sense would have been considerable as option is made high due to flaring and inadequate supply for domestic consumption. According to Hammond et al, (2007), Nigeria's poorest household earn $1-2 USD per day, but they spend on average 0.40 USD per day on their energy needs.

In Nigeria, households and businesses spend well over 10% of their income in just trying to meet up with energy demand; be it cooking, road fuels electricity etc. Energy prices have been proportionately higher for industries and have direct impact on costs and competitiveness, especially for transport companies and energy intensive industries (www.parliement .uk, 2011). Every economy, both developed and emerging depends solely on energy for effectiveness. The tariff by communication companies, cost of transportation, Electricity to light up buildings and almost the cost of all economic activities have gone very high due to direct or indirect impact of cost of fuels to power economic activities.

According to business monitor international[2], to check this ugly trend of fuel poverty, NNPC has signed contracts to swap crude for products under yearly contracts with Trafigura an oil trading company, and Cote d'voire's national refiner SIR.

According to Odoko etal in CBN (2003), some of the causes of fuel poverty as a result of shortages and price hikes are inadequate capacity of ports, pipelines and depots, frequent strikes by tanker drivers at the slightest provocation, corruption and recent militancy and kidnapping in the Niger Delta.

According to United Nations estimates, if nothing is done by 2030, 900 million people will not have access to electricity, 3 billion people will still cook with traditional fuels, and 30 million people will have died due to smoke-related diseases and many hundreds of millions would be confined to poverty due to lack of energy access (Practical Action 2012, Eleri et-al,[4] .

However, some countries have made significant successes in tackling energy poverty some of these countries include; China which connected 500 million people in rural areas since 1990 whilst Vietnam has increased coverage from 5% to 98% in 35 years (Energy Poverty guide, October 2011) . Cambodia, Mali and Madagascar have made significant progress by providing support to the private sector from their rural electrification funds. In Bangladesh and Nepal, local operatives owned by consumers are developed to run electricity services.

South Africa which had only one-third of the population at the end of Apartheid in 1994 connected to the electricity grid was doubled ten years late.

Right from 1973, Nigeria has operated a policy of uniform petroleum prices ,Odoko et al [10] where the same price is paid for petroleum products irrespective of location. The Nigerian government over the years has dominated the domestic energy scene by exerting influence in the area of petroleum product pricing. Petroleum prices are fixed by government (either low or high) based on certain prevailing economic situations.

Table. 1 Comparison of Fuel Price and wage differentials by countries 2011

Country	Fuel pump price (Naira)	Country Minimum wages Averages (N/dollar)	Inflation (%)	Per Capita GDP (US $)	Population
USA	(N120)	(N277,092)	3	48,100	313,232,044
RUSSIA			9.50	15,612	142,517,670
NIGERIA	(N65)N95-130	(N18,000)	10.8	2,600	170,123,740
SAUDI ARABIA	(N25.12	(N140,694)	5	24,400	26,131,703
UAE	N78.18		2.5	49,600	5,148,664
ANGOLA			14.3	8,200	13,338,541
LIBYA	N26.69	23,813	6.1	13,846	6,597,960
EGYPT		(N 78)	13.3	6,200	83,688,164
QATAR	N34.54	101,250	2.8	179,000	848,016
ALGERIA	N63.55	55,957	4	7,300	34,994,937
KUWAITE	N34.54	N161,461	5.6	48,900	2,595,628
VENEZUALA	N3.61	N95,639	27.6	12,400	28,047,938
IRAN	N102.05	86,585	22.5	12,200	78,868,711
IRAQ	N59.66	N25,813	6.0	3,900	31,129,225
UK	N334.41	N295,644	4.5	35,900	63,047,162

Source: CIA World Factbook 2012 U.S. Census Bureau, International Database, Wikipedia 2011, IMF 2010, 2000–2011 Pearson Education, publishing(Note: population is taken mid 2011)

Government fixed prices putting subsidy in during the first era considering the relative influence and stability in exchange rates, which puts Nigeria to compete fairly well with other oil producing countries. But the subsequent prices are fixed with considerations with the prevailing economic realities by opting to remove subsidies in order to check and eliminate Cross-border smuggling of petroleum products and promote efficiency and encourage government saving for infrastructural development.

Table .2 Trend in petroleum (energy) pump price in Nigeria. 1966-2012

S/N	Year	Pump Price of Perol/Litre	% Increase in Price
1	Jan 1966– Sept 1978	8(4/5) Kobo	Nil
2	Oct 1, 1978	15(1/2) Kobo	73.86%
3	April 20, 1982	20 Kobo	31%
4	March 31, 1986	39(1/2) Kobo	97.5%
5	April 10, 1989	42 Kobo	6%
6	Jan 1, 1989	42Kobo (Commercial) & 60Kobo (Private)	43%
7	Dec 19, 1989	60 Kobo For all	43%
8	March 6, 1991	70 Kobo	16.6%
9	Nov 8, 1993	N5	614%
10	Nov 22, 1993	N3.25	
11	Oct 2, 1994	N15	361.5%
12	Oct 4, 1994	N11	
13	Dec 20, 1998	N25	127%
14	Jan 6, 1999	N20	
15	June 1, 2000	N30	50%
16	June 8, 2000	N25	

17	June 13, 2000	N22	
18	Jan 1, 2002	N26	18.2%
19	June 1, 2003	N40	53.85%
20	June 9, 2003	N34	-17.54%
21	Oct 1, 2003	N39.90	17.35%
22	Dec. 2003	N40.50	1.5%
23	May 29, 2004	N49.00	20.98%
24	Jan 1, 2005	N51.00	4.08%
25	Aug 26, 2005	N65.00	27.45%
26	May 29, 2007	N75.00	30.05%
27	2008	N65.00	
28	2011	N97.00	

Source: Gani Fawehinmi (2003) "Increases in petrol pump price in Nigeria: 1966-2005 as citied by Abifarin (2003:16) "Merchant of Venom" This Week Magazine. Vol.19, No.3, Akinyele (2011)

Oil Production and Refining in Nigeria
Nigeria had estimated 37.2billion barrels of proven oil reserves as of January, 2011 OGJ, [11]. While EIA [17] estimates Nigeria's nameplate oil production capacity to have been close to 2.9million barrels per day (bbl/d)at the end of 2010. In 2010, total oil production in Nigeria was slightly over 2.46 million bbl/d making Nigeria the largest oil producer in Africa. Crude production was boosted to 2.17 million bbl/d for the month of July, 2011 due to offshore and restart of some of some shut in onshore production.

Nigeria total oil export stands at approximately, 2.2 million bbl/d in 2010 and 1.8 million bbl/d of crude oil. Over 980,000bbl/d of crude oil and slightly over 1 million bbl/d of total oil and products is exported to the United States, making Nigeria the 4th largest foreign oil supplier to US in 2010 EIA,[17]. Even with the large volume of light, sweet quality crude produced in Nigeria, much of its domestic fuel is imported and this can be a factor for fuel poverty and energy price rise. For example, approximately 280,000 bbl/d of oil was consumed in Nigeria in 2010 and all of this was imported.

In Nigeria, local refineries before now (when functional) receive crude oil produced by companies from their oil mining lease through pipelines from the oil terminals. This crude oil is then refined and sent to retail filling stations through road tankers which get fuel by NNPC or other fuel depots. Due to the non-functioning of Nigerian refineries for some time, imported petroleum products are evacuated from ocean-going tankers. This tankers feed the NNPC and other local depots with petroleum product for onward supply to the fuel stations for consumption. There are four refineries in Nigeria with a total capacity of 500,000bbl/d. These are;

The Port Harcourt Refinery I; was commissioned in 1965 with an initial installed capacity of 35,000bbl/d and further expanded to 60,000bbl/d. The second refinery is the Warri Refinery commissioned in 1978 with an initial refining capacity of 100,000bbl/d and later upgraded in 1986 to 125,000bbl/d. the third refinery is Kaduna Refinery, commissioned in 1980 with a refining capacity of 100,000bbl/d and later upgraded to 110,000 bbl/d in 1986. The most recent was the Port Harcourt II, commissioned in 1989 with 150,000bbl/d installed capacity.

There has been a declining trend in production of petroleum products from the local refineries for as low as 0 and 30 percent capacity. This trend had led to the importing 85 percent of its fuel need, EIA, [17]. Some of the attributed constraints on this refineries are plant equipment failures, management problems etc.

Impact on the Nigeria Economy

In the international scene, according to International Energy Outlook IEA [17], oil prices rose in 2011 as a result of growing demand associated with signs of economic recovery and a lack of sufficient supply response. The hike in oil prices at the end of 2010 – 2011 was mainly due to social and political unrest in several Middle Eastern and African economies. That oil prices increased from $82 per barrel at the end of November 2010 to more than $112 per barrel in day trading on April, 2011. IEO 2011 reference case also predicts that price of light sweet crude oil in the United States to continue increasing in the long term reaching $108 per barrel in 2020 and $125 per barrel in 3035. All these are cases of substantial uncertainty.

METHODOLOGY

The study was based on three hundred respondents drawn from the different income strata within six States and Abuja Federal Capital Territory (the states include Cross River-South South;, Enugu-South Eastern; Lagos- South-western; Benue and Abuja FCT -North Central; Kaduna- North Western; Borno-North Eastern) across the six geopolitical zones. Initially Four hundred and Fifty five copies of the questionnaire were sent out. Sixty five (65 per state and FCT) copies of questionnaires were administered randomly on various respondents both self-employed and salary earners such as, Politicians, Business men and women and the Local villagers of low income in each state. Out of the four hundred and fifty five (455) copies of questionnaires mailed out to the states only three hundred (300copies) were properly completed and returned from the whole respondents. The study was eventually based on three hundred respondents. This number represents the sample size in this study.

The questionnaire was designed in such a manner as to solicit responses in the following areas.

o Causes (or reasons) for fuel poverty.
o Identification of the problems (or Impact) of fuel poverty on the citizens;
o The various ways through which fuel poverty is perpetrated;
o Evaluation of the possible consequences of fuel poverty on the citizenry and economy in general.

ANALYSIS, FINDINGS AND DISCUSSIONS

Data collected were analysed using percentages, the arithmetic mean and standard deviation. TheStandard deviation enables us to determine with a great deal of accuracy where the values of a frequency distributions are located in relation to the mean. The standard deviation and the mean of normal population density function help us to determine probabilities of events. As the sample size is sufficiently large (greater than 30) the central limit theorem was applied. According to the Central Limit theorem, even if the population is not normally distributed as the sample size increases, distribution of sample means approaches normality. Thus the application of this theorem enabled us to use the sample size in this study to draw inferences about the population of study without knowing much of the population other than what we got from the sample.

Table 3. Analysis of (monthly) Income level and employment Strata

S/No.	Particulars	No. of Samples that identified it (X)	Mean (M)	X-M	(X-M)^2	Percentage(%)
	Employment levels					
1.	Grade level 1-6	64	66.67	-2.67	7.13	21.33
2.	Grade level 7-12	60	66.67	-6.67	44.49	20
3.	Grade level 12-above	76	66.67	9.33	87.05	25.33
4.	Employment type	200	66.67	133.33	17776.89	66.66

5.	Paid employment	36		66.67	-30.67	940.65	12
6.	Self employed	30		66.67	-36.67	1344.69	10
7.	Politician	34		66.67	-32.67	1067.33	11.33
	Farmer						
8.	Monthly Income	52		66.67	14.67	215.21	11.33
9.	Level	71		66.67	4.33	18.75	23.66
10.	N18,000-N30,000	65		66.67	-1.67	2.79	21.66
11.	N31,000- N75,000	82		66.67	15.55	241.80	27.33
12	N76,00-N120,000	30		66.67	-36.67	940.65	10
	N121,000-N200,00						
	N201,000 -Above						
		800				22687.42	

Source : Field Survey November 2012

$$\text{Variance } (s^2) = \frac{\sum (X-M)^2}{n-1}$$

$$= \frac{22687.42}{11} = 2062.49$$

$$\text{Standard deviation } (s) = \sqrt{2062.49} = 45.41$$

From the Central Limit Theorem: $Z = \frac{X-M}{s}$ this is exactly standardized when $n \geq 30$

when $X = 300$ $s = 45.41$ and mean $(m) = 66.67$

then $Z = \frac{300-66.67}{45.41} = 5.14$

$$\Pr (X \geq 5.14) = 1-\Pr(Z \leq 5.14)$$
$$= 1-(0.5000 + 0.4207)$$
$$= 0.5000-$$
$$= 0.0793$$

Based on the above computations the mean (M) = 66.67 the standard deviation (s) = 45.41 and the distribution = 0.0793. These data show that there is 0.0793 probability that the mean will lie outside the standard deviation. This implies that there is about 92% probability that all the variables mentioned as ways through which income is generated are correct. Since the probability of its correctness is by far greater than its non-acceptance, it is concluded that these are the various ways through which citizens make their income for a living. Also as shown in table 3 income is earned through four major means. These are paid employment, Self employment, Politics and Farming.

Table 4. Analysis of Energy Prices and monthly fuel Expenditure by households.

Sr.	Particulars	No. of Samples that identified it (X)	Mean (M)	X-M	(X-M)^2	Percent (%)
	Car ownership and maintenance					
1.	one motor bike	42	83.33	-41.33	1708.17	14
2.	one car	198	83.33	114.67	13149.21	66
3.	Two cars	40	83.33	-43.33	1873.49	13
4.	Above Two cars	20	83.33	-63.33	4010.69	6

	fuel Expenditure on Cars/month	19		64.33	4138.35	6
5.	<N5,000	201	83.33	117.67	13846.23	67
6.	N10,000 – N20,000	52	83.33	-31.33	981.57	17
7.	N30,000-N40,000	28	83.33	-55.33	3061.41	9
8.	N50,000-N70,000		83.33			
	fuel Expenditure on Gen./month	30		53.33	2844.09	10
9.	<N5,000	212	83.33	128.33	16468.59	70
10	N5,000-N15,000	38	83.33	45.33	2054.81	13
11	N16,000- N30,000	20	83.33	63.33	4010.69	6
12	N31,000 and Above		83.33			
	Expenditure on cooking fuel /month	83		-0.33	0.109	28
13	<N3,000	207	83.33	123.67	15294.27	69
14	N5,000- N10,000	10	83.33	73.33	5377.29	3
15	N11- N25,000		83.33			
	Electricity bills/ Month	56		-27.33	746.93	18
16	<N2,000	232	83.33	148.67	22102.77	77
17	N3,000-N10,000	12	83.33	71.33	5087.97	4
18	N10,00 0 above		83.33			
		1500			116756.63	

Source : Field Survey November 2012

$$\text{Variance } (s^2) = \frac{\sum (X-M)^2}{n-1}$$

$$= \frac{116756.63}{17} = 6868.04$$

$$\text{Standard deviation } (s) = \sqrt{6868.04} = 82.87$$

From the Central Limit Theorem: $Z = \dfrac{X-M}{s}$ this is exactly standardized when n≥ 30

when X = 300   s = 82.87 and mean (m) = 83.33

then $Z = \dfrac{300-83.33}{82.8} = 2.61$

$$\Pr (X \geq 2.61) = 1-\Pr(Z \leq 2.61)$$
$$= 1-(0.5000 + 0.4955)$$
$$= 0.5000-0.4955$$
$$= 0.0045$$

Based on the above computation, the result shows that there is 0.0582 probability that the mean will lie outside the standard deviation. In other words, it means that there is about 99% probability that all the variables listed such as the number of car ownership, amount of fuel expenditures made on cars, powering electric generators and payment of electricity bills are correct. For the fact that the probability of its correctness is by far greater than its non-acceptance; it is concluded that these are ways by which energy is used and the expenditure trend by households. The Table also reveals that the numbers of people who own and maintain

at least one car are higher and that expenditure on fuel to drive cars and power generator sets as well as payment for electricity bills per month is above N10, 000 per individual. These can be deduced from the variables identified by over 65% responses in the study.
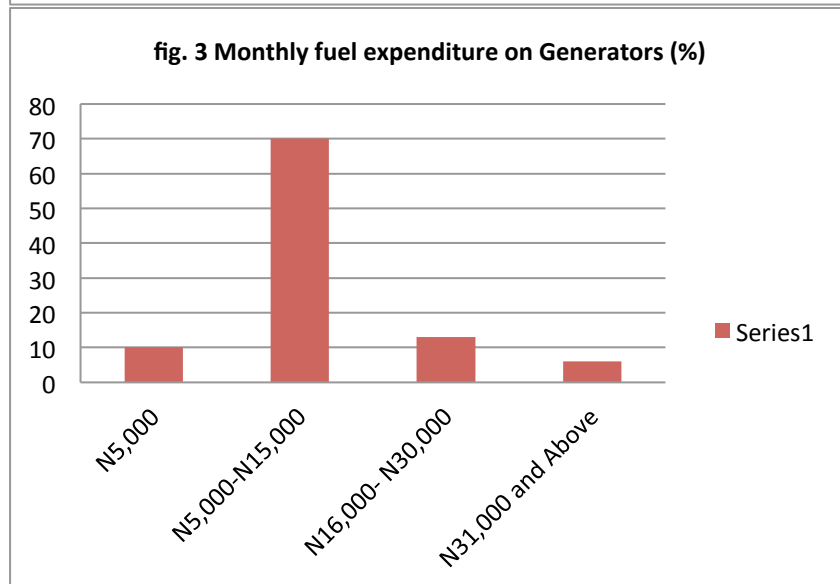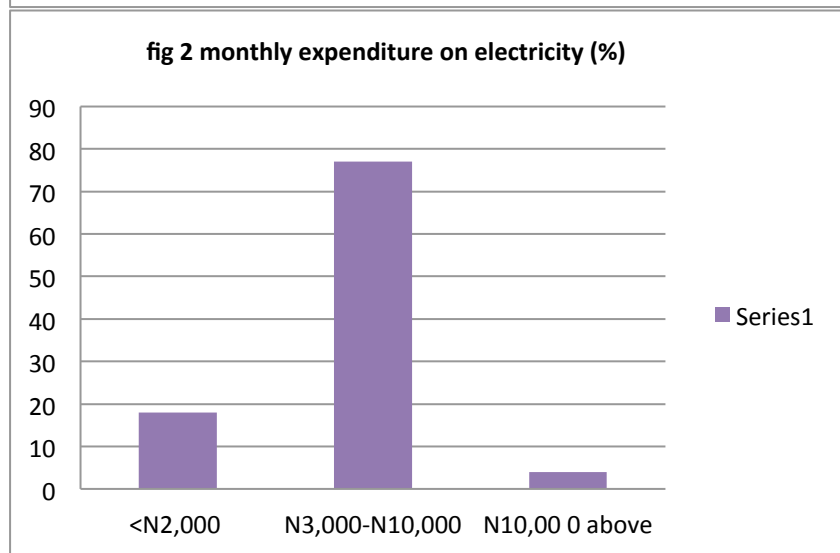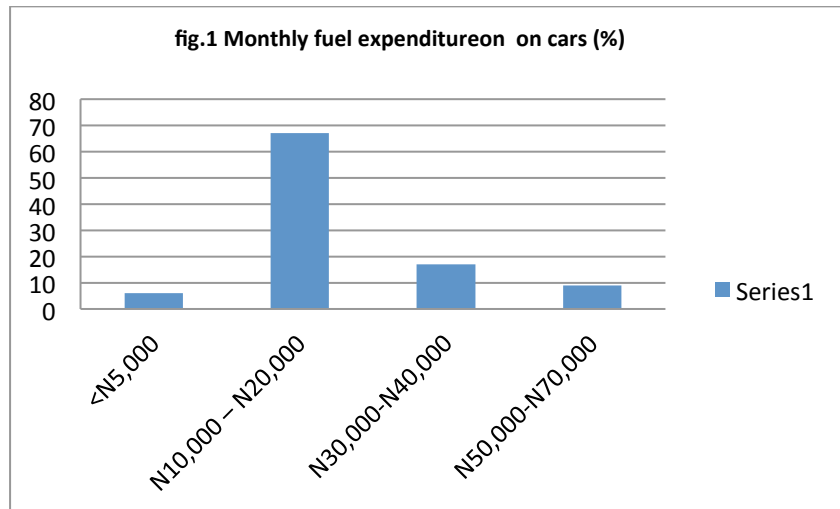
fig.1 Monthly fuel expenditureon on cars (%)

fig 2 monthly expenditure on electricity (%)

fig. 3 Monthly fuel expenditure on Generators (%)

Table 5. Analysis of the extent of comfortability and acceptance of energy poverty in Nigeria

	Particulars	No. of Samples that identified it (X)	Mean (M)	X-M	(X-M)^2	Percentage (%)
	Acceptance					
1	Not comfortable with fuel/energy prices	290	81.82	208.18	43338.91	97
2	comfortable with the fuel and energy prices	10	81.82	-71.82	5158.11	3
	% of monthly income spent on all fuels(*domestic and cars*)					
3	spend <5% of my income on fuels	12	81.82	-69.82	4874.83	4
4	spend at least 10%of my monthly income on energy	10	81.82	-71.82	5158.11	3
5	spend 15% to 20%	263	81.82	181.18	32826.19	88
6	spend 21% and above	15	81.82	-66.82	4464.91	5
	extent of energy poverty rate	276	81.82	194.18	37705.87	92
7	very high	12	81.82	-69.82	4874.83	4
8	high	10	81.82	-71.82	5158.11	3
9	moderate	2	81.82	-79.82	6371.23	0.6
10	low	0	81.82	-81.82	6694.51	0
11	not in existence					
		900			**156625.61**	

Source : Field Survey November 2012

$$\text{Variance } (s^2) = \frac{\sum (X-M)^2}{n-1}$$

$$= \frac{156625.61}{10} = 15662.56$$

$$\text{Standard deviation } (s) = \sqrt{15662.56} = 125.15$$

From the Central Limit Theorem: $Z = \dfrac{X-M}{s}$ this is exactly standardized when n≥ 30

when X = 300   s = 125.15 and mean (m) = 81.82

then $Z = \dfrac{300-81.82}{125.15} = 1.74$

$$\begin{aligned}
\text{Pr } (X \geq 1.74) &= 1\text{-Pr}(Z \leq 1.74) \\
&= 1\text{-}(0.5000 + 0.4591) \\
&= 0.5000\text{-}0.4591 \\
&= 0.0409
\end{aligned}$$

This result shows that there is 0.0409 probability that the mean will lie outside the standard deviation. In other words, it means that there is about 95% probability that all the variables listed to show the degree of fuel poverty are correct. For the fact that the probability of its correctness is by far greater than its non-acceptance; it is concluded that these are the extent

or degree of acceptance and percentage of monthly income spent on energy. The table also reveals that citizens are not comfortable with the amount of expenditure on energy per month as it is taking a large chunk of their income leaving them poor. Responses from the study show that as high as above 15% to 30% of monthly income is spent on energy and this keeps the citizens uncomfortable. The variables to affirm these facts were identified by over 90% responses in the study.
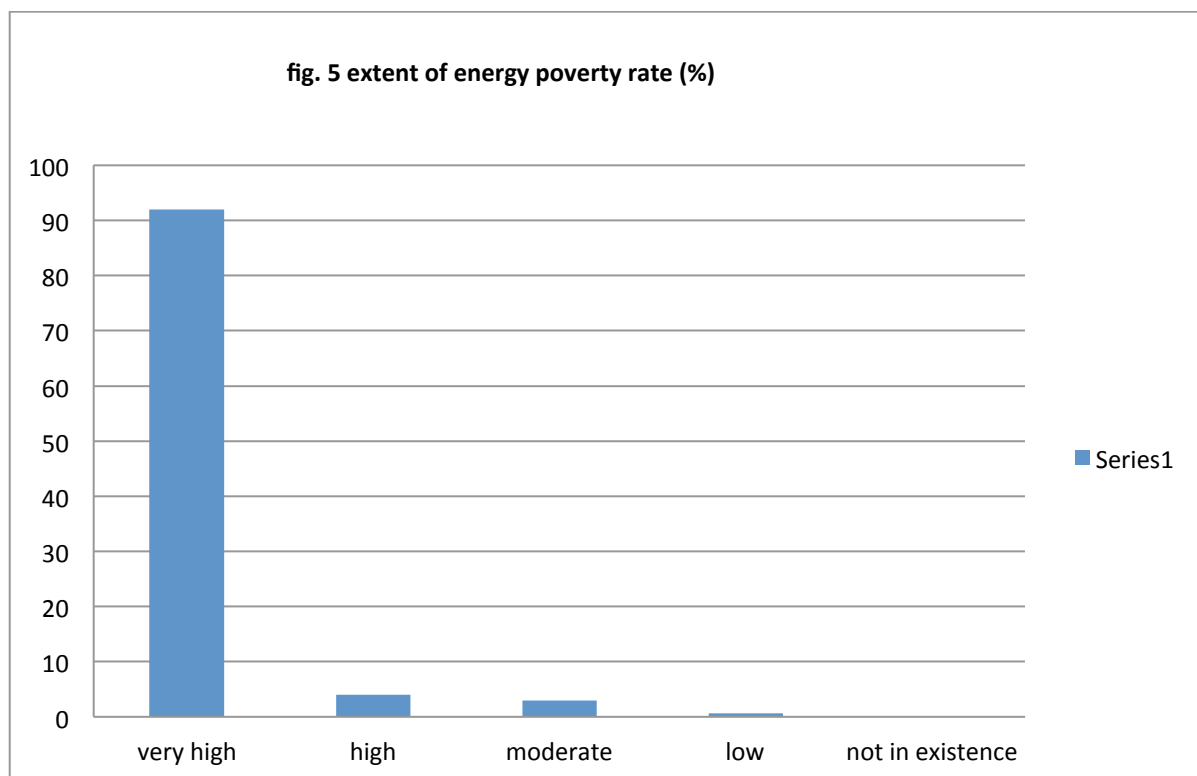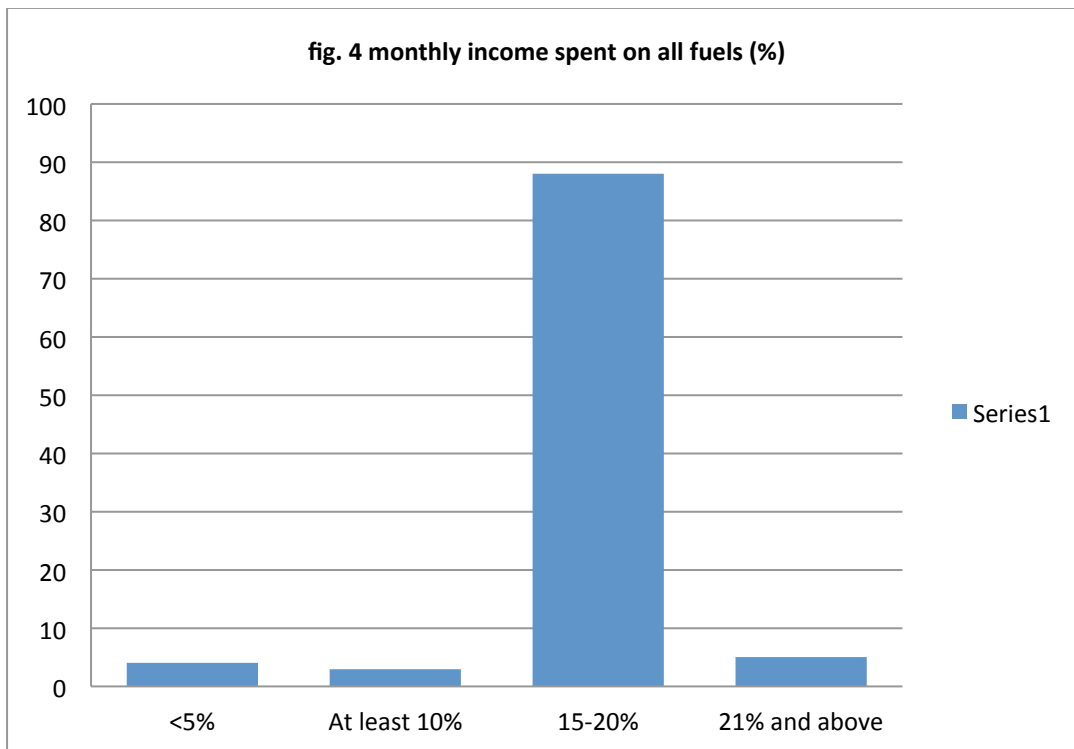

fig. 4 monthly income spent on all fuels (%)

fig. 5 extent of energy poverty rate (%)

Table 6. Analysis of the causes of energy poverty in Nigeria

S/No.	Particulars	No. of Samples that identified it (X)	Mean (M)	X-M	$(X-M)^2$	Percentage (%)
1.	Corruption	230	148.05	81.95	6715.80	77
2.	Military rule	100	148.05	-48.05	2308.80	33
3.	Frequent tanker drivers strike	163	148.05	14.95	223.50	54
4.	Distribution bottlenecks	104	148.05	-44.05	1940.40	35
5.	Vandalisation of pipelines	129	148.05	-19.05	362.90	45
6.	Multinationals	60	148.05	-88.05	7752.80	20
7.	Insecurity	30	148.05	-118.05	13935.80	10
8.	Short supply of product	280	148.05	131.95	17410.80	93
9.	Non- functional refineries	276	148.05	127.95	16371.20	92
10.	Gas flaring	231	148.05	82.95	6880.70	77
11.	Poor infrastructure	279	148.05	130.95	17147.90	93
12	Bad road net work	112	148.05	-36.05	1299.60	37
13	Non passage of PIB bill	109	148.05	-39.05	8658.30	36
14	International conspiracy	60	148.05	-88.05	7752.80	20
15	Bunkery	68	148.05	-80.05	6408.00	23
16	Cross boarder Smuggling of petroleum products	169	148.05	20.95	438.90	56
17	Declining trend in production of fuel	100	148.05	-48.05	2308.80	33
18	High cost of production	165	148.05	16.95	287.30	55
		2665			118204.3	

Source : Field Survey November 2012

$$\text{Variance } (s^2) = \frac{\sum (X-M)^2}{n-1}$$

$$= \frac{118204.3}{17} = 6953.19$$

$$\text{Standard deviation } (s) = \sqrt{6953.19} = 83.39$$

From the Central Limit Theorem: $Z = \frac{X-M}{s}$ this is exactly standardized when n≥ 30

when X = 300   s = 83.39 and mean (m) = 148.05

then $Z = \frac{300- 148.05}{83.39} = 1.82$

$$\Pr (X \geq 1.82) = 1-\Pr(Z \leq 1.82)$$
$$= 1-(0.5000 + 0.4656)$$
$$= 0.5000- 0.4656$$
$$= 0.0344$$

From the above computations the mean (M) = 148.05 the standard deviation (s) is 83.38 and the distribution = 0.0344 This shows that there is 0.0344 probability that the mean will lie outside the standard deviation. In other words, it means that there is about 96% probability that all the variables listed as causes of energy poverty in Nigeria are correct. Since the probability of its correctness is by far greater than its non-acceptance we can conclude that these reasons are actually the causes of energy poverty. As could also be observed in the table,

there are five major causes of energy poverty in Nigeria. These are corruption 77%, short supply of products 93%, non functional refineries 92%, and gas flaring 77%, poor infrastructure 93%. All of these causes have a percentage of 75% and above.
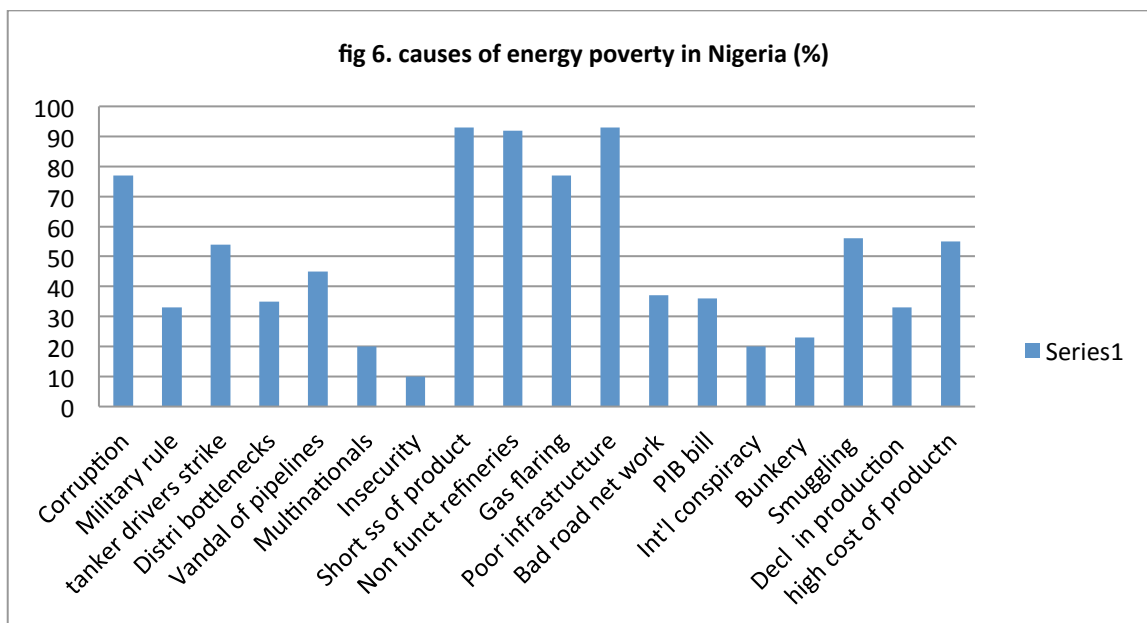

fig 6. causes of energy poverty in Nigeria (%)

Table 7. Analysis of economic and social Consequencies of high energy cost on Nigerians

S/No.	Particulars	No. of Samples that identified it (X)	Mean (M)	X-M	(X-M)^2	Percentage(%)
1.	Low real income	284	235.89	48.11	2314.57	95
2.	High poverty level	200	235.89	-35.89	1288.09	67
3.	High cost of economic activities	245	235.89	9.14	83.54	82
4.	Economic uncertainty	290	235.89	54.11	2927.89	97
5.	incessant power outages	276	235.89	40.11	1608.81	92
6.	energy inefficiency	234	235.89	-1.89	3.57	78
7.	collapse of industries	291	235.89	55.11	3037.11	97
8.	inflationary pressure	102	235.89	-133.89	17926.53	34
9.	high cost of electricity bills	201	235.89	-34.89	1217.31	67
		2123			30407.42	

Source : Field Survey November 2012

$$\text{Variance } (s^2) = \frac{\sum (X-M)^2}{n-1}$$

$$= \frac{30407.42}{8} = 3800.93$$

Standard deviation (s) = $\sqrt{3800.93}$ = 61.65

From the Central Limit Theorem: $Z = \dfrac{X-M}{s}$ this is exactly standardized when n≥ 30

$$\text{when } X = 300 \quad s = 61.65 \text{ and mean (m)} = 235.89$$
$$\text{then } Z = \frac{300 - 235.89}{61.65} = 1.04$$
$$\Pr (X \geq 1.04) = 1 - \Pr(Z \leq 1.04)$$
$$= 1 - (0.5000 + 0.3508)$$
$$= 0.5000 - 0.3508$$
$$= 0.1492$$

In analyzing the economic and social consequences of high energy cost on the Nigerian citizens, the results shows that; the mean (M) = 235.89 the standard deviation (s) is 61.65 and the distribution = 0.1492. This shows that there is 0.1492 probability that the mean will lie outside the standard deviation. In other words, it means that there is about 85% probability that all the variables listed as economic and social consequences of high cost of energy in Nigeria are correct. Since the probability of its correctness is by far greater than its non-acceptance we can conclude that these are actually the consequences of high energy cost. As could also be observed in the table, there are very many consequences of high energy cost which transcend to fuel poverty in Nigeria. These low real income, high poverty rate, high cost of doing business, economic uncertainty, incessant power outages and collapse of industries. All of these consequences have a percentage of 82% and as high as 97%.

fig. 7 economic and social Consequencies of high energy cost (%)
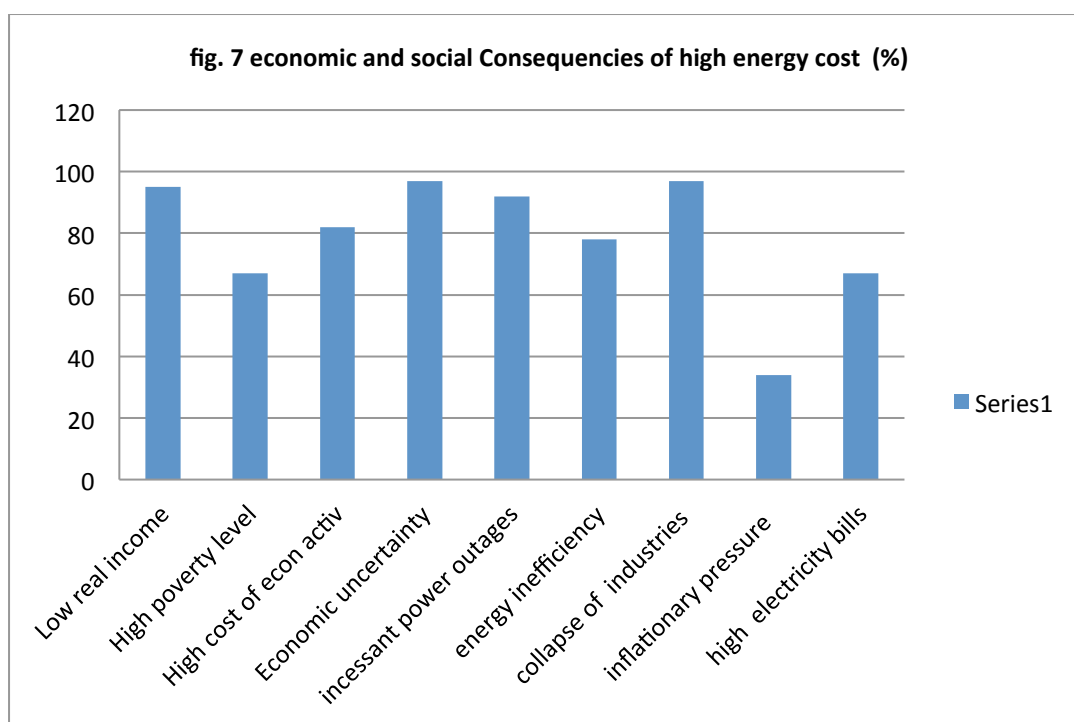
CONCLUSION

Despite abundant energy sources, Nigeria is worst hit in terms of Energy poverty and incessant energy price hike and energy insecurity. This situation is causing untold widespread poverty among the teeming population, for decade's hence causing economic bleakness. This is because energy is a key to economic development and political stability. Energy poverty has been a persistent problem for almost every Nigerian with no end in sight

From all indications it is now clear that the only cushion to reduce energy bills and energy poverty to a tolerable level is a policy towards energy efficiency which entails reaching an

informed judgment on the pricing, availability and sustainability of energy in Nigeria to avoid the untold energy poverty that has been lingering on for decades.

RECOMMENDATIONS

For Nigeria Governments to solve the teething problem of energy poverty it would be appropriate to take a look at the factors responsible for the incidence of energy poverty since a check on these factors will go a long way in reducing if not eradicating the problem. In the light of this, the following recommendations are made:

o   All refineries must be put on stream by proper overhaul to maximize local refining capacity utilization.
o   Customers must be provided with transparent and comparable information on energy use and prices in order to enable them to reduce their energy spending
o   Improve oil and gas development and production efficiency to reduce cost.
o   Improve distribution network by setting tank farms in all the geopolitical zones to ease free flow and supply of products to control scarcity.
o   Using railways as an alternative means of transporting petroleum products
o   Adopting a physical policy of direct involvement in distribution by NNPC to check the excesses of independent tanker drivers.
o   Stop importation of fuel of any sort
o   Increase storage region in times of unforeseen circumstances.
o   Government should construct new transmission lines to improve power supply.
o   Fast tracking and passage of the Petroleum industry Bill (PIB) to reform the entire energy sector. This Bill would bring in three measures: an energy efficiency programme to bring existing homes up to current energy efficiency levels; social tariffs to limit vulnerable households' exposure to high energy bills; and reinforcement of the legal duty on the Government to act to end fuel poverty.
o   Alternative energy sources such as solar energy, biomass and wind energy should be annexed to provide the necessary power generation levels

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A Move Towards A More Sustained Competitive Institution: Using theories of Structure and Change

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ABSTRACT

Many technical and vocational colleges have gone through a number of transformations in its structure and functions as a result of increased competition, increased Government pressures to stay within its mandate as technical vocational institutions, and to become more sustainable. The Porter's Five Forces will be used to determine the extent of the institutions level of competitiveness and sustained competitive advantage. Results of the study show that the threats to new entrants, threats to substitute products, suppliers bargaining power, and buyers bargaining power were all statistically significant predictors of the level of competitiveness among the technical and vocational colleges. However, the log of the odds of the institutions maintaining sustained competitive advantage was negatively related to threats to suppliers bargaining power, as these technical and vocational colleges were .389 times less likely to maintain sustained competitive advantage, being 95% confident that the population value of the odds ratio lies between [CI]0.157 and 1.009.

Keywords: Miles and Snow typology, Porter's Five Forces, change theories, theories of organizational structure, and Sustainable competitive advantage.

INTRODUCTION

It is important to understand the organizational structure and design of an entity and the environment in which it operates so as to determine whether or not it is operating efficiently and is in need of change or reengineering. In a competitive environment, technical vocational colleges have to be restructuring to adapt to changes caused by globalization, competition, and meeting the demands of its customers. An organization of this nature is complex, and has to respond and make decisions as it relates to the various contingencies that exist. A switch to a semi- virtual institution is often appropriate where colleges wish to differentiate themselves, become early adopters according to Miles and Snow Typology as well as to become a low cost defender.

Virtual classrooms are the new and emerging trends in this technological and informational era and many colleges and universities have provided their busy customers with an educational package through distance learning and e-learning. To move to this stage, the technical and vocational colleges in Jamaica have to make planned and radical changes to be successful and to change its structure. This of course will require tremendous amount of funding and training at all levels; but before that can be achieved, the technical and vocational colleges need to assess their levels of competition and aim to maintain sustained competitive advantage.

This article is two-fold as it begin by looking at the structural and design problems existing at two Technical and vocational colleges through the lens of various structure and change theories in management. It then uses the Porter's Five Forces to determine the level of competition and the odds or likelihood of these institutions maintaining sustained competitive advantage in moving forward in its mandate to providing quality education in the Caribbean.

BACKGROUND OF THE COLLEGES: A THEORETICAL APPLICATION
Structure and Design of the institution
The Technical and vocational colleges in Jamaica are professional bureaucratic structures as presented in Mintzberg's five organizational archetypes. According to Schmidt (2006) the professional bureaucratic configuration uses coordination by standardization of skills, and is in effect the only organizational structure that allows standardization and decentralization to coexist (Schmidt, 2006). Schmidt (2006) stated that:

> *"The professional bureaucratic structure contains a large number of knowledge workers, and is complex in nature with many rules and procedures to follow. Because of its professional workers, the operating core becomes the key organizational part, but it is usually supported by a very elaborate support staff. The middle line is very short, and is often populated by professionals whom also participate in the operating core. The technostructure is very small and without importance. The Professional Bureaucracy is highly decentralized in both dimensions, but because the support structure is so large, a parallel machine like configuration sometimes emerges in this part"*

This statement above presented by Schmidt is often seen in technical and vocational colleges where ten to fifteen percent of the academic staff only possesses a bachelor's degree and holds senior lecturer positions. For the minority of workers, their mode of delivery and content are dated as no further upgrade of qualification has taken place; to add to this, more than fifty percent of the Administrative staff only possesses ordinary levels qualifications. The operating core (Lecturers) according to Schmidt should be supported by the support staff (administrative staff) but this is not always the case in our colleges. Administrative staff are sometimes reluctant to provide the needed services such as photocopying and printing to facilitate the lecturers, a simple task such as to roll off exam scripts and coordinate invigilators are daunting tasks within the colleges as the Administrative staff have proven to be difficult sets of workers and are not working collaboratively with the academic staff unless these staff members have seniority positions.

The main variables in organizational design are related to the contingencies of the environment, size and technology (Clegg, 2009). It is argued that the more certain and predictable the environment in which organizations operate, the greater the probability of bureaucratic structures occurring (Clegg, 2009). The structure and organizational environment and design of the technical and vocational colleges are further supported in Burns and Stalker's contingency theory where it is operating as an organic structure. All the Colleges' organizational structure works best in a dynamic and uncertain environment where rapid communication and information sharing is necessary and departments and functional areas are tightly integrated; tasks are differentiated so as to allow the lecturers to respond quickly to changing situations or contingencies. Complex decision making is made at all levels of the hierarchy as the academic, administrative and ancillary staff are given some amount of autonomy to make decisions without having to consult the Principal, Head of Department and

Deans. According to Burns and Stalker, when tasks changes rapidly, it is unfeasible to institute standardization and formalization procedures, instead tasks should be mutually adjusted, which is evident at the colleges.

In terms of organizational design and mode of operation, Burns and Stalker's contingency perspective will enable the Principals to examine various situations within their own institutions, and determine the cause of problems experiences before a new procedure or program is implemented. However, the drawback to this theory is that an awareness of all possible solutions to the problem must be made in order for the Principals, Heads of School and Deans to be able to arrive at a correct solution. This theory thus supports Mintzberg's professional bureaucratic approach that is evident at the colleges.

Theory of Organizational Design
Lawrence and Lorsch's theory of organizational design and operation was used to analyze the organizational design and operations of these technical and vocational colleges. They developed an open systems theory of how organizations and organizational sub-units adapt to best meet the demands of their immediate environment and proposed that organizations must balance differentiation and integration to be successful. They found that a dynamic, unstable environment was associated with rather great "differentiation" or specialization of function in order to more effectively identify and respond to major environmental uncertainties (Herbert, 1977). According to Herbert (1977) great differentiation created needs for extensive coordination ("integration") of functional effort. Those companies who manage to achieve high sub-unit differentiation and yet still maintain high integration between sub-units seem to be best equipped to adapt to environmental changes. High differentiation and integration exists at the colleges as each department has to carry out its own educational functions but collaborate with other departments by providing cross-lecturing services. For example Lecturers from the Mathematics department provides lecturing services to the Computer department and Engineering department.

The Technical and vocational colleges' organizational design according to Wheeler and Hunger are all functional structure with wide spans of control that are tall and organic in structure thus maintaining a high manager-to-employee ratio, and that the tight supervision inherent in the mechanistic structure that is characteristic of bureaucracy is absent. A wide span of control exists because the heads for each schools or department supervises many lecturers and assistant lecturers. There is also the case where a matrix- like structure exists at the colleges because lecturers have to answer to more than one head of department, which at times causes confusion.

The organizational design may influence the stages of growth according to Weber. This is further supported in the works of Greiner. The Technical and vocational colleges are currently experiencing growth through coordination of the Greiner's phases of growth cycle; here projects and tasks are coordinated between all schools and departments so that they are well in place with each other. This is necessary as there are standard courses such as Mathematics and Communication studies that are taught throughout the colleges and departments work closely together where this is concerned. The coordination phase is also characterized by decentralized units; periodic review of planning procedures; initiation of college-wide programs is done by hiring staff; and the expenditures are also reviewed and distributed throughout the organization which oftentimes take a long time to be disbursed. There are instances where textbooks for the semester have been ordered but because of the bureaucratic redtape that exists, the Lecturers get those textbooks close to the end of the semester.

Miles and Snow Typology

When the Miles and Snow typology was used to analyze the colleges and their educational environment, it was quite obvious that in general, they developed relatively unstable patterns of strategic behaviour in order to accomplish a good alignment with the perceived environmental conditions. The colleges are mere "Reactors" because the Deans and Heads of Schools frequently perceive change and uncertainty occurring in their departmental environments but are unable to respond effectively. This was evident during the rise of many offshore universities entering Jamaica as well as new universities existing locally. Because the colleges have a weak and inconsistent strategy-structure relationship, they did not make any adjustment to the quality and types of programmes offered until forced to do so by environmental pressures and competition.

The colleges need to continually search for market opportunities, regularly experiment with potential responses to emerging environmental trends, and become creators of change and uncertainty to which their competitors must respond, thus the institutions need to become "Prospectors".

Issues of the institutions

The technical and vocational colleges are faced with major issues as it relates to its structure and design as well as its culture. In this very dynamic, global and competitive educational environment, the colleges are in the process of re-positioning itself to meet the challenges that have been created with the information era. The task is great, but the colleges hope to succeed in its missions. Why is the structure of the colleges a complex one? This is because there are many structural problems associated with them such as:

o   Differences in the system of operation and functioning
o   Duality of roles: Heads of schools are also Deans of faculties
o   Role conflict: Lecturers across departments and faculties reports to many coordinators, heads and assistant heads of schools
o   Qualification and certification does not match the tasks to be carried out. Senior members of academic staff have various roles such as figureheads without the qualification to support positions and they are teaching courses out of their areas of competence.
o   Lack of cohesiveness between members of staff
o   High levels of negative workforce deviance
o   Poor decision making within the organizations
o   The structure of the institution and course designs lead to competition in the market. As such as soon as the students finish their Associate Degrees they move on to other universities and colleges without completing their first degree.
o   Schools and programmes offered are moving with technology but at a slow pace.
o   The organizational structures of the various technical and vocational colleges are constantly changing to reflect new positions and create more job categories that are not necessary for the scale and magnitude of the College's operations.

PORTER'S FIVE FORCES AND SUSTAINED COMPETITIVE ADVANTAGE

Porter's five forces

According to Porter a firm develops its business strategies in order to obtain competitive advantage over its rivals (Porter, 2008). This is done by responding to five primary forces: the threat of new entrants, rivalry among existing firms within an industry, the threat of substitute products or services, the bargaining power of suppliers, and the bargaining power of buyers (Ronquillo, 2012).

Threat of new entrants: Puiu (2010) stated that new comers are companies that can compete or start companies already competing in an industry; bringing a desire to win and often have significant resources.   However, new entrants to an industry brings new capacity and desire to gain market share that puts pressure on prices, costs and the rates of investment necessary to compete (Porter, 2008). Puiu (2010) further stated that new entrants enter the market when the profit margin is attractive and the barriers to entry are low.

Rivalry among existing firms: this is characterized by the intensity of competition in a particular industry to fill a specific market segment (Puiu, 2010). According to Porter (2008) rivalry is determined by factors such as price discounting, new product introduction, advertising campaigns, and service improvements.

Threat of substitute products or services: Porter (2008) states that a substitute performs the same or similar functions as an industry product by a different means; they are always present but tends to be overlook because they appear different from the industry's products. When the threat of substitutes is high, industry profitability suffers (Puiu, 2010).

Bargaining power of suppliers: This affects an industry when suppliers capture more of the value for themselves by charging higher prices, limiting quality or services, or shifting costs to industry participants (Porter, 2008).

Bargaining power of buyers: affect an industry through their ability to force lower prices, negotiate a better or more services and to determine competitors against each other (Wheelen &Hunger, 2000). Porter (2008) further stated that buyers are powerful if they have negotiated leverage relative to industry participants, especially if they are price sensitive.

According to Ronquillo (2012) Porter's Five Competitive Forces Model has already been applied in a wide array of businesses including non-profit organizations where competitive advantage is a central theme, however, in this article it will be applied to the technical and vocational institutions.

Level of competitiveness (Competitive advantage) versus Sustainable competitive advantage

Barney (1991) stated that a firm is said to have competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors. Ehmke (2008) extended the notion that competitive advantage is an advantage gained over competitors by offering customers greater value, either through lower prices or by providing additional benefits and service that justify similar, or possibly higher, prices. According to Porter (1985), competitive advantage for a firm is the result of complete comprehension of its external and internal environment. Porter (1985) further stated that "After it comprehends the market which it is activated in, its competitors, the wider exterior environment but also its strengths and weaknesses, it is possible later to discover its own unique core competencies and to be supported in one of the three types of competitive strategies - generic strategy - that is to say the leadership of cost, the strategy of differentiation and the strategy of focus".

Barney (1991) however stated that a firm has sustained competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors, and when these other firms are unable to duplicate the benefit of this strategy. Organizations' success depends on employees' knowledge, experience, creative

activity and qualification and emphasis is placed on continuous learning and research and development (Hana, 2013), these are some of the driving forces of sustained competitive advantage. This article tries to determine the level of competitiveness of the institution and whether it has achieved sustained competitive advantage using the Porter's five forces as predictors.

METHODOLOGY

A quantitative research design was used to analyze the effects of the Porter's five forces on the level of competitiveness of the technical and vocational institutions and whether or not they are able to maintain sustained competitive advantage.

Research questions:
1. Do the Porter's five forces determine the level of competition among the technical and vocational colleges?
2. Do the Porters five forces determine sustained competitive advantages among the technical and vocational colleges?

H1: There is a statistically significant relationship between threats to new entrants, threats to substitute products, suppliers bargaining power, buyers bargaining power, rivalry among competitors and the outcome variable level of competitiveness.

H 2: Threats to new entrants, threats to substitute products, suppliers bargaining power, buyers bargaining power, and rivalry among competitors are less likely to predict sustained competitive advantage.
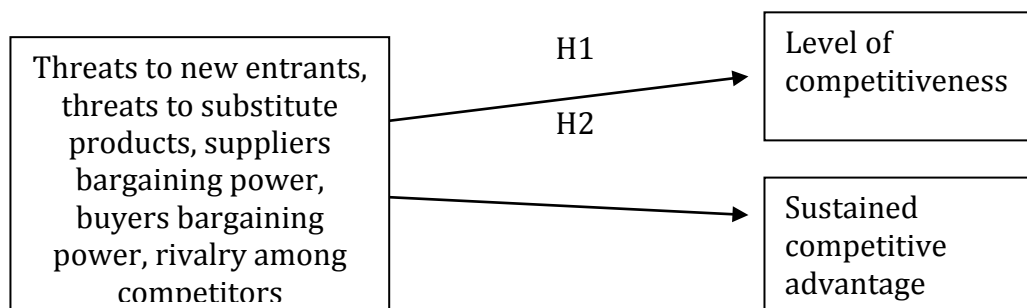

Figure 1: Theoretical Model

Population and sampling
A total of 100 respondents (20% men and 80% women) between the ages of 18 and 50 were included in the sample of college staff employed to the two technical and vocational colleges under study of a population of 250 employees. The participants were selected by a purposive sampling method and reflected employees from different socioeconomic background and demographics within the technical and vocational institution.

Instrumentation
A questionnaire was developed consisting of three sections that captured information on the level of competition and sustained competitive advantage among the institutions as well as how the Porter's five forces impacted the institutions. Section one was developed to determine how Porter's five forces affected the level of competition among the technical and vocational

colleges; section two was developed to determine whether the Porters five forces helped to maintain sustained competitive advantages of the institutions; while section three consists of a list of factors that affects organizational competitiveness which was derived using the Porter's five forces for which participants must rate the extent to which the factors affected competitiveness within their institutions.

Data Analysis
Descriptive statistics and frequency distributions were generated using SPSS 18.0 to describe the basic features of the data in the study and to check its accuracy. Correlation was used to determine the relationships between the Porters five forces and the level of competition among the technical and vocational colleges. Binary Logistic regression was used to determine the impact of multiple independent variables (threats to new entrants, threats to substitute products, suppliers bargaining power, buyers bargaining power, and rivalry among competitors) presented simultaneously to predict the outcome of sustained competitive advantage (the dependent variable category). Simple logistic regression analyses were conducted separately to estimate p value, odds ratios and their 95% confidence intervals (C.I) for predicting the colleges' sustained competitive advantage.

Measures
Level of competition was determined by asking the respondents about the intensity of the level of competition experienced by the technical and vocational colleges on a scale of 1 to 5, with 1 being "very low", 2 = "low", 3 = moderate, 4 = "high" and 5 = "very high". Sustained competitive advantage was determined by asking the respondents whether or not the technical and vocational colleges possessed value creating processes and positions that cannot be duplicated; while to determine threat to new entrants' respondents were asked if the colleges were greatly affected by the introduction of new universities and colleges in the educational market. Threats to suppliers bargaining power were determined by asking respondents if the suppliers of services were a source of power over the institutions. "Are the respondents placed under pressure by the customers who are sensitive to price changes?" and "Does the existence of substitute programs increase the likelihood of customers switching to alternative programs?" were two questions asked to determine whether or not there were threats to buyer bargaining power and threats to substitute products. To determine rivalry among competitors', respondents were asked if the technical and vocational colleges were exposed to intense rivalry among competitors.

Data screening procedures
Prior to data analysis, the data was screened for possible outliers, cases, and extreme values. It was also screened for normality (skewness and kurtosis) and homoscedasticity using plots and univariate descriptive statistics; and correcting problems in the data by the log or square root transformation methods.

Coding and transformation of variables
The variables chosen for this analysis relates to the institutions level of competition, sustained competitive advantage, threats to new entrants, threats to substitute products, suppliers bargaining power, buyers bargaining power, and rivalry among competitors in a sample of 100 (20 men and 80 women between the ages of 18 and 50 from two technical and vocational colleges in Jamaica. The outcome variable sustainable competitive advantage was coded 1 for the presence of sustained competitive advantage and 0 otherwise, while the independent variables threats to new entrants, threats to substitute products, suppliers bargaining power, buyers bargaining power, and rivalry among competitors were coded using dummy variables for the logistic regression analysis.

RESULTS AND ANALYSIS

Descriptive statistics

A sample of 100 workers were analysed in this study with 20% being male and 80% females. Forty three (43%) of these respondents held bachelor's degrees and twenty three (23%) of which held postgraduate degrees in the areas of specialization they currently teach at the institutions. The remaining percentages represented workers who were facilitators and demonstrators holding qualifying certifications and associate degrees in respective technical and non-technical areas. Fifty Five (55%) percent of the respondents were employed to the institutions for over ten years, 10% for over fifteen years and 10% for over twenty years under the contract of services, while the remaining 25% being employed on a contractual basis and tenured for under ten years.

Table 1 show the means and standard deviations of the Porters five forces, with rivalry among competitors having the highest mean and standard deviation; pressures from key stakeholders was considered an important mix based on the prevailing situation of the institutions which had a mean of 3.23 and standard deviation of .898. Rivalry among competitors was considered important in the study (Table 2) as there were problems existed among the institutions relating to low customer loyalty, fierce competition among the technical and vocational institutions, and evidence of undifferentiated products and services.

Table 1: The means and standard deviations for the Porters five forces

Porter's Five Forces	Means	Standard Deviations
Threats to new entrants	3.49	.603
Threats to substitute products	3.51	.517
Suppliers bargaining power	3.79	.740
Buyers bargaining power	3.66	.655
Rivalry among competitors	3.86	.917
*Pressure from key stakeholders	3.23	.898

Table 2: The means and standard deviations for Rivalry among competitors

Rivalry among competitors	Means	SD
There are many other universities and colleges competing	3.93	.987
Products of the colleges are not differentiated and can be easily substitutes	3.32	1.294
Competitors are of equal sizes	4.05	.757
Colleges are competing against each other	4.03	.771
Low customer loyalty	3.96	.777
Average	3.86	.917

Correlation and Linear Regression

Cohen and Cohen (1983) classified correlations as high, moderate, or weak according to unconnected r values of .50, .30, and .10, respectively, thus Table 3 shows high correlations between threats to substitute products (r = .733, r^2 = .537, p<.01) and buyers bargaining power with the level of competitiveness (r = .599, r^2 = .358, p<.01). Threats to substitute products and pressures from key stakeholders were highly correlated with threats to new entrants (r =.530, r^2 = .281, p<.01, r = .527, r^2 = .278, p<.01), while suppliers bargaining power was highly correlated with pressures from key stakeholders (r = .533, r^2 = .284, p<.01).

Table 3: Correlation among the Porters five force with the level of competitiveness

	Threats to new entrants	Threats to substitute products	Suppliers bargaining power	Buyers bargaining power	Rivalry among competitors	*Pressure from key stakeholders	Level of Competitiveness
Threats to new entrants	1.00						
Threats to substitute products	.530**	1.00					
Suppliers bargaining power	.338**	.222*	1.00				
Buyers bargaining power	.400**	.473**	.200**	1.00			
Rivalry among competitors	.142	.410**	.142	-.066	1.00		
*Pressure from key stakeholders	.527**	.369**	.533**	.066	.224*	1.00	
Level of competitiveness	.255**	.737**	-.018	.599**	.353**	.331**	1.00

**Correlation is significant at the 0.01level (2-tailed)
*Correlation is significant at the 0.05 level (2-tailed)

Threats to new entrants, threats to substitute products, suppliers bargaining power, and buyers bargaining power were all statistically significant predictors of the level of competitiveness among the technical and vocational colleges. The five predictor model was able to account for 69.5% of the variation in the level of competition among the institutions, $F(6,93) = 38.59$, $p<.05$, $R2 = 69.5\%$; 30.5% of the variation in the level of competition among the institutions is explained by factors other than the Porters five forces.

Level of competition = -.898 + (-.066 * threat to new entrants) + (.150 * threats to substitute products) + (-.102 * Suppliers bargaining power) + (.109 * Buyers bargaining power).

Table 4: Predicting level of competitiveness from the Porter's five forces

	B	SEB	β
Constant	-.898	.431	
Threats to new entrants	-.066	.015	-.325
Threats to substitute products	.150	.019	.629
Suppliers bargaining power	-.102	.020	-.384
Buyers bargaining power	.109	.023	.332
*Pressure from key stakeholders	-078	.015	.407

Logistic regression
A logistic regression analysis was conducted to predict the institutions sustained competitive advantage using threats to new entrants, threats to substitute products, suppliers bargaining power, buyers bargaining power, and rivalry among competitors as predictors. The omnibus test of the full model against a constant only model was statistically significant, indicating that the predictors as a set, reliably distinguished between the institutions that does and does not maintain sustained competitive advantage (χ^2 (6) = 5.504, p < .05); the Hosmer and Lemeshow

test was non-significant and indicates that the model was a good fit; therefore we fail to reject the null hypothesis that there is no difference between observed and model predicted values. Nagelkerke's R^2 of .075 indicated a weak relationship between prediction and grouping. Only 7.5% of the variation in the institutions sustained competitive advantage can be explained by threats to new entrants, threats to substitute products, suppliers bargaining power, buyers bargaining power, and rivalry among competitors, while 92.5% can be explained by other factors. Prediction success overall was 72% (as the model failed to correctly predict 28 cases) The Wald criterion demonstrated that only threats to suppliers bargaining power made significant contribution to prediction of sustained competitive advantage ($p < .05$).

Predicted logit of (Sustained competitive advantage) = 1.312 + (-.921)*threats to suppliers bargaining power

According to the model, the log of the odds of an institution maintaining sustained competitive advantage was negatively related to threats to suppliers bargaining power, ($p < .05$; Table 3). EXP(B) value indicates that when suppliers bargaining power was increased the odds ratio was 0.398 times as small and therefore the technical and vocational colleges were .389 times less likely to maintain sustained competitive advantage, being 95% confident that the population value of the odds ratio lies between [CI]0.157 and 1.009. In other words, as the threats to suppliers bargaining power increase the less like it is that the institutions will maintain sustained competitive advantage.

Table 5: *Logistics Regression Analysis of Reporting the impact of threats to new entrants, threats to substitute products, suppliers bargaining power, buyers bargaining power, rivalry among competitors and pressure from key stakeholders affecting sustainable competitive advantage.*

			95% CI for Odds Ratio		
Predictors	**β**	**SE β**	**Lower**	**Odds Ratio Upper**	
				EXP (b)	
Constant	1.312	1.917			
Threats to suppliers bargaining power	-.921	.474	.157	.938	1.009

The Cronbach alpha reliability coefficient was α = 0 .89 and fell within generally accepted limits.

DISCUSSION

Applying Porter's Five Force Model to the Technical and vocational colleges of Jamaica

Porter's theories were selected to analyze the colleges because they have "shaped a generation of academic research and business practice" (Harvard Business Review, 2008; Hua, 2011). When the Porter's model for industry analysis is used to analyze the prevailing situation, it is evident that the threat of substitute products, the threat of established rivals; the threat of new entrants; the bargaining power of the faculty and the bargaining power of students are very low for the technical and vocational colleges in comparison to the other universities and colleges in Jamaica.

The threat of substitute products: The cost of higher education is a significant factor for the colleges as the programme fees are lower in comparison to its major competitors for undergraduate technical and vocational education. However, one problem the institutions

experiences is the inability to secure substantial scholarships, loans and grants each year to existing students and to attract enrolment. The Colleges threats to substitutes are high but they have to remain strategic in order to remain competitive. Many students are demanding alternatives that decrease the completion time for a degree or certification. Substitute products may come in the form of online and distance degree programmes which our technical and vocational colleges does not offer. It is clear that they have to put measures in place to retain the students, one such method could be through proper marketing, public relations and strategically aligning themselves to become more of a brand name instead of just a technical and vocational colleges and also to build a stronger alumni.

Rivalry among existing competitors: This takes many forms, including price discounting, new product introduction, advertising campaigns, and service improvements. In the education industry, the intensity of rivalry depends on the object of the competition: students, faculty, donors, or government-based funding and research dollars. For the technical and vocational colleges, new product introduction is slow even though there is a demand for those programmes. There has been a demand for the Associate Degrees in Environmental Science, Psychology and Banking and Finance but all the technical and vocational colleges have not yet reacted to those demands. With talks of introducing a logistic hub in Jamaica, only one of the two technical and vocational colleges has sought to capitalize on training in such area to keep up with its mandate.

The threat of new entrants: The colleges are faced with major competition from many universities, four year colleges and community colleges which have lowered their entry requirement standards. The presence of substitute business degrees can lower industry attractiveness and profitability because they limit price levels.   This means that the colleges cannot overcharge students in terms of fees and service costs as customers will want to access cheaper technical and vocational education which gives the same or better recognition locally and internationally even if those degrees are not accredited with the University Council of Jamaica or National Council on Technical and Vocational Education and Training (NCTVET).

The power of the College as the supplier: The colleges have many support services such as bookstore franchises, health clinics, and food services, but many lack research facilities. Some department have the most qualifes lecturers holding master's and doctoral degrees who are less technically qualified, while other departments have more technical staff who are less structurally qualified; the colleges are weak structurally and are in need of development.

In applying the Porter's Competitive Strategy to the technical and vocational colleges it is clear that differentiation through branding, the physical aspects and the mode of delivery should provide a more sustained competitive advantage for the colleges competing for market leadership in the education industry. Branding the colleges will add value to each individual institution and offer more satisfaction for their consumers. However this is going to be a difficult task unless the structures of the individual colleges are changed or reengineered. In differentiating from its competitors, the college must include "quality", packaging, style, features and augmenting offers which are just some of the differentiation strategies.

THE WAY FORWARD
Sustained competitive advantage

Sustainable competitive advantages are required for educational institutions to thrive in today's global environment. Based on the application of theories above, the long awaited question may be asked – "Does technical and vocational colleges have sustainable competitive advantages?" When the institutions assets, attributes, or abilities are examined it is clear they

are not difficult to duplicate or exceed. The technical and vocational colleges does not provide a superior or favorable long term position over their competitors, in fact they strive to be more like their competitors and not better than. The results obtained also showed that they are less likely to maintain sustained competitive advantage.

The way forward requires the colleges to strive to improve brand and customer loyalty, greater operational efficiency, focus more on skills training and technical vocational training, and greater employee productivity. There must be a stronger focus on product differentiation, employment of more qualified and competent staff, stronger management, greater transparency and a push for more research and publication among staff.

A move towards a more efficient workplace through planned and radical changes

Because of the many structural problems affecting the colleges and the increase in competition in the educational environment, there needs to be a change in the structure to a more feasible educational environment and one that will increase student intake and market share of the entity. According to Tsichritzis (1999) the university today must be redefined with new concepts: the internet allows virtual classrooms, digital libraries provide knowledge repositories, the Web offers up-to-date material for seminar discussions, and computer simulation substitutes for laboratories. What the Colleges need is to change its entire business process by reengineering its mode and delivery of tertiary education to allow for greater flexibility. According to Hammer and Champy (1993), Business Process Reengineering encompasses a radical thinking and redesigning of core organizational activities to achieve higher efficiency and performance (Clegg 2009). For this to happen the College's staff and students have to become intimate with technology and technological devices to move forward.

Transformational change is required for the College to succeed and move forward and requires a shift in assumptions made by the departments and its members. Lles and Sutherland (2003), states that transformation can result in an organisation that differs significantly in terms of structure, processes, culture and strategy. It may, therefore, result in the creation of an organisation that operates in developmental mode – one that continuously learns, adapts and improves (Iles and Sutherland 2001). When Lewin's force field analysis was applied to the current situation it is quite evident the some administrators are for and against the changes.

For business process reengineering to be successful, the Colleges need to stand on their own and sever ties with the Council of Technical and vocational colleges of Jamaica. The CCCJ have allowed for slow decision making, change management, and anomalies within the system. It drains the lecturers' capabilities and brain power through its constant requests for information and time that could have been put to better use.

All areas of the College must be reengineered from lesson delivery, to human resource management to the student administration system. Central to reengineering strategy is a determination to break out of the `them and us' mould and to forge effective working relationships with faculties and departments (West, 1999). This is evident at the Colleges as there is a rift between academic and administrative staff, this is in need of change because all members of staff are working for one reason and that is to provide quality service to the students who are the customers.

CONCLUSION

There was a statistically significant difference between the Porter's five forces and the level of competitiveness among the colleges within the educational industry. The hypothesis holds

true that Threats to new entrants, threats to substitute products, suppliers bargaining power, buyers bargaining power, and rivalry among competitors are less likely to predict sustainable competitive advantage. However, further research on how reengineering of the structure and function of the colleges to semi-virtual institutions may be studied to determine if impacts the level of competitiveness and sustained competitive advantage.

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On Assessing Emotional Intelligence as a Precursor of Positive Personality Functioning and Mental Health

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ABSTRACT

The recent conceptualization of emotional intelligence (EI) as a new dynamic integral trait (Austin et al., 2008; Ziedner et al., 2009) and "a wise management of emotions" (Nosenko, 2011) has opened up prospects for the comprehensive assessment of its role in positive personality functioning. The objective of this paper is to present empirical findings (obtained on a sample of 135 participants) which show that the individuals with high levels of EI are characterized by positive behavioral outcomes, indicative of their mental health continuum (Keyes, 2002) and achievements in the fulfillment of the basic life tasks (Janakov, 2008). The findings are claimed to help solving the controversy of the ability/trait conceptualization of EI.

Keywords: emotional intelligence, ability/trait controversy, mental health, positive functioning.

INTRODUCTION

A wide diversity of aspects identified in the phenomenon of emotional intelligence (EI) within a comparatively short period of time, since the term had appeared in the psychological thesaurus, made EI one of the most attractive phenomena for studying the personality precursors of the individual's optimal functioning. As is known, EI was conceptualized first as a set of abilities to adequately perceive, understand and manage emotions, which can be exercised both intrapersonally and interpersonally (Mayer & Salovey, 1990). Then it was interpreted as an array of non-cognitive capabilities, competences and skills that influence one's ability to succeed in coping with environmental demands and pressures (Goleman, 1995; Bar-On, 1997). The global personality traits were defined as dispositional components (Petrides & Furnham, 2001).

Numerous findings prove that EI is associated with life success, leadership abilities, life satisfaction, subjective well-being, self-actualization, adaptability. At the same time, the question still remains, whether EI is a precursor of positive personality functioning or on the contrary an outcome of the positive latter. This question can now be discussed more comprehensively thanks to the new approaches to the conceptualization of the construct that were identified lately. Contemporary personality psychologists have realized that operationalization of personality as a relatively small number of traits, measured by

questionnaires, may fail to illuminate important aspects of the personality sphere. As the editors of the recently published SAGE Handbook of "Personality Theory and Assessment" (Boyle et al.,2008) point out, the new personality trait and dynamic trait constructs can be found at the interface of the personality and ability, personality and values, personality and beliefs, which allow to assess personality functioning more comprehensively and adequately. In the review of the current research findings, related to studying EI, Austin et al. (2008) claim that while the "trait EI" allows its operationalization as an *explicit aspect of personality* that can be measured by questionnaires, the EI as a *true ability* requires implicit assessment with the help of the objective tests and behavioral measures. But there are no reliable instruments to assess EI as an ability and its correlations with general intelligence are only moderate and do not exceed 0.3.

The authors of the recently published monograph on EI (Zeidner et al., 2009) have included into its foreword, written by James R. Averill, the Aristotel's famous definition of some individual's ability to manage their emotions wisely as a *virtue.* The first variant of translation of the term EI into Ukrainian language made by one of the authors of this paper (E. Nosenko, 2003) was formulated as "a wise management of emotions" ("rozumnist'") reflecting the Aristotel's idea of the personality's virtuous behavior.

The *objective* of this paper was to demonstrate that EI, evaluated *explicitly* (as a trait) appears to be indicative of the mental health, assessed with the help of a new technique "The Mental Health Continuum – Short Form MHC-SF" (Keyes, 2009) which allows to define the frequency of experiencing some likely "consequential outcomes" of mental health in terms of the symptoms of psychological, social and emotional well-being.

EXISTING RESEARCH FINDINGS

There are convincing empirical findings that reflect the role of EI in determining mental and physical health of an individual (Zeidner et al., 2009). Evidence has also been gathered concerning the role of the high level of EI in preventing the development of maladaptive emotional states associated with mood and anxiety disorders. Current research findings show that the individuals with higher level of EI typically experience more positive moods and are better able to repair a negative mood after its induction (Schutte et al., 2002).

Lack of awareness of emotions and the inability to manage them are reported to be key symptoms in some personality disorders and impulse control disorders (Matthews et al., 2002). Schutte et al. (1998) found that lower level of emotional intelligence was associated with more alexithymia and less impulse control while higher level of EI is linked with aspects of better psychosocial functioning (e.g., Brown & Schutte, 2006; Salovey& Grewal, 2005; Schutte et al., 1998; Schutte et al., 2001) and greater optimism. Some of psychosocial factors, such as more social support and more satisfaction with social support, are claimed (Brown & Schutte, 2006) to serve as buffers to physical illness.

The low EI college students, males in particular, have been reported to be at risk for potentially harmful behaviors, such as addiction to the illegal drugs, excessive consumption of alcohol, and engaging in deviant behavior (Brackett et al. 2004). There are data that also point to modest correlation in a sample of adults between EI and alcohol and drug problems (Riley & Schutte 2003).

A meta-analytic investigation of the relationship between emotional intelligence and health (Schutte et al., 2007), based on the responses of 7898 participants, yielded the results, proving

that EI was significantly and positively related to different types of health indicators: with $r = .29$ for mental health (anxiety, depresion), $r = .31$ – for psychosomatic health, and $r = .22$ for physical health. Individuals with higher EI appeared to report fewer clinical symptoms, including: anxiety (O'Connor & Little 2003), depression (Saklofske et al. 2003), loneliness (Engelberg & Sjoberg 2004), and the signs of the borderline personality (Leible & Shell 2004). In addition to the above reviewed findings, it was found out that men with lower EI have been engaged in self-destructive behavior (Brackett et al. 2004).

SUBSTANTIATION OF METHOLOGY OF THIS RESEARCH

This research is based on the hierarchical informational-proceeding model of EI suggested by Nosenko and Kovriga (2003) that presumes three levels of EI development.

The low level of EI is characterized by the generation of the impulsive, emotional responses to the external stimuli. This type of emotional responses reflects mechanisms of the conditioned reflex, i.e. they are initiated at the sensory-perceptual level (not mediated by the thinking). The modality of emotions is consistent with that of the stimulus.

The intermediate level of EI is characterized by the generation of responses mediated by thinking. So, the individuals deliberately select the types of responses, the modalities of which might not coincide with the modalities of the stimuli.

The highest level of EI reflects the developed inner world of an individual. The activity is based on *the system of sets* that reflect the internalized norms of behavior to which the individual habitually sticks, not experiencing inner tension. It enables the activity on the "suprasituational" level, free of contextual constraints. Thus, on the highest level of EI development the behavior is controlled automatically (by the internalized system of individual beliefs as to the rules and norms of appropriate behavior).

The present study is based on the conceptualization of EI as an integral dynamic trait. This empirical research was designed to answer the following questions:

o Do individuals, who achieved higher levels of EI demonstrate higher levels of the mental health continuum, the latter being indicative of EI?
o Do individuals with higher levels of the EI development possess more adaptive dispositional personality traits, which thus reflect their positive functioning?
o Do individuals with higher levels of the EI development have higher levels of self-esteem, purpose in life and satisfaction with life, which confirm that EI is rather an integral dynamic trait than an emotional ability?

METHOD

Participants

The sample consisted of 135 adults (65 male and 75 female) aged from 18 to 35 years. The participants were the office employees (44.5 %), students of National Mining University (38.5 %) and students of Oles Honchar Dnipropetrovsk National University (17 %). Participants were not paid for their services but upon request could receive an individual feedback via e-mail one to two months after they finished the study.

Data tools

To answer the research questions the following data tools were chosen. *"EMIN"* (Lyusin D, 2009) is a questionnaire designed for the self- assessment of emotional intelligence. It consists of 46 items with a four-point Likert scale (0 = strongly disagree; 1 = moderately disagree; 2 = moderately agree; 3 = strongly agree). The Cronbach's alpha values for the scales are >.80.

"Four Factor Test of Social Intelligence" (M. O'*Sullivan* & J. P. *Guilford, 1976*) is an instrument which consists of 4 subtests (Cartoon Prediction, Expression Grouping, Social Translation, Cartoon Missing) and measures social intelligence. Russian version of the test was adapted by E. S. Mihajlova (1990). Internal validity values of the subtests are in the range from .66 to .73.

"The Big Five Locator" (Howard et al., 1996) is an instrument designed to assess the personality traits of an individual. The Ukrainian version was adapted by L. Burlachuk and D. Korolo'v (2000). The inventory consists of 25 adjectives and measures five personality traits: Extraversion, Openness to Experience, Agreeableness, Neuroticism, and Consciousness. Cronbach's alpha values are .73 for Introversion, .55 for Neuroticism, .70 for Consciousness, .41 for Openness to Experience and .63 for Agreeableness.

"The Mental Health Continuum – SF" (Keyes, 2009) is a self-report questionnaire that consists of 14 items, measuring hedonic well-being, symptoms (items 1-3) and positive functioning symptoms (items 4-8 which are indicators of social well-being and 9-14 indicators of psychological well-being). Mental health continuum is indicated when a set of symptoms at a specific level are present for a specific duration. The Ukrainian version of the "MHC-SF-UA" was adapted by E. Nosenko and A. Chetveryk-Burchak (2014) at the consent of the author. Cronbach's alpha value was .853.

The Satisfaction with Life Scale – SWLS (Diener et al., 1985) is a short 5-item instrument designed to measure global cognitive judgments of satisfaction with one's life. SWLS has a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). A total score is calculated by summing the individual responses. The Russian version of the SWLS was adapted by E. N. Osin and D. A. Leont'ev (2008). Cronbach's alpha value was .75.

"Coping Inventory for Stressful Situations" (Endler & Parker, 1990). It consists of 48 items, responses being measured on a five-point Likert scale (from 1 – never to 5 – very often). The Russian version of CISS was adapted by T. Kryukova (2001). Cronbach's alpha were .853 (task-oriented coping), .877 (emotion-oriented coping) and .814 (avoidance-oriented coping).

Rosenberg Self-Esteem Scale – RSES (Rosenberg, 1965) is a questionnaire designed for measuring global self-esteem. It consists of 10 items, responses being measured on a four-point Likert scale (from 1 – strongly disagree to 4 – strongly agree). The adaptation of the Russian version of the scale was presented by L. F. Burlachuk and S. M. Morozov (1989). Cronbach's alpha value was .72.

Purpose-in-life Test (Crumbaugh & Maholick, 1981) is an instrument developed to assess meaning and purpose in life. It consists of 20 items, each rated on a 7-point scale ranging from 1 (low porpose) to 7 (high porpose). Russian version of the PIL was adapted by D. A. Leont'ev (2000). Scores are obtained for 5 subscales: purpose in life, emotional richness of life, satisfaction with self-actualization, locus of self-control and locus-control of life.

Procedure
With the help of the method of cluster analysis (K-means algorithm) the sample of participants was split into three groups on the variables of emotional intelligence, social intelligence and Big five personality trait variables (extraversion, neuroticism, openness to experience, agreeableness and conscientiousness) as indicative of the dispositional components of EI. After that the between-cluster differences were computed and the differences were assessed by t-test.

Participants were contacted in person or via e-mail. They expressed an interest in participating in the study and had given contact details for future use.
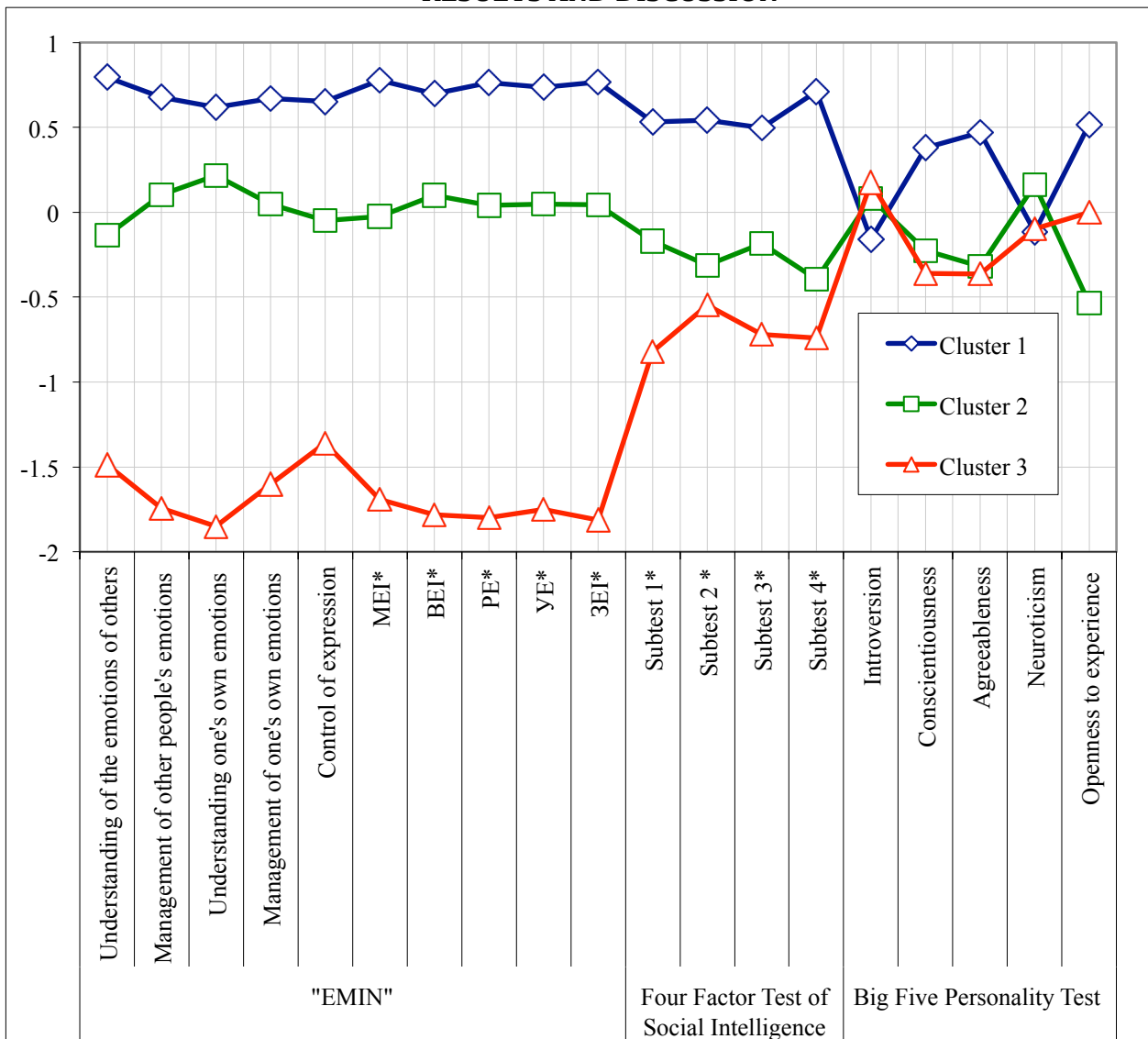
RESULTS AND DISCUSSION

Figure 1: The results of clusterization of the sample

*　MEI – inter-personal emotional intelligence; BEI – intra-personal emotional intelligence; PE – understanding of emotions; УE - management of emotions; ЗEI –general score of emotional intelligence.

Subtest 1 – ability to understand consequences of behavior; Subtest 2 – ability to understand non-verbal information; Subtest 3 – ability to understand the content of the words according to the character of interpersonal interaction; Subtest 4 – ability to understand the logic of the complicated situations of interaction.

Differences between the variables, used for clusterization, were processed with the help of t-test (see Tables 1, 2).

Table 1 shows between-cluster differences in the cumulative scores of the emotional intelligence.

Table 1: Between-cluster (1ˢᵗ vs. 3ʳᵈ) differences in Emotional Intelligence

Variables	Mean Cluster 1 (N = 56)	Mean Cluster 3 (N = 25)	t-value	Std. Dev. Cluster 1	Std. Dev. Cluster 3
Understanding other people emotions	35,67	22,36	**18,09****	2,50	4,05
Management of other people emotions	29,51	16,88	**18,99****	1,17	4,69
Understanding one's own emotions	28,96	15,28	**23,39****	1,67	3,61
Management of one's own emotions	20,62	12,24	**16,42****	1,49	3,11
Control of expression	18,73	11,16	**12,26****	2,18	3,27
Inter-personal emotional intelligence	65,19	39,24	**21,91****	3,05	7,64
Intra-personal emotional intelligence	68,32	38,68	**22,79****	4,14	7,54
Understanding of emotions	64,64	37,64	**29,67****	3,19	4,87
Management of emotions	68,87	40,28	**22,87****	3,53	7,75
General score of emotional intelligence	133,51	77,92	**28,70****	6,30	11,06

**p < .001

As evident from Table 1, the level of the EI development, the participants of *the first cluster* possessed, appeared to be significantly higher (by t-test) than that of the individuals of the third cluster. Table 2 presents the results which illustrate between-cluster differences in the social intelligence and personality traits variables. It means, that the groups of participants, included into these clusters, can be used for the further stages, intended to obtain the empirical answers to the research questions in a quasi-experimental format of the research.

Table 2: Between-cluster (1ˢᵗ vs. 3ʳᵈ) differences in social intelligence and personality trait variables

Variables	Mean Cluster 1 (N = 56)	Mean Cluster 3 (N = 25)	t-value	Std. Dev. Cluster 1	Std. Dev. Cluster 3
Subtest 1 (ability to understand consequences of behavior ("cartoon prediction"))	10,50	7,04	**7,09****	1,87	2,33
Subtest 2 (ability to understand non-verbal information ("expression grouping"))	8,42	6,04	**5,10****	1,92	1,98
Subtest 3 (ability to understand content of the words according to character of inter-personal interaction ('social translation"))	8,96	6,08	**5,81****	1,91	2,36
Subtest 4 (ability to understand the logic of complicated situations of interaction ("missing cartoons))	7,50	4,12	**7,06****	2,14	1,58
Introversion	22,03	23,68	-1,33	4,53	6,26
Conscientiousness	34,75	31,12	**3,33****	3,44	6,34
Agreeableness	30,96	27,08	**3,79****	4,65	1,30
Neuroticism	19,33	19,44	-0,07	6,25	1,19
Openness to experience	29,67	23,35	**2,63*****	5,46	1,36

***p < .01;* *p < .001

As shown in Table 2, the opposite clusters (1 and 3) significantly differed on all the four variables of social intelligence and on the dispositional trait variables: conscientiousness, agreeableness and openness to experience. There no significant differences only on neuroticism and introversion.

The participants' data demonstrated that the chosen sample included 41.5 % (N = 56) of individuals with a high level of emotional intelligence, 40 % (N = 54) – with an average level, and 18.5 % (N = 25) – with an extremely low level of emotional intelligence.

To examine the relationship between emotional intelligence and mental health, between-cluster differences were compared with mental health indicators and other variables which were chosen as likely *dependent* variables of the quasi-experiment for non-equivalent groups (Table 3).

Table 3: Between-cluster (1st vs. 3rd) differences in the *dependent* variables of the quasi-experiment for non-equivalent groups.

Variables	Mean Cluster 1 (N = 56)	Mean Cluster 3 (N = 25)	t-value	Std. Dev. Cluster 1	Std. Dev. Cluster 3
Mental Health	50,08	41,84	**3,36****	9,93	10,72
Purpose in Life	34,64	27,08	**6,10****	4,60	6,21
Emotional richness of life	32,92	29,12	**3,47****	4,64	4,33
Satisfaction with self-actualization	27,92	23,68	**4,35****	3,83	4,52
Locus of self-control	22,94	18,76	**3,76****	4,35	5,19
Locus control of life	32,66	21,76	**8,70****	4,87	5,90
Purpose in Life (general point)	111,01	93,72	**5,43****	12,79	14,16
Self-Esteem	33,37	29,36	**4,94****	3,36	3,41
Satisfaction with life	23,69	20,52	**2,62*****	4,62	5,84
Task-oriented coping	61,08	51,24	**4,77****	6,66	11,83
Emotion-oriented coping	41,01	46,68	**2,11*****	10,91	11,57
Avoidance-oriented coping	48,73	47,84	0,35	11,03	8,61

***p < .01; **p < .001

The first cluster with the highest levels of the clusterization variables (analogues of the independent variables) appeared to show the highest levels of mental health as well as most of other variables chosen to represent the likely behavioral consequences of different levels of EI, conceptualized as an integral dynamic trait, indicative of the positive functioning and mental health continuum. The participants of the first cluster have significantly higher value of the task-oriented coping (t=4.77) and significantly lower emotion-oriented coping, while differences in the avoidance-oriented coping are not significant. These and other results provide the convincing answers to our research questions to be commented upon later in thus section of the paper. Table 4 shows significant differences not only between the "opposite" clusters of the participants (1 and 3), but also between the clusters with the highest and the intermediate levels of EI.

As shown in Table 4, the representatives of the cluster with the high level of EI have significant differences in mental health, five subscales of the Purpose-in-Life Test, they are more satisfied with life, have higher level of self-esteem and tend to use task oriented coping strategy as compared against the individuals of the cluster with the intermediate level of emotional

intelligence. So, the data obtained in this research provide answers to all four research question.

Table 4: Between-cluster (1st vs. 2nd) differences in the dependent variables.

Variables	Mean Cluster 1 (N = 56)	Mean Cluster 2 (N = 54)	t-value	Std. Dev. Cluster 1	Std. Dev. Cluster 3
Mental Health Continuum	50.08	41.01	**4.19****	9.93	12.61
Purpose in Life	34,64	31,29	**2.89*****	4.60	7.35
Emotional richness of life	32,92	28,57	**3.78****	4.64	7.18
Satisfaction with self-actualization	27,92	24,55	**4.36****	3.83	4.25
Locus of self-control	22,94	20,37	**3.19****	4.35	4.08
Locus control of life	32,66	29,07	**3.54****	4.87	5.73
Purpose in Life (general score)	111,01	99,57	**3.67****	12.79	19.34
Self-Esteem	33,37	31	**3.53****	3.36	3.69
Satisfaction with life	23,69	20,40	**3.72****	4.62	4.63
Task-oriented coping	61,08	55,94	**3.74****	6.66	7.72
Emotion-oriented coping	41,01	42,03	-0,49	10.91	10.75
Avoidance-oriented coping	48,73	48	0.35	11.03	10.43

***p < .01; **p < .001

In study 2 we included the Mental Health Continuum variable into the set of the analogues of independent variables, used in the first variant of clusterization, in order to test the incremental validity, if any, of the Mental Health Continuum as a likely criteria measure of EI. The data obtained with the help of cluster analysis (K-means algorithm) on the variables of EI, social intelligence, Big Five personality traits and *the mental health continuum* show that the t-value differences (between 1st and 3rd clusters) appeared to be higher for all variables indicative of the positive functioning of an individual (purpose in life (6.34); emotional richness of life (4.50); satisfaction with self-actualization (5.10); life management 10.26; purpose in life (general score) (6.55); self-esteem (6.28); satisfaction with life (3.99); task-oriented coping 5.29) comparing with the results of explicit assessment of EI (as a trait).

CONCLUSION

The findings of the present study have provided answers to all the questions formulated before carrying out the empirical study. In answer to the first question we obtained data that proved the existence of differences in mental health between the opposite clusters both in case when MHC was included into the analysis as an additional independent variable and when it was analyzed as a dependent variable. This allows to conclude that MHC can be both a precursor of differences in EI and an outcome of the existing differences. So, its effect on EI might be reciprocal: high level of EI predisposes mental health, which, in its turn, causes the increase of EI. To answer the second question (about the effect of EI on the stable personality dispositions) we have obtained a partially controversial answer. The value of three of the five personality traits appeared to vary between the clusters in the predicted direction. The cluster with highly different levels of EI appeared practically not to differ on the level of neuroticism and introversion. It can be explained by the genetic roots of both: the neuroticism and extroversion/introversion, or probably by the fact that high level of EI influences the individual's shrewdness and makes the person very sensitive to the possible insincerity of other people which the person with very high level of EI may notice and the person with the low level of EI might overlook. In any case this aspect of the research requires further

investigation. In answer to the third question we obtained data that proved that the high level of the emotional intelligence was strongly associated with greater life satisfaction, purpose in life, task-oriented coping and higher self-esteem. It confirms that EI is rather an integral dynamic trait than an emotional ability.

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Marketing Performance Measurement Management: Study of Selected Small and Medium Scale Businesses in Nigeria

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ABSTRACT
Small and medium scale businesses constitute over 70% of the industrial sector of Nigeria. Unfortunately however these firms, based on estimation of performance do not contribute significantly for the macro development of the society. This poor level of contribution is attributed to paucity in the adoption of marketing performance measurement management principles and techniques. This work for the assessment of the rate and level of adoption use of marketing and accounting metrics studied firms in selected industrial sector of the economy. This is based on sample population determined using the yard mathematical notation and set of questionnaire assessed using Likert rank order scale and pearson correlation co-efficient R. Findings include that small and medium scale businesses find it difficult to create and sustain linkage between marketing as a unit of business system with the entire system; paucity in tracking metrics that relate to programmes; gross inability at managing changes among others. Recommended are efficiency in corporate goals and marketing objectives determination given the peculiar business environment; adoption of acceptable marketing metrics for performance evaluation; adoption of acceptable marketing metrics for performance evaluation; adoption of regular performance audit programmes and adoption of modern methods of data capturing and analysis based on the use of skilled personnel.

Key Words: Performance measurement, marketing metrics, efficiency; effectiveness, small and medium scale, economic development, marketing audit and CRM

INTRODUCTION:
Small and medium scale businesses constitute over 70% percent of the productive and marketing sector of Nigeria, thus are considered vital source of and catalyst activities in the macro industrial and economic development of the nation through growth. Unfortunately however, the performances of these firms as are reflected in national statistics as estimates, are based on paucity in activities of marketing performance measurement and management, hence planning gaps as variances between actual results and planned objectives of these firms are not identified for analysis-Berkowitz, Kerin, Hartley and Rudelius (2000), neither are the firms involved in the analysis of return on marketing investments-Kotler and Armstrong (2009). These small and medium firms are poor in control activities of deviation from performance standards; identification for positive deviations exploitations and negative deviations correction. Hence do not maximize their potentials as bases of alignment of marketing activities, strategies and metrics with business goals. This basically is attributed to inefficiency in the measurement of returns on marketing investments.

Theoretical Frame Work:

Small and Medium scale businesses are strategic in national economic growth and development, as source of employment; stimulation of entrepreneurship skills and for capital accumulation as well as for their contributions in the transformation of the traditional industry based on their linkage effects.

Given the rural base of these firms, they ensure efficiency in human and material resources utilization, as such generate income domestically and international based on export and international marketing operations in the face of their role as trainer-trainees in manpower development-Onuoha and Udensi (1996) and CBN Bureau of Statistics (2013).

In Nigeria, the role of the small and medium scale businesses is not prominent even when these firms dominate the industrial sector, generating over 70% of productive and marketing activities. This mark of inefficiency is attributed to paucity in the execution of marketing performance measurement and management activities among the firms.

Managers in marketing in addition to financial performance measurement are expected to consider useful some non financial measures: such as percentage of products delivered on time, number of defective product units produced, setup time for batches of production, average time from order to delivery and units of output per direct labour-Horngren and Sundern (1990). These financial and non-financial performance measures ensure that the desired effects of quality control are achieved as they express the impact of cost on quality of output.

Significance of this work:

Literature abound on financial and non-financial marketing performance measurement and management, such as: –Berkowitz, Kerin, Hartley and Rudelius (2000); Bateman and Snell (1999), Horngren and Sunden (1990), Kotler and Armstrong (2010), Krishnamurtly and Ewald (2009), Adwww.vconnect.com/Result, admarketing.webcrawler.com and Adwwwinfo.com/measurement +marketing. These works are all in the theory of the concept without practical input, thus it has been difficult to assess the validity or otherwise of their claims. Even when these claims are valid in the developed economies, it is difficult to conclude same level of validity and rate in the developing economies. Thus this work is considered significant as it evaluates for the efficiency in adoption of marketing performance measurement and management principles based on measurement tips of goal stating; use of database, employment of response mechanisms, code and test, qualify prospects, marketing and market research and elicitation of feedback-Fusion b2b (2008) in the developing economy of Nigeria with special bias for the small and medium scale industrial sector; as a means of re-positioning firms in the small and medium scale industries for positive contributions to national economic development.

Objectives of the Study:

This work has the objective of re-positioning the small and medium scale firms in the industrial sector of Nigeria for positive contribution to national development based on efficiency in the adoption of marketing performance measurement and management principles. Following this, its subsidiary objectives include:

o X-raying for the challenges to the adoption of marketing performance measurement and management principles among small and medium scale firms in Nigeria.

o   Determination of the impact of adoption or otherwise of marketing performance measurement and management principles among small and medium scale businesses in Nigeria.

Hypotheses:
This work is based on these null hypotheses

H0: Lack of understanding of the importance of and principles of marketing performance measurement management does not significantly challenge its adoption among small and medium scale businesses in Nigeria.

H0:Inefficiency in the adoption of the principles of marketing performance measurement management does not have significant impact on the operational efficiency of small and medium scale businesses in Nigeria.

METHODOLOGY:

This work is industrial marketing bias with special reference to small and medium scale businesses in the transportation, hospitality, community, manufacturing, agriculture, mortgage, construction, wholeselling, insurance and quarrying and mining subsectors of the economy. Membership of these sub-sectors of the industry sector as sample population of the study was determined given yard mathematical notation represented as equation 1 thus:

$$N \quad = \frac{N}{1 + N\,(\infty)^2}$$

(1)

Where: N = population size
                n = sample size
                ∞ = permissible of sample error

Sets of questionnaire were administered on these target respondents as artificial personalities through the different front line managers. These yielded 68% return rate and 60% validity - rate. These sets of questionnaires addressed issues bordering on the definition of goals as standards of operation, employment of response mechanism to performance measurement, coding and testing of information, variables that qualify prospects and methods of eliciting market response as feedback.

The Likert rank order scale measurement was introduced in the set of questionnaires as guide to respondents' in the evaluation of the variables of importance. Variables were evaluated based on the principles of the ordinary scale ranking order and the interval scale –order respectively-Ezejelue, Ogwo and Nkamnebe (2008), as well as the pearson correlation co-efficient 'R'

Organization of the Study:
This study is organized in subheads of abstract, introduction, literature, analysis, findings, discussions of findings, conclusion and recommendations.

LITERATURE

Progressive and successful marketing oriented business organizations given the global inter and intra gernic competition, adopt strategic control programmes that aid the comparison of results of marketing activities with the goals as formulated at the planning stage, for the purpose of identification of derivations from standards as well as to take actions aimed at correcting negative deviations and or exploiting for advantage the positive deviations from standards-Berkowitz, Kerin, Hartley and Rudelius (2000).

It is important to note that the evaluation of performance in marketing like other aspects of corporate activities may not achieve the desired and expected impacts without acceptable corporate goals and marketing objectives quantified and stated in numerical values; as basis for comparing the actual and standard performances based on defined benchmarks Thus marketing at the corporate level develops programmes with the aim of monitoring key measures of performances in tangible and intangible financial targets as covering issues such sales revenue and profits and customer satisfaction, new product development cycle time and sales force motivation respectively. These in expanded scopes include sales analysis, profitability analysis and the marketing audit –Berkowitz, Kerin, Hartley and Rudelius (2000).

Effectiveness and Efficiency
Performance evaluation of marketing activities could be effectiveness and or efficiency based. While effectiveness is associated with the degree to which goal and or objective is met, efficiency has to do with the degree to which inputs are used in relation to a given level of outputs. Conventionally, the sales volume as a variance index is associated with the measure of effectiveness, but efficiency as flexible budget based measurement index traces the change in unit price on output –Horngren and Sundern (1990).

Measuring Performance: Financial and Non-financial:
Performance measurement and evaluation are managerial control devices, thus are adopted in spurring members of the internal market to goal actualization, thus must relate to corporate goals; are affected by activities of managers; are reasonably objective; should be easily and readily understood by managers, cover the important aspects of performances without conflict with one another, be used in evaluating and rewarding managers, be used consistently and regularly and should be adequate and comprehensive to balance long and short term concerns of the organization-Bahader & Kapil (2003), Cadegan (2012), Donnelly, Simon & Armstrong & Fearne (2012), Farris, Bendle, Pfe.fer & Reibatian (2006), Gok; Hacciogh (2010), Gupta (2012), Miller & Goffi (2004), Mendragon, Lalwanie & Mondragon (2011) and Mulky (2011).

As quality measurement device, it should measure the effect of quality control and express the financial impacts of costs on quality, based on the assessment of costs incurred to prevent the production of defective products, costs incurred to identify products that are scrapped and costs required to correct defects in product that are reworked as well as costs caused by delivery of defective products to customers- Horngren & Sundern (1990), Paswan, Blankson & Guzman (2011), Rosenblom & Dimstrova (2011) and Wbster (1992).

Productivity thus is measured based on labour as output divided by input for capital intensive operations, technology utilization rate may be considered. While the efficient use of materials is considered relevant in some industries, material yield is an acceptable productivity measure in others-Horagren & Sundren (1990) and Patterson (2010).

Modern marketing activities based on holistic management approach evaluate for corporate performance evaluation based on units of operation, market segments and individual internal marketing activities. Where conflicts exists between different units' performances as favourable and unfavourbale direction from objectives as standards, incentives are adopted to motivate employees for higher favourable performance and for improvement on the unfavourable performance; however, the corporate performance evaluation is holistic as the integration of the performance of the different market segments-Horagren & Sundern (1990) and Patterson (2010).

Managers in marketing also adopt the use of incentives as those informal and formal performance measures and rewards that enhance goal congruence and managerial efforts to address dysfunctional behaviours as actions taken in conflict with top management and goals-Horngren and Sundren (1990), as individuals' are motivated to perform in the way that leads to rewards. The choice of rewards clearly belongs to top management with an overall system of management control and is influenced more by non accounting objectives rather than subjective inputs from front line managers in form of advice-Huhtala & Parzefall (2007), O' Sullivan (2009) and West & Sacreamento (2006)

Marketing is interested in linking rewards to performance, however, in most cases performance cannot be measured directly, thus is related to financial results of different responsibility centres even when factors beyond the internal markets' control can affect results, and often generate problems on performance assessment-Bahadir & Kapil (2003) Therefore demand and supply of labour that is subject to reward, based on performance evaluation is based on specifications of performance measures and how it will affects reward, as performance measures and rewards are implicit. Given this, employment contracts trade off incentives, risk and cost of measuring performance. Inspite of this, marketing is increasingly being expected to measure the returns on investments-Clancy & Stone (2005).

Measures of Profitability:
Profit as a term or concept has inferences that are objective rather than subjective, thus does not mean the same thing to different persons and organizations. Inspite of these differences in adoption, organizations are favourably disposed to the maximization of profit-Mucky (2011) and Kotler & Armstrong (2002).

Profitability is net income, income before tax, net income percentage based on revenue, a percentage as well as an absolute amount-Ambler, Kokkinoki & Puntomi (2004) and Barney (1991). Marketers show interest in net income or the income percentage but have total neglect to the measurement of the investments associated with the generation of the income, hence the evaluation of profitability lack merit.

For general acceptability, profitability is associated with the Srate of return on investment (ROI) which is defined as a measure of income or profit –Kotler and Armstrong (2010). Return on investment is an expression of sameness of risks, for any given amount of resource required. The investor wants the maximum income, hence it is considered a useful common dominator for marketing performance measurement because it compares the rates inter and intra organization and with investment opportunities in other industries even in unrelated projects, and it is a combination of income percentage of revenue and capital turnover; whose respective adjustments without change of the others have effect of improving the rate of return on investment capital- Horngren & Sundern (1990), kotler & Keller (2010) and Kotler & Armstrong (2009).

The question is, given this literature and the complexity in performance indices evaluation especially in the area of data analysis, are Nigeria small and medium scale businesses in marketing positioned for efficiency and effectiveness in performance measurement and management? Answer to this question is the subject of this work.

Indices of Performance Evaluation in Marketing:
Marketing as a sub-system of corporate operation like other sub units is under big pressure to estimate the impact of its costs on returns-Brady (2004) and Owens (2007). Though the benefits of marketing are implicit and difficult to be quantified in monetary terms. It is

depending on various performance evaluation indices for data sourcing, analysis and metrics for the quantification of its return values based on the supply of prior and posterior estimates of the impact of marketing programmes-Hise (2006), Kotler and Armstrong (2010), Mcmaster (2002), Wyner (2007), Seggie, Cavusgil and Phelan (2007), Lenskold (2007) and Kotler (1999).

Marketing research with its data base characteristics as objectivity and consumer focused – Oko (2002) aids marketing with data for managerial decisions on operational performance evaluation-Kotler and Keller (2009). However these data are heaps of information wastes where quantitative relationships are not created between the data and marketing productivity, hence marketing dash board is required for the interpretation and synthesizing of data. Following this marketing metrics of -Economic Value Added-Kumar, Sarkar, Saxena, Repathi & Moller (2012), brandy equity -Aaker (1991), Baldomger (1990), Byron (1995) and Fraguher (1990); relationship equity –Morgan and Hunt (1994), Achrol (1997), Sawhney and Zabin (2012) and customer equity-Blattberg and Deightm (1996), Lemon, Rust and Zethem (2001), Rust, Zeithaml & Lemon (2001) are employed to assess marketing effects and marketing mix modeling, to estimate the cause and effect relationship between marketing investments along the inter and intra variables of marketing and the outcomes as actual performance of activities –Kotler and Keller (2009).

These measurement indices have associated problems in usage especially in the measurement of economic value added (EVA) which is beyond the simple accounting measure, rather considers expenditures as investments, thus Stewart (1993) advocates that this evaluation should be in line with the principle of return on investment. Researchers therefore postulate that the measurement of EVA should be based on non-accounting metrics that should be adopted in conjunction with the orthodox accounting and financial metrics-Kaplan & Norton (1992). Hence Blattborg & Deighton (1996), Rust, Zeithaml & Lemon (2003), Jackson (1989) and Vain & Singh (2002) advocate for the use of customer equity (CE) and customer lifetime value (CLV) as tools of measurement of marketing performance. Based on the foregone, Seggie, Cavusgil & Phelan (2007), identify factors that influence the demand for marketing measurement based on metric as: greater demand for corporate and unit's accountability, managerial dis-satisfaction with the orthodox metrics and the development in and availability of information technology and internet facilities for access to information and ease in data analysis.

From the view point of corporate accountability through sub unit's accountability, marketing is assessed based on its return on investment as marketing expenditures are considered investments –Schitz & Gronstedt (1997), hence these expenditures are not considered short term as such are not influenced by the viability or otherwise of the firm-Rust, Lemon & Zeithaml (2004). Marketing costs thus must be related in linearity with marketing and financial outcomes not as independent measures; hence metrics are acceptable as they create explicit link between marketing performance and investments-Ambler, Kokkinaki & Puntoral (2004). Based on this, casual models are incorporating micro level customer data to model individual consumer behavior-Kata (2002), which permits the marketing unit of the firm to evaluate investment decisions at the respective consumer level. Given this, a deviation is made from the orthodox model of marketing investment that combines both the financial and non- financial measures on general customer basis –Rust, Zeithaml & Lemon (2004).

Corporate managers have continued to express dis-pleasure with traditional accounting metrics –Ittner & Larecker (1998) and Kapplan & Norton (1992), as they do not offer basis for

the assessment of long –term (future) performance of organization based on extrapolation principles, thus short term (run) performances are maximized at the expense of long term wealth creation objectives of firms-Laverty (1996). These metrics also do not reflect the value of intangible assets of firms-Bayon, Gutsche & Bauer (2002) and Sawhney & Zabin (2002). This situation is at variance with the demands of modern business management techniques; in skills, competencies and knowledge, hence are misleading –Kaplan & Norton (1992). Sawhney & Zabin (2002) are of the opinion that underrating the value of intangible assets held by contemporary businesses will generate mis-leading results of operations, hence inaccurate decisions will be generated. These inaccurate results based on subjective metrics, affect expected relationship creation between marketing investments (expenditures) and performances as expressed financially-McMullan, Chrisman & Vesper (2001), Moers (2005) and Hogan, Lehrhann, Merino, Srecastava, Thomas & Verhoef (2002),

The traditional metrics of performance measurement do not also recognize the implicit value of competitors activities expressed as threat to corporate advantages and are also poorly estimated and exploited for corporate survival –Barney (1991), Srivastava, Fahey & Christensen (2001). Advocates of marketing metrics are of the opinion that any metric whether orthodox or modern that relegates to the background the causal link expected between marketing expenditures (investments) and performance will be bias and error infested if it does not consider the position of competition-Seggie, Cavusgil & Phelan (2007).

Given the growth and development in information technology and internet facilities, in the midst of expressed dissatisfaction with the orthodox metrics of accounting, marketing is expected to be spurred to efficiency in the use of technology of internet and extranet for Enterprise Resource Planning (ERP) software, customer relationship management (CRM) and software and electronic cash registers (ECR) for the monitoring and evaluation of marketing performances –Saggie, Cavusgil and Phelan (2007). This exercise of marketing performance evaluation based on customer relationship management revolves around the creation of customer data base, which provides information on brand loyalty for effective customer targeting as well as for linking processes with technology and the target market-Winer (2001) and Crosby & Johnson (2001).

Advocates of marketing performance evaluation, thus are of the view that the inter and intra environmental variables of the marketing organization do not allow for the creation of proper relationship between marketing investments and performance based on the orthodox measurement standards that are subjective rather than objective and do not recognize the place of the intangible nature of marketing investments and well as the future orientation of these investments as data that are micro–departmental organization based are related to competitors as link between marketing investment and returns.

Ideological Foundation of Marketing Performance Measurement:
Marketing performance measurement in the light of technological development and qualitative rather than quantitative relationship between costs (investments) and outcomes (outputs, returns or performance) is based on the definition and determination of marketing objective as well as the desire for enhancing marketing initiatives for enhanced resource allocation for marketing activities –Rust, Ambler, Carpenter, Kumar & Srivastava (2002), hence must shift from the point of considering marketing expenses as non-financial rather financial, thus information must be timely assessed for feedback and for corrective actions-Ambler, Okikinaki & Puntoni (2004), in terms acceptable by all subunits of the organization. Marketers argue that non-clarity in the expression of non financial measures as standard for appraising the marketing performance creates confusion-Paste & Live, Bergen, Dutta & Walker (1992).

Marketing activities thus must be qualitative and quantitative data based for ease in performance trend assessment, especially for extrapotation of events in the face of growth in competitive activities of other firms. To achieve this, data collation and collection must recognize the changing nature of the market, environmental shifts and internal initiatives of marketing in product related issues-Seggie, Cavusgil & Phelan (2007). It is important to stress that marketing organizations' effort at developing forward-looking measurement indices (metrics) must not relegate to the background to the role of the orthodox metrics such as product contribution margin, revenue and gross margin as common in accounting related assessments-Amber et all (2004), Barwise & Farley (2004).

Performance measurement metrics should be more micro data based than macro to aid marketing ascertain the minute impact of investment on performance, though both complement each other. This however is influenced by the financial strength of the organization given additional expenses involved in straining of personnel, data analysis, data collation, information dissemination and implementation of programmes associated with data collection and collection-Ridby & Ledinghen (2004). These costs marketers argue constitute barrier to the acceptance of the more sophisticated marketing metrics as such consider the expenses a favourable investment area where tangible benefits of such investment do not offset the associated costs through value creation in service efficiency-Seggie, Cavusgil &Phelan (2007).

Marketing performance evaluation is expected to shift from the independent metrics to those that create causal chains between efficiency and control –Seggie, Cavusgil & Phelan (2007). This shift in metrics is vital as marketing strategies and tactics create direct relationship with benchmarks of evaluation for choice of most viable course to profit amidst alternatives, given customers re-actions and market share as trend issues.

Marketers are of the opinion that performance measurement indices should be based on relative rather than absolute metrics as it will grant the marketing unit the opportunity of comparing its performance with those of competitors especially as the marketing firm does not exist in the vacuum -Lippman & Rumelt (2013), Barney (1991) and Wernerfelt (1984). It is however important to note the difficulties associated with sourcing information on competitors, especially given the law in espionage –Shapiro (1998); Dallas Morning News (July 24, 1998), Pasztor (1995) and Darlin (1989). It is the opinion of marketers in management that difficulties are common in efforts at establishing relationships between relative marketing performances of organizations and their values- Seggie, Cavusgil & Phelan (2007), however break through are in the areas of price premium as a measure of brand health and brand equity –Ailewadi, Neslin & Lehmann (2002) and investment in extensive benchmarking studies based on competitors pool of information and reporting of average level of activities on key metrics even as reporter remain anonymous-Vorhies & Morgan (2005). Finally, marketing performance assessment must be objective rather than subject principles oriented, hence product and service attributes are considered most valuable drivers of customer perception relatives to competitors-Wiggins & Rabay (1996). This is based on the power of the internet system given its information dissemination and impact on highlighting the objective attributes of market offer relative to brand loyalty-Bennet & Rundle-Thiele (2005), Blumenthal (2005) and Surowieck (2004). Following the above,, marketers are of the opinion that tracking, controlling and planning changes in objective attributes of market offer inter and intra firm relative to competitors will change marketing performance measurement and productivity-Seggie, Cavusgil & Phelan (2007), hence the need for internal and interactive marketing will be

high –kotler and Keller (2010) and Kotler and Armstrong (2009) for improved shareholders' value and welfare- (Serivastava, Shervani and Fahey (1999).

Measurement of Marketing return on investment and the demonstration of value as well as balancing marketing strategy with tactics and tying marketing success to the goals of other groups as practices of marketing operations-www.market.com/assets.uploads./mktgMertic-cheatshelt731.pdf and marketing operations-Partner (2006) has remained difficult task, thus marketing has continued to struggle to show its contributions to business success-Patterson (visionEdgeMarketing-2010). This involves the adoption of measurement approaches of Economic value added, the balance score card, brand equity, relational equity and customer equity-Seggie, Cavusgil & Phenlan (2009). Synchrova (2012) concludes that value of symmetric measure intensity tends to be small rather than high among small micro, small medium and large scale enterprises signifying the low rate of dependency on marketing metrics for the measurement of performance especially in relations to other sub units of the firm, for the purpose of ensuring that marketing processes are internally efficient and effective-Marketing Operations Partners (2006). This situation accounts for the poor allocation of resources across marketing activities given the desire to achieve acceptable return on marketing investment-Mohammadian & Dehabadi (2012).

Net Profit is the most adopted metrics of marketing performance measurement, with others like of market share, relative market share, customer satisfaction, marketing expenses and variables and fixed costs-Sychrova (2012) and Seggie, Cavusgil & Phelan (2007). Sparingly adopted metrics include market and brand penetration, the average costs of customer retention, percentage profit, costs per click and return on investment. Least and non adopted metrics include market share of strategic business, loyalty, degree of cannibalization of products, break even point, cost per unit, cost per order, return on sales among others-Synchrova (2012).

De Raad (2000), Goldberg (1993), Goldberg & Rosolack (1994), Aaker (1997), Caprara, Barbaraneth &Guido (2001) in their work on corporate personality relate with product brand as metrics index while Melar & Nyeffengger (1997), Neslin (2002) and Srinivasan,, Pauwell, Hanssens & Dekimpe (2004) express concern over the disappearance of the accepted importance of linking advertising expenditure to brand building activities. Studies and results there-to have explored the effects of brand personality on variables that reflect brand equity-Kim (2000); Sung & Tinkham (2005), Hess, Bauer Kuester & Huner (2007) and Brakas, Schmitt & Zaraintonello (2009).

It is the assertion of marketing practitioners that corporate personality as influenced by the personalities of members of the internal market adds value to brand personality; the degree of influence is jet to be established –Aaker, Fournier & Brasel (2004).

Given the state of the small and medium scale businesses in Nigeria, the question is how equipped are these businesses for the measurement of marketing performance?

Effectiveness and efficiency in marketing performance measurement is achieveable given measurability of activities in the presence planning process improvements, marketing information technology, budget /financial management, marketing intelligence, sales and traceable and acceptable relationships with relevant corporate stakeholders and functions – Marketing Operation Partners (2006), as these touch points build foundation for excellence in alignment between marketing strategies and marketing metrics, process and infrastructure as means to marketing efficiency based on accountability.

Improved identification with and integration of marketing metrics in corporate operations ensure performance assessment, based on good quality financial management, strategic planning, efficiency in marketing resources allocation and utilization, skill acquisition and performance assessment and management.

It is however important to note that marketing performance measurement is challenged as it is difficult to create parity between marketing expenditure (investment) with returns; as means to demonstrating value, neither is it ease to achieve optimal balance between strategy and tactics, hence tying common goals for marketing success to other sub units of the organization based on system concept (principle) is difficult. Based on this, justifying goal actualization has remained elusive among firms and ensuring marketing process efficiency and effectiveness is considered a challenge-Marketing Operations Partner (2006).

Marketing in its activities is vast in data collection and collation and has always determined net profit of operations. Documentations of marketing processes in relationship with other sub units of the organization such as finance, production, sales, research and development as basis of performance evaluation has always been held at high esteem. Thus the difficulties and challenges associated with marketing performance measurement based on the use of metrics are not traceable to the absence of data –Marketing Operation Partners (2006), Patterson (2010), Kotler and Keller (2010) and Kotler & Armstrong (2009), but to the inability to use collected and collated data to give sustained competitive advantage and derive specific business outcomes. Thus data as collated based on internal and external measures must be structured, and synthesized for interpretation based on sophisticated visualization tools that create live in the data and for improved understanding and analysis-Zabin (). For Kotler & Keller (2010) and Kotler and Armstrong (2009). These structured data are presented on marketing dash board with customer –performance scorecard and stakeholder performance scorecard for corrective actions when negative performances are recorded –Kaplan & Nerton (1996).

Marketing Operations Partners (2006) are of the opinion that neither the dashboard nor the information there-to is responsible for corporate success but the decimal effect of the information. Thus the marketing metrics for optional investment decisions and marketing performance management in the midst of efficient marketing mix (blending) provide guidance and governance for decision making.

The marketing dashboard at its three level and functions of executive, operational and tactical and strategic marketing management and functions individuals respectively should monitor and measure performance against business outcomes and marketing objectives; track performance of core marketing strategies and processes and analyse performance at project or actuality level as they relate to strategic level and marketing management.

While marketing metrics show corporate objectives in order of preference, the dashboard as conceived based on marketing operations should give effective and timely guide to decision making. The marketing dashboard aid the synthesization of knowledge as it highlights performance gaps, thus creates alignment between tactics, strategies and objectives and business outcome returns, thus is considered performance guide-Marketing Operations Partners (2006).

The increasing call on marketing to justify management expenses on its operations has continued to spur marketing to performance evaluation-Sanders (2006), Ambler (2003) Kasum, Lehamm & Neslin (2003), Shaw & Merrich (2005) and Marketing Operations Partners (2006), hence the need to tie cost of marketing activities as expenses and investment return as demonstration of value addition based on brand value enhancement, increase in revenue and customer equity as wall as stakeholders welfare improvement.

It therefore incumbent on the market and marketing as an organizational function to position and re-position itself based on acquisition of skill especially science related for the development of traits that will enhance corporate efficiency and accountability. This is made possible given the discipline of marketing network and inter and intra departmental interaction based on internal customer marketing management attributes of principal marketing personnel.

Kotler and Keller (2010) and Kotler and Armstrong (2009) in their discourse on interactive marketing opine that it enhances corporate efficiency hence could spur the marketing department to efficiency in work and visibility of processes, budgeting and budget implementation, application of metrics variables as well as performance reporting. These directly influence accountability as efficiency and effectiveness are assured.

Marketing drives based on marketing operations are essential for spurring up performance management as well as for the creation of performance driven organizations. Following the development of strategy roadmap that are capable of addressing marketing and accounting processes, data collection and collation, resources utilization, talent and skill acquisition, development and utilization as well as application of metrics for roadmap to future environmental management, objectives conceptualization as yardstick for performance evaluation and performance variance management as it communicates deviation from task accomplishment within time frame and gives priorities to programme execution and for strategy development in-view of marketing functions-Reibstein (2006), Ambler (2000), Kaplan & Norton (1996), Tellis (2006), Kusum, Lehmann & Neshin (2003), and McManus (2004).

In view of the requirements for marketing performance measurement, this work is interested in determining the level of preparedness of small and medium scale firms in Nigeria for performance measurement as condition for negative variance management and for positive contribution to macro economic development of the nation.

ANALYSIS

The hypotheses of this study are analyzed based on the data generated as follows:

Test 1: Evaluation of the impact of knowledge of importance of and the principle of marketing performance measurement on the adoption rate.

Data base of evaluation given test 1 is shown on table 1

Table1: Knowledge and Importance of Principle of Marketing Performance Measurement and Adoption Rate

Variables:	Knowledge Importance	Performance Rate Adoption
▪ Linkage between marketing and business	2.25	2.05
▪ Knowledge of the handling of metrics to affect changes in performance	2.05	1.95
▪ Knowledge of process of change and for investment		

on change process.	2.15	2.00
▪ Knowledge of need for well defined metrics and for investment son metrics	2.45	2.50
▪ Knowledge of reporting systems and their impediments on process	2.20	2.35
▪ Knowledge of marketing performance auditing process as means of aligning business to market and marketing	2.30	2.45
Total	**13.40**	**13.30**
Mean	**2.23**	**2.21**

Statement of Evaluation:
Poor knowledge of and importance of the principles of marketing performance measurement does not affect the adoption rate and level of marketing performance measurement principles

Decision Rule:
<u>Accept the projected statement:</u>
If and only if the value calculated is greater than the accepted mean of 2.5 on Likert ranking scale

<u>Reject the projected statement:</u>
If otherwise

Based on table 1, the knowledge of and importance of marketing performance measurement is valued at 2.23 and its impact on performance rate is valued at 2.21. The values calculated are below 2.50 accepted mean. Thus the decision is to reject the projected statement which is "poor knowledge of and importance of the principles of marketing performance does not affect the rate and level of marketing assessment principles adoption".

This confirms the idea that the lack of understanding of the knowledge and importance of marketing performance measurement management affects the level and rate of adoption of this principle among small and medium scale businesses in Nigeria.

To test for the significance of relationship between knowledge and importance of the principle of marketing performance measurement and level of its adoption, the pearson correlation co-efficient R represented by equation 1 is adopted.

$$rxy \quad = \quad \frac{\sum (x - \square)(y - \square)}{nS_x \ S_y} \qquad\qquad (1)$$

Where: x and y are each values of a and y
             $\square$ and $\square$ are mean values of x and y
             S_x and S_y are standard deviation of x and y
             n is the number of paired values.

Data for these computations is shown in table 2

Table 2: Required computations for calculating rxy

Knowledge & Rate Importance	Adoption	x -x̄	(x- x̄)	(y -ȳ)	(x- x̄)²	(x- x̄)(x- ȳ)
x	y					
2.25	2.05	0.02	.0004	-0.16	.0256	.0032
2.05	1.95	-0.18	.0324	0.26	0.676	.0468
2.15	2.00	-0.08	.0064	-0.21	.0441	.0168
2.45	2.50	0.19	0361	0.29	.0841	.0551
2.20	2.35	-003	.0009	0.11	.0121	.0033
2.30	2.45	0.07	.0049	0.24	.0576	.0168

∑x = 13.40   ∑x = 13.30   ∑(x -x̄) .0811   ∑(y -ȳ) =0.2911

(x-x̄)(x-x̄)= 0.142

x = 2.23   x = 2.21

Sx = 0.1273

Sy = 0.2412

Substituting for equation 1

$$rxy = \frac{\sum (x - \square)(y -\square)}{nSx \, Sy}$$

$$= \frac{0.142}{5(0.1273)(0.2412)}$$

$$= 0.93$$

The correlation of 0.93 as shown denotes a positive correlation between the knowledge of and importance of marketing performance measurement and the rate and level of adoption of the principles among small and medium scale businesses in Nigeria.

Computing based on pearson correlation for test of significance of the correlation, the student's 't' statistic represented by equation 2 is adopted.

$$t = \frac{r /n -2}{1-r} \qquad\qquad (2)$$

Where: r is the value of the pearson correlation
        n the number of paired observation

To conduct this test, the hypothesis is re-structured thus:

H0: μ = 0   (there is a linear relationship between knowledge of and importance of marketing performance measurement and its rate and level of adoption among small and medium scale businesses in Nigeria.

H0: μ ≠ 0   (there is no linear relationship between knowledge of and importance of marketing performance measurement and its rate and level of adoption among small and medium scale business in Nigeria.

Substituting for equation 2:

$$t \quad = \quad \frac{r \,/n - 2}{1 - r^2}$$

$$= \quad \frac{0.93 \,/6 - 2}{1 - r^2}$$

$$= \quad 6.17$$

The value of the 't' computed is 6.17. At 0.05 level of significance and 4 degrees of freedom (6-2), the critical value of the 't' statistic is given as 2.132. The conclusion is that the test is significant, thus rejected is the null hypothesis that there is no linear correlation between the knowledge small and medium scale business operators have and the importance attached to marketing performance measurement and the rate and level of adoption of the principles of this measurement.

Test 2: Evaluation of the impact of inefficiency or otherwise in the adoption of the principles marketing performance measurement management on the efficiency of small and medium scale business in Nigeria.

Projected Statement of Evaluation:
Inefficiency in the adoption of the principles of marketing performance measurement management does not have significant efficiency impact on the operations of small and medium scale businesses in Nigeria.

Decision Rule:
Accept the projected Statement:
If and only if the value calculated is greater than the accepted mean of 2.5 on Likert ranking scale.

Reject Projected Statement
If otherwise

Evaluation in test 2 is based on data in table 3.

Table 3: Adoption efficiency of marketing performance measurement management principles and efficiency rate of small and medium scale businesses in Nigeria

Variables of Study	Adoption Rate	Efficiency Rate of Small and Medium scale businesses
▪ Ability of metrics to drive decision and actions that improve marketing actions	2.15	2.20
▪ Alignment of metrics with business goal for impact	2.40	2.35
▪ Audit process for lifecycle of performance management	2.45	2.40
▪ Audit as tool for continuous improvement in programmes and process	2.40	2.42
▪ Effectiveness in capturing data in marketing process for critical gap determination	2.25	2.15
▪ Provision of timely and relevant insight as well as		

accurate data for performance management	2.30	2.45
▪ Incorporation of performance targeting skills process and technology optimization and strategic capabilities to drive change.	2.20	2.45
▪ Adoptability to new practices and trainings	2.50	2.35
Total	**18.65**	**28.77**
Mean	**2.33**	**2.35**

Based on table 3, adoption efficiency rate of marketing performance measurement management principles is calculated and valued at 2.33 while the rate of efficiency of small and medium scale businesses following adoption of marketing performance measurement principles is calculated and valued at 2.35 both on Likert 5 point ranking scale.

Rejected therefore is that "inefficiency in the adoption of the principles of marketing performance measurement does not have negative impact on the operations of small and medium scale businesses in Nigeria". This confirms ascertion that the poor level and rate of efficiency in the adoption of the marketing performance measurement has negative impact on the efficiency rate of small and medium scale businesses in Nigeria.

Testing for the significance of this impact, the pearson correlation co-efficient R represented by equation 1 is adopted.

$$ rxy \; = \; \frac{\sum (x - \square)(y - \square)}{nSx \; Sy} $$

Where: x and y are each values of x and y
                $\square$ and $\square$ are mean values of x and y
                S_x and S_y are standard deviation of x and y
                n is the number of paired valued.

Values as required for substitution in equation 1are derived based on table 4

Table 4: Principles and efficiency rate of small and medium scale businesses in Nigeria; required computation for calculating r_{xy}

Adoption of MPM Principles 'x'	Efficiency of Corporate Operations 'y'	x -x̄	(x-x̄)²	y -ȳ	(y -ȳ)²	(x- $\square$) (y -ȳ)
2.15	2.20	-0.18	0.0324	-0.15	0.0225	0.027
2.40	2.35	0.07	0.0049	0.00	0.0000	0.000
2.45	2.40	0.12	0.0144	0.05	0.0025	0.006
2.40	2.42	0.07	0.0049	0.07	0.0049	0.005
2.25	2.15	0.08	0.0064	0.20	0.0400	0.016
2.20	2.45	-0.03	0.0009	0.10	0.0100	0.003
2.30	2.45	-0.13	0.0169	0.10	0.0100	0.013
2.20	2.35	0.17	0.0289	0.00	0.0000	0.000
∑x = 18.65	**∑y = 18.77**		**(x-x̄)²**		**(y -ȳ)²**	**(x- x̄) (y -ȳ)**
x̄ = 2.33	**ȳ = 2.35**		**= 0.1097**		**= 0.0899**	**= 0.07**

S_x = 0.1249

S_y = 0.1133

Substituting for equation 1

$$rxy \quad = \quad \frac{\sum (x - \square)(y -\square)}{nSx \; Sy}$$

$$= \quad \frac{0.07}{8 \,(0.1249)(0.11133)}$$

$$= \quad 0.62$$

At correlation of 0.62 as calculated, positive correlation exist between adoption efficiency in marketing performance management and efficiency in operation of small and medium scale firms in Nigeria.

To test for significance of the established correlation, the pearson correlation R using 't' statistic shown as equation 2 is adopted.

$$t = \quad \frac{r \,/n -2}{1\text{-}r^2} \tag{2}$$

Where: r = the values of pearson correlation
        n = the number of pair observation

This test is based on the following as re-structured hypotheses:

H0: μ = 0 (there is a linear relationship between efficiency in the adoption of marketing performance management principles and efficiency of operations of small and medium scale businesses in Nigeria.

H0: μ ≠ 0 (there is no linear relationship between efficiency in the adoption of marketing performance management principles and efficiency of operations of small and medium scale businesses in Nigeria.

Note: MPM = Marketing Performance Measurement
*Substituting values for equation 2

$$t \quad = \quad \frac{r \,/n -2}{1\text{-}r^2}$$

$$= \quad \frac{.62 \,/8\text{-}2}{1 - .62}$$

$$= \quad 2.46$$

The value of the 't' computed is 2.46. At 0.05 level of significance and at 6 degrees of freedom (8-2), the critical value of the 't' statistics is given as 1.943. The test is significant, thus the null hypothesis is rejected which states that there is no linear correlationship between efficiency in the adoption of marketing performance management principles and efficiency in operation of small and medium scale businesses in Nigeria.

FINDINGS

The findings of this research work include:

o Small and medium scale businesses in various industrial sectors of Nigeria are finding it difficult to create and sustain linkage between marketing activities as sub unit of business with the entire business, thus they find it difficult to establish the impact of marketing on business corporate goal actualization-Lyon (2010).

o Most firms studied show paucity in ability at tracking marketing metrics that are related to progrmames monitoring and more in using the metrics as basis for effecting changes that affect corporate progress.

o Firms studied show gross inability at managing changes, especially given lack of process and well defined metrics as well as lack of reporting systems which challenge progress.

o These firms show lack of appreciation of the role of performance audit in the successful implementation of marketing performance measurement programmes especially in the long run, hence formal audit processes that ensure alignment of marketing activities and business as a corporate venture is relegated to the background.

Based on the foregone, most marketing organizations in Nigeria among the small and medium scale class do not have the ability to influence marketing performance drawing from the benefits of adopting the use of metrics and dash boards. Thus are challenges in their efforts at developing and executing systematic approach to marketing performance management – Patterson (2010), thus lack proper infrastructure to support the implementation of marketing performance management programs, hence the strive to link activities to business result has always been challenges. Data, analytics, measurement and process initiative required to execute marketing performance measurement are grossly unavailable.

DISCUSSION OF FINDINGS:

o Small and medium scale firms in the industrial sector of Nigeria are challenged in their efforts at building metrics for informative and drive marketing effectiveness and efficiency. Based on these challenges, chosen metrics are deficit as drive decision variables thus actions for improved marketing results are poor. Small and medium scale businesses in the industrial sector of Nigeria should be encouraged at developing metrics that show real reflection of quantifiable outputs and values in response to change efforts.

o Required analytical skills must aid the corporate marketing units to put in place devices that will aid the creation of alignment between marketing activities and business goals for acceptable impact creation, hence marketing metrics should be considered beckons as well as catalysts for marketing performance adjustment in response to the detects of drives of business results.

o Marketing activities in the small and medium scale industrial sectors of Nigeria should be based on continuous audit rather than just as a one-time activity; hence the lifecycle of performance management is considered in turn, risk reduction marketing activity, and generally, marketing activities are better focused. Marketing audit should be considered tool for the improvement of processes and programmes as such should make room for the realization of activities that generate changes along new processes and serve as source of input for dynamic initiatives for marketing excellence. Interim and ad hoc marketing audit exercises should also be considered relevant for the optimization of marketing performance activities and for sustaining marketing lead position as a unit of the business,

managed based on system 'concept' principle.

o Marketing performance evaluation and assessment for process improvement are not based in the use of appropriate data among most small and medium firms in Nigeria. Virtually all the firms' studied still adopt manual methods of data acquisition and management. The use of CRM, service providers and soft ware as system based means of data acquisitions are yet to be fully appreciated. Based on this, these firms experience difficulties in designing and executing activities of data collection and collation. Given this, Patterson (2010) advocates that organizations should map out how information is captured in their marketing process and determine critical gaps in the metrics architecture that can be closed through process change and /or enhancing systems.

o The use of manual methods of data generation, collection and collation for the determination of results of marketing activities is prone to errors and faulty analyses, thus give rise to results that are considered mirage; hence adjustments in response to marketing efforts yield elusive results. Most firms in the small and medium enterprises category of the industrial sectors of Nigeria are yet to adopt automatic performance metrics for marketing management activities, hence personnel are not responsive to quick and accurate demands for data. Activities are reactive rather than pro-active action oriented. Marketing experts opine that solution to the provision of timely and relevant insight for performance management aid marketing focus on the consolidation and analysis of data that are vital for the overcoming of the barriers in the aggregation of data from disparate systems and sources-Patterson (2010). Based on this, Kotler and Keller (2010), Kotler and Armstrong (2009), Marketing Operations Partners (2006); Seggie, Cavusgil and Phelan (2007), Moham Madian and Dehabadi (2012) and Synchria (2012) advocate for the use of dashboards for effectiveness, based on the provision of complete and holistic protocol detail of marketing activities within defined period or on long term basis.

o Firms in the small and medium enterprises category of the industrial sector of Nigeria are still finding it difficult to creating linking marketing initiatives between marketing as a sub system of business with other areas or the entire body of business. These firms do not have operationaliased processes commonly located in the marketing sub system of the business system, thus marketing functions do not align with required analysis variables for efficiency and effectiveness in performance management.

o For efficiency in the management of marketing performance, it is important that the marketing operations' role be expanded among these small and medium scale businesses. This should include acquisition of skill for performance targeting, process and technology optimization, and strategic capabilities to drive changes.

o Personnel of the small and medium scale businesses in Nigeria do not possess the required skills for the adoption of marketing metrics. This is as a result of paucity of investment in personnel training, resulting from difficulties in capital formation that is attributed to the low and poor level of per capita income-World Development Report (2010) and National Bureau of Statistics (2012). For efficiency in marketing performance management, firms in the industrial sectors of Nigeria should invest in personnel training.

CONCLUSION

Marketing and its activities in the small and medium scale organizations' category in Nigeria still falls below expectations in expressing its contributions to corporate goal actualization as index of macro economic development based on its inadequacies in the establishment of processes, metrics definitions and adoption of tools for adequacy and ease in explanation of operations results. This accounts for the call for investment in marketing performance management and measurement as activities priority area of business, as it provides desired insights from metrics and dashboards for performance evaluation, corporate activities planning and appropriate thrust as actions determination in the midst of alternatives, and for efficiency and effectiveness.

RECOMMENDATIONS

The activities of small and medium scale businesses in Nigeria may significantly impact economic development based in the ability of these firms to create linearity in relationship between marketing activities and business functions and output based on the use of acceptable metrics of evaluation of performance, for the detection of deviations in standard and corrections there-to. Based on this, this work recommends as follows:

o Small and medium scale businesses in the industrial sectors of Nigeria need to be managed based on well defined set of strategies that must be tailored in consonance with the macro environmental variables. These strategies must be goal focused, time based and specific in initiatives.

o Organizational goals must be practical, attainable and measurable. Thus the organizations must indentify key performance indicators and tie goals directly to the individual content assets created and metrics for analysis.

o Small and medium scale businesses as prelude to marketing performance measurement and management activities efficiency must build metrics as evaluation indices for information and drive marketing effectiveness and efficiency. These metrics should be capable of tracking marketing activities as investments in volume and value and relate same with outputs as quantifiable variables, for adequacy of adjustments in favoruable variances between standards and actual performances, for better drive to business outcomes.

o It is important that firms in addition to regular, complete and continuous marketing activities and performance audit, to be involved in interim and ad hoc audit exercise as means to efficiency in performance lifecycle management as well as for eliminating risk of marketing discordance activities in relations to business goals and for the management of conflicts in marketing activities' results.

o Organizations as a matter of necessity should develop and sustain electronic means of data capturing especially based on CRM, service providers and software-as-to-service in their marketing processes. This is important for ease and efficiency in the determination of performance gaps in the marketing metrics; and for gap closure through processes and changes and or enhancing systems.

o Emphasis should be placed on the use of automatic reporting devices for the elimination of errors associated with manual calculation of marketing results; and challenges in adjusting to required marketing efforts. Automating reporting places performance metrics in the hands of executives, market management, and marketing personnel for quick and accurate

access, re-active and pro-active marketing actions-Patterson (2010).

o Efforts is now more needed to extend marketing activities for linkage effect on businesses based on initiatives spurred and accurate metrics based data. Hence marketing activities should be operationalised in processes. This therefore calls for expansion in marketing operations' role and skill set, inclusive of performance targeting skill, process and technology optimization as well as strategic capabilities to drive changes.

o Small and medium scale businesses in Nigeria should invest in personnel training especially in the area of marketing performance management as means of repositioning marketing for efficiency and effectiveness, for contributions to corporate success as sub-system of business and for macro economic development.

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Deliberative Capacity of Individuals – Dimensions and Determinants

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ABSTRACT

This essay deals with an area of deliberative democracy where research has hitherto been limited: individual deliberative capacity. The main objective of the study is to define and create a concept and a measure of deliberative capacity of individuals; in addition, some determinants of deliberative capacity are examined. The purpose of and the very meaning of deliberative democracy, and what deliberation requires from the citizen constitute the point of departure in developing the dimensions of deliberative capacity. The aim is to capture the cognitive and attitudinal characteristics that are beneficial to deliberation, such as respectful, reciprocal, tolerant, empathic and open-minded; that is, characteristics that largely define a "deliberative citizen". Three dimensions are elaborated, labeled generalized trust, equality and other-regarding ability. In order to examine the concept empirically, the dimensions are transformed into an index of deliberative capacity by means of survey data from the European Social Survey 2008. The regression analysis suggests that education is the most important socio-demographic variable; women also have more deliberative capacity than men. Non-institutionalized political participation clearly surpasses electoral and associational activity as a determinant of deliberative capacity. Naturally, political interest enhances capacity, whereas internal efficacy is of modest importance.

Keywords: deliberative capacity, deliberative democracy, generalized trust, equality, other-regarding ability

INTRODUCTION

At the end of the last century, there was a deliberative turn in democratic theory, and by now deliberative democracy has become the most active field of political theory in its entirety (Dryzek, 2007: 237). While there is a rich theoretically oriented literature on deliberative democracy, systematic empirical research on different aspects of deliberation has lagged behind. Today, however, as Dryzek points out, "…research on deliberative democracy is at the cutting edge of the integration of political theory and empirical social science" (2007: 250). For instance, several studies have dealt with the effects of deliberation, notably changes in participants' opinions and knowledge (e.g. Luskin et al., 2002). Some researchers have studied the dynamics of deliberative processes and the quality of deliberation (e.g. Steenbergen et al., 2003), whereas others have focused on the civic impact of deliberation (e.g. Morrell, 2005; Mendelberg and Karpowitz, 2007; Grönlund et al., 2010). Moreover, there are studies that concentrate on what kind of people take part in discursive participation, on the one hand, and who is willing to deliberate, on the other (Jacobs et al., 2009; Neblo et al., 2010).

This article deals with the deliberative capacity of individuals – an area of deliberative democracy where the theoretical as well as the empirical research is still limited. The paper aims at making a contribution to both, yet the main purpose of the study is to define and create a concept and a measure of individual deliberative capacity. The concept of deliberative capacity that is developed consists of three interrelated dimensions that embody essential cognitive and attitudinal characteristics, labeled *generalized trust*, *equality* and *other-regarding ability*. An index of deliberative capacity, consisting of seven values, is constructed by means of survey data (European Social Survey). Having conducted statistical bivariate analyses for deliberative capacity as well as the three dimensions separately, OLS regression analysis is applied when determinants are examined.

Deliberative capacity is actually a term designed for societies rather than individuals. The term was introduced by Dryzek who defines it as "the extent to which a political system possesses structures to host deliberation that is authentic, inclusive and consequential" (2009: 1382). *Authenticity* means that deliberation has to induce reflection without coercion, claims have to be connected to general principles, and the process has to be reciprocal. Domination via propaganda, manipulation, threats, indoctrination, deception, expressions of mere self-interest, and the imposition of ideological conformity needs to be absent (Dryzek, 2000: 8). *Inclusiveness* means that a wide range of interests, opinions and preferences has to be taken into consideration. Without inclusiveness, there may be deliberation but not deliberative democracy. Thirdly, a deliberative process that is *consequential* has an impact on collective decisions and social outcomes.

However, there are some important elements of deliberation – other-regarding ability in particular – that cannot really be captured and measured at the societal level. A society is not other-regarding but the individuals in society may be. Therefore, without depreciating the model of deliberative capacity described above, we need to examine deliberative capacity at the individual level. Individual deliberative capacity is to a considerable extent something else than the deliberative capacity of a political system. The individual deliberative capacity is what each participant brings into a deliberative discussion, and it affects the quality of deliberation that takes place among the participants, whereas societal deliberative capacity is concerned with the public and the empowered space, transmission and accountability between these two spheres, and the extent of decisiveness in the whole system.

Deliberative Democracy

Deliberative democracy is a distinctive interpretation of democracy where free and public reasoning among equals is central to the process of decision-making. A major contrast to representative (aggregative) democracy is that the matter of results being reasonable must play a role in the process itself (Cohen, 2007: 220-21). The opinion that eventually forms the basis of decision-making is developed through discussion and respectful interaction between equal individuals in public (Barber, 1984; Gutmann and Thompson, 1996). In a deliberative process, by contrast with aggregative democracy, opinions, values and preferences may change and eventually result in a common agreement. Correction, revision and transformation of opinions as well as respectful and mutual argumentation constitute the basis of the deliberative process (Rosenberg, 2007).

In a free and open conversation, different proposals are reflected upon and opinions may be transformed for the sake of the common good. According to most theorists, political equality and the nature of the democratic dialogue are defining characteristics of deliberative

democracy. All opinions need to be pondered over, the process must not be manipulated, and mutual understanding is a primary goal (Smith and Wales, 2000; Smith, 2005). A process where everyone justifies his/her own political views and considers the arguments of others is believed to transform individual values and preferences towards a more collective understanding – therefore, decisions based on public deliberation should be perceived by all participants as more legitimate, rational and fair than decisions based on individual preferences (Rosenberg, 2007; Grönlund et al., 2009). Deliberative theorists argue that deliberative democracy to a greater extent than other forms of democracy realizes basic democratic values such as autonomy and equality. Taken together, it is believed to improve the quality of decisions and to enrich democracy (Stokes, 1998).

Empirical Research With Relevance To Deliberative Capacity
In the volume Talking Together, Jacobs, Cook and Delli Carpini (2009) analyze how and why citizens talk to each other, who is actively involved in the conversation, and what difference it makes. The crucial point is whether citizens are capable of self-government. On the basis of new empirical data, in settings ranging from one-on-one conversations to more formal gatherings, the authors find that in as much as eight out of ten Americans regularly take part in public discussions about important political, economic and societal issues. They conclude, on the one hand, that discursive participation is more common than previously assumed. The study challenges the notion that the crisis of democracy is attributed to lazy, withdrawn and incompetent citizenry, as well as the conception that public deliberation is elitist, exclusionary and politically insignificant. On the other hand, they also conclude that public deliberation falls short of the expectations of its most enthusiastic promoters concerning universal, representative and rational communication and outcomes leading to agreement and politically efficacious citizens. Nevertheless, their study shows that ordinary citizens to a great extent have the capacity to engage with one another about demanding policy issues.

Himmelroos (2012) has conducted a study of the activity and discourse quality among deliberators, based on a deliberative mini-public experiment held in Turku, Finland 2006. Regarding the discourse quality, a modified version of the Discourse Quality Index (Steiner et al. 2004) – originally developed as a technique for measuring the deliberative quality in parliamentary debates – is applied. The modified index consists of the following categories: level of justification, content of justification, respect, and reciprocity. These dimensions capture the coherence of arguments, the reason behind one's argumentation, how empathic and considerate participants are of each other, and how participants treat arguments that contradict their own views. Accordingly, discourse quality is to a great extent concerned with the capacity to deliberate. The determinants examined include some socio-demographic characteristics, associational activity, knowledge, political efficacy and opinion intensity. Himmelroos finds that elder, male and highly educated citizens take more actively part in the discussion. However, when the other determinants are controlled for, only the effect of gender remains significant among the socio-demographics. Internal efficacy also has an impact on activity.[1] Concerning discourse quality, age is the only relevant socio-demographic variable. Younger participants display better discourse quality, whereas elder people to a lesser extent motivate their own beliefs and make reference to the common good or the demand of others. Knowledge also enhances the quality of deliberation.

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[1] By contrast, according to one study, participation in a deliberative discussion does not increase internal efficacy (Grönlund et al 2010).

In an article entitled "Who Wants to Deliberate – And Why?" Neblo, Esterling, Kennedy, Lazer and Sokhey (2010) examine who is willing to deliberate and its determinants, using survey data from the US. One distinguishing feature of deliberation compared to traditional forms of political participation is that it is cognitively effortful. Therefore, in addition to *demographic*, *resource* and *engagement* determinants, which are derived from research on traditional political participation, the authors include correlates of motivation that are associated with the kinds of demands typical of deliberative participation. *Conflict avoidance* is a feature that is assumed to decrease the propensity to deliberate, whereas the personality variables *need for cognition* and *need to evaluate* should be positively related to deliberative participation. *Political efficacy* should likewise be a prerequisite of the willingness to deliberate, because deliberative forums are designed to be opportunities to reduce feelings of disillusion and powerlessness. *Political interest* and *need for cognition* are the most important antecedents of motivation. *Conflict avoidance* and *need for judgment* are also of some relevance, whereas efficacy is not significantly related to hypothetical willingness to deliberate. However, in an analysis based on another survey where citizens were offered the opportunity to participate in an online deliberative forum with their members of Congress to discuss immigration policy, political efficacy is one of the main determinants. The authors also find that those less likely to participate in traditional party-based politics are most interested in participating in deliberative politics.

There is a difference between the ability to deliberate and the willingness to deliberate, even though they may be closely related. Some individuals have the cognitive prerequisites to effectively participate in a deliberative process but may lack the motivation to do so, while others would like to take part in deliberative activities but may be incapable of discussing politics on equal terms with others, interpreting new facts with an open-mind, and being other-regarding and tolerant towards people that are different and/or have different points of view. We may assume that many people who to a great extent share the values that define deliberative democracy also have the willingness to deliberate; on the other hand, it is obvious that the capacity to deliberate is not equivalent to the propensity to deliberate. Attitude may be related to deliberative capacity as well as deliberative propensity. A positive attitude towards discussing political matters is, of course, a precondition for the willingness to be part of a deliberative process. In this study, however, a positive attitude is foremost associated with particular attitudinal characteristics, such as being tolerant and open-minded, which are essential ingredients of the individual capacity to deliberate.

One problem with regard to empirical research on deliberative democracy is the difficulty in combining normative theory with empirically testable theories. Too often theorists and empiricists have talked past each other (Thompson, 2008: 498). As Mutz says, "How can we take what has been, by its origins, a normative theory and turn it into an empirically testable theory?" (2008: 522). She advocates transformation of deliberative theory into middle-range theory by replacing vaguely defined entities with more concrete, circumscribed concepts, and by testing theoretically and empirically grounded hypotheses about specific associations between these concepts. A "middle-range" approach can be described as a means of bridging the gap between theory and empirical evidence (ibid.).

Furthermore, deliberative theories often involve a great deal of conceptual ambiguity as to what should qualify as deliberation. They frequently conflate defining criteria of deliberation and its beneficial consequences; thus the independent variable is defined in terms of its hypothesized effects. Deliberative theorists often seem to assume that good deliberation will

automatically result in good things such as greater levels of trust, public-spirited attitudes, opinion consistency, faith in democratic processes, greater interest in political participation, and even better citizens. This circularity makes it impossible to empirically test the allegedly positive claims of deliberative theory (Mutz, 2008: 527). I believe that to create a measurable concept of individual deliberative capacity, we need to start with the meaning and purpose of deliberation and what it requires from the deliberator.

The Purpose Of Deliberation
True deliberation is assumed to produce several beneficial results, many of which remain to be proved. If public deliberation is appropriately empathic, egalitarian, reciprocal, open-minded and reason-centered, it is expected to lead to a variety of positive democratic outcomes (Mansbridge, 1983; Barber, 1984; Cohen, 1989; Warren, 1992; Benhabib, 1996; Gutmann and Thompson, 1996; Fishkin, 1997). Real deliberation will lead to a more empathic view of other people, a better-informed perspective on common problems, and a broader understanding of one's own as well as others' interests (Mendelberg, 2002: 153). Citizens will become more involved in civic affairs (Barber, 1984), and tolerance for opposing views will increase (Gutmann and Thompson, 1996). Political decisions will be more considered and based on relevant reasons and evidence (Chambers, 1996), the community's social capital will increase (Putnam, 2000), and satisfaction with the democratic process will be enhanced when people feel that their government truly is "of the people" (Fishkin, 1997). As Mendelberg summarizes, "deliberation is expected to lead to empathy with the other and a broadened sense of people's own interests through an egalitarian, openminded and reciprocal process of reasoned argumentation" (2002: 153).

Gutmann and Thompson (2004: 3) argue that the most important characteristic of deliberative democracy is its reason-giving requirement. Reasons should appeal to principles of fair terms of cooperation and express the value of mutual respect. Moreover, reasons given in a deliberative process should be accessible to all the citizens to whom they are addressed. Thirdly, the deliberative process should aim at producing decisions that are binding for some period of time. Their fourth characteristic, neglected by most of its proponents, is that deliberative democracy is dynamic (2004: 3-6). Moreover, they identify four aims of deliberative democracy: (1) to promote the legitimacy of collective decisions; (2) to encourage public-spirited perspectives on public issues; (3) to promote mutually respectful processes of decision-making; (4) and to help correct mistakes in collective actions that stem from incomplete understanding (2004: 10-12).

In a normative sense, Parkinson (2006: 3-4) maintains, deliberative democracy implies reasoning between people in a public environment. Moreover, democratic deliberation comprises binding collective decisions, responsiveness to reflective public wishes, and the political equality of all participants. In the light of these definitions, deliberative capacity becomes a question of what is required from the citizens in a deliberative process. If participants are to persuade others and find "the better argument", all arguments must be made in public so that preferences that are vague, unreflective and ill-informed can be transformed into more firm, reflective and other-regarding ones (Cohen, 1989). Such transformation presupposes, first, that participants are communicatively competent; i.e. they can understand and critically estimate the arguments of others, and make well-founded arguments of their own. Secondly, participants have to be willing to be persuaded, and to have their preferences challenged and transformed in the face of a better argument. In other words, they must be able to set aside strategic concerns and behavior in the pursuit of their own preferences if faced by more reflective, informed and other-regarding arguments (Dryzek, 2000: 2; Parkinson, 2006: 4).

Delli Carpini, Cook and Jacobs (2004: 328) put forward that the capacity of citizens to effectively participate is central to the democratic potential of deliberation. Some critics argue that the majority of citizens lack the capacity and/or opportunities to effectively participate in public deliberation (2004: 321). Advocates of deliberative democracy, by contrast, believe that citizens do have the capacity to efficaciously deliberate, provided that deliberative institutions are properly designed. Regardless, we may with good reason assume that the deliberative capacity varies between citizens.

In a conference paper from 2007, Zsuzsanna Chappell provided a critical assessment of the preconditions for introducing large-scale deliberative reform to existing democracies, distinguishing three interrelated levels: individuals, society and political institutions. Two broad areas at the individual level were addressed: ability and motivation of an average citizen to take part in deliberative procedures. This is similar to the distinction between deliberative capacity and deliberative propensity that was described earlier. Chappell emphasized that deliberation is a demanding activity; participants need to perform a multitude of cognitively complex tasks. Individuals have to understand arguments, they must be capable of making well-reasoned arguments, and they must be open to new arguments. They have to be able to interpret new facts and arguments correctly and they need the ability to evaluate them critically. Chappell maintained that different people have different abilities to perform these tasks.

In addition to cognitive capacities, individuals need certain attitudes. First of all, deliberating citizens need to be tolerant towards each other; they have to give equal respect to arguments that differ from their own. The most prominent of attitudes, according to many, is being other-regarding (e.g. Elster, 1986; Mansbridge, 1990). Other-regarding is an unselfish, disinterested attitude that attaches great importance to the welfare of other members of society. Chappell maintains that an other-regarding attitude rarely comes naturally to people, and it may well be the case that it will, for most people, develop as a result of deliberative practices. Tolerance, on the other hand, should be there right from the beginning; a tolerant attitude may hopefully be sufficient to get deliberation started in the first place. Related to a tolerant attitude is the requirement of participants to be open to different ideas. Gratifyingly, there is evidence from deliberative polls, meetings, and experiments that citizens in established democracies to a great extent already possess sufficient levels of tolerance and openness needed in deliberative discussions (e.g. Fishkin et al., 2002; Gastil and Levine, 2005).

A CONCEPT OF DELIBERATIVE CAPACITY
Three Dimensions of Deliberative Capacity
Deliberative democracy is associated with certain attributes, values and abilities, such as reason-giving, egalitarian, reciprocal, tolerant, respectful, empathic, reasonable, other-regarding and open-minded. These are characteristics that individuals have more or less of; citizens that to a great extent are distinguished by these characteristics have better prerequisites for efficaciously acting in a deliberative discussion than those who to a lesser extent share these features. These cognitive and attitudinal characteristics may be captured with three dimensions, called *generalized trust*, *equality* and *other-regarding ability*. The dimensions are elaborated below.

Generalized trust
Trust consists of a cognitive as well as an emotional component. The cognitive element is based on estimating the risks of potential negative consequences, whereas the emotional aspect is

manifested in the desire to trust another because of a feeling of security, although there is potential for negative consequences. To trust is to accept some share of risk for ill will of others in exchange for the benefits of cooperation (Bäck, 2011: 30-31; McKnight and Chervany, 2011; Warren, 1999: 1). To simplify, trust is the expectation of another actor's future reliability (Rothstein, 2003: 111). There are different kinds of trust, however. Although it appears logical to only trust people that you know, trust is more valuable and beneficial when it can be applied to people you do not know. It has been argued that there is a moral community spirit in the human nature which makes it easier to cooperate with foreign people, even those who belong to a different culture and religion (Uslaner, 2002: 1-2). Moral trust does not presuppose that all people are reliable under all circumstances; rather, it requires the assessment that most people are trustworthy most of the time (2002: 21-22).

Generalized trust, in particular, is regarded as important to society for several reasons. It is based upon morals as well as our collective experiences; a general conviction of the benevolence of human nature. The differences between generalized and moralistic trust is that the former goes up and down, even though it is basically stable, whereas the latter is a more enduring value. The central idea that distinguishes generalized trust from particular trust is the width of one's moralistic community spirit (2002: 26-27). Generalized trust is concerned with bridging social capital as opposed to bonding social capital, which is based upon particular trust (Putnam, 2000). Bridging social capital implies networks and relationships that connect individuals from different social, economic and cultural groups. Zsuzsanna Chappell stresses the importance of bridging social capital in deliberative democracy, since deliberation requires that people leading different lives and holding different viewpoints get together and make decisions together for the sake of the common good.

Generalized trust is to have faith in people who are different from you. Usually, we trust people like ourselves, especially persons we know well. In a deliberative discussion, however, we are interacting with people that we do not know on a personal level, and, moreover, people who may be different from us in several ways. One basic precondition for acting and cooperating with other people on an equal level is to believe that their intentions are good and that they are not guided by self-interest or trying to manipulate the deliberative process in their own favor. Believing that people in general can be trusted is a leap of faith, a moral decision that we should trust other people. It is an expression of a belief in a common core of values between all people.

Equality
One of the most profound principles in a democracy is equal consideration of the preferences and interests of all citizens. Here we may call to mind the first principle of justice by Rawls, arguably the foremost representative of the liberal perspective of deliberation: "Each person is to have an equal right to the most extensive total system of equal basic liberties compatible with a similar system of liberty for all" (Rawls, 1971: 250). All citizens must be equal in their basic liberties and political rights such as voting, political participation, freedom of speech and equality under the law.

Naturally, equality is also a defining argument of deliberative democracy: the opinion that eventually forms the basis of decision-making, or recommendation to policy-makers, is developed through discussion between free and equal individuals. The deliberation must be guided by the principle of equality. It should be observed that it does not imply equality of resources; if that were a necessary condition, deliberative democracy would fail from the beginning. Rather, it is about equal participation (Thompson, 2008: 509). Democratic deliberation is an ongoing process of mutual justification where citizens are expected to give

reasons to one another (Gutmann and Thompson, 2004: 3, 126). When deliberating, individuals should offer reasons that can be accepted by others who are similarly interested in finding reasons that are acceptable to others – thus, citizens should pursue a kind of political reasoning that is mutually justifiable, which, in turn, presupposes that they approach each others on equal terms. The principle of equal participation in the reason-giving process must be respected, although participants may be unequal in power and prestige (Thompson, 2008: 504-05). Without willingness to give others equal opportunities, the demand of mutual respect cannot be met and no preferences are challenged in the face of better-informed arguments. Policy decisions or suggestions that are perceived as legitimate, rational and fair will hardly be made.

Even when deliberative disagreement prevails, reciprocity presupposes that individuals try to seek fair terms of cooperation among equals (Gutmann and Thompson, 1996: 53). The value of mutual respect lies at the core of deliberative democracy; it is a form of agreeing to disagree, and it requires a favorable attitude towards the persons with whom one disagrees (1996: 79). Fung (2007: 167) puts forward that deliberation should be reasonable in the sense that individuals respect the claims of others and constrain the pursuit of their own self-interest. Also, the criterion of equality requires that the individual is capable of putting oneself in another place and recognizing the differences between oneself and others (Mansbridge, 1999: 225). When citizens deliberate on equal terms, they are free to develop their political capacity as well as utilize the political capacity of others.

Other-regarding ability
Jacobs et al. argue that toleration of difference is a main component of the deliberative experience (2009: 69). For one thing, the ability to understand different people presupposes some degree of faith in people who are different from oneself. Generalized trust is not enough, however. It requires power of insight, respect for other people, internal reflection, and an open-minded attitude towards differing points of view. The valuable attitude of being other-regarding, i.e. to place high value on the well-being of others and the welfare of the community at large, as opposed to pursuing self-interest, is central to deliberation. Other-regarding capacity involves a fundamental respect for other people and their points of view – without respect and respectful consideration of other people's arguments, the bridging of different views, which is one of the main purposes of deliberation, is impossible. A person with other-regarding capacity is able to discern the difference between respectable and merely tolerable differences of opinion, and ready to change his/her mind or position if confronted by a better-informed point of view. In fact, one purpose of deliberation is to get a better-informed perspective on common problems and a broader understanding of one's as well as others' interests. Individuals in the majority of a deliberative setting need to respect and be interested in the perspectives of the individuals in the majority and new information presented by them. Being reasonable does not only imply that one has good reasons for one's actions; it also encompasses an open attitude towards objections and alternative suggestions, and willingness to reevaluate one's position in the light of new information (Chambers, 1996). It has been argued that individuals confronted by a greater diversity of ideas tend to be more open-minded, to learn more from other people, and to engage in a deeper consideration of issues (Eliasoph, 1998).

Deliberating with people that are different makes great demands on the communicative competence. Deliberative communication implies that particular interests of individuals and groups are related to more universal principles (Dryzek, 2000: 68). The key deliberative virtue

in this regard is reciprocity: communicating and presenting arguments in terms that others can accept. The primary function of reciprocity is to regulate public reason (Gutmann and Thompson 1996: 52-56). It is one of the leading principles of deliberation, prescribing accommodation based on mutual respect. Reciprocity is manifested in the desire among individuals to justify their claims to those with whom they cooperate. It represents the capacity to seek fair terms of social cooperation among equals, even in the face of deliberative disagreement. Therefore, in addition to logical justification, arguments should have intrinsic values that make them convincing and attractive to others (Cohen, 1989). Being faced with a different perspective may bring about a modification of one's original standpoint (Bohman, 1996: 63). Hence, the ability to communicate with people that are different in a constructive manner is invaluable in a deliberative setting.

None of these three dimensions embodies the concept of deliberative capacity alone; rather, each dimension serves a purpose. Equal treatment and opportunities for all is not similar to having trust in people that are different. The fact that a person appreciates equal opportunities for all and thinks that all people should be treated equally does not necessarily mean that he/she has faith in people that are different. While the ability of being other-regarding probably requires the value of considering all people as equal, the opposite is definitely not a necessary condition, and one may trust in people that are different without being able to place high value on the welfare of others. Simultaneously, while being conceptually and theoretically distinct, they are also related to one other. To believe that most people can be trusted involves, to a considerable extent, a belief that all individuals are equal – not only those that we know but also those that we do not know and people that are different from us. Similarly, the ability of being other-regarding requires a fair share of belief that all people should be treated equally and given equal opportunities as well as a good proportion of trust in those that we are cooperating with.

Index of Deliberative Capacity

Moving from normative theory to empirical science, the crucial task is to find survey data that capture these dimensions. Dryzek (2005) has argued that standard survey methods cannot capture the inherently holistic, social and dynamic elements of deliberative opinion formation. Opinion surveys represent a culture inimical to deliberative democracy. However, in Neblo et al.'s study of the propensity to deliberate which was presented earlier, the research team claims that Dryzek's critique runs the risk of being overly dismissive (Neblo et al., 2010: 569). In the absence of more refined methods of measuring the deliberative capacity of individuals, we have to rely on survey data. This is particularly so when we need data that is comparable with regard to individuals in different countries.

Moreover, survey data has also been applied in some related areas such as political trust, political knowledge and, in particular, social capital. While political trust and the political knowledge of citizens may be determined by means of asking straightforward questions, the social capital of an individual is a more complex phenomenon. Still, survey data has been frequently applied in measuring the social capital of citizens and even countries (e.g. Putnam, 2000; Norris, 2002; Rothstein and Stolle, 2003). In empirical studies, social (generalized) trust and associational activism have almost been conventional elements of social capital; some studies also include social relations as a component of social capital. For example, Bäck (2011) creates an interaction term of these three variables in a study of social capital and political participation, employing data from ESS 2002/2003.

The data exploited in this study are taken from the European Social Survey Round 4 – 2008, since it provides indicators of the dimensions of deliberative capacity elaborated above. The

measure of deliberative capacity is made up of three variables/questions in the data set (see Appendix for details). These variables are recoded into a three-grade scale, corresponding to high, medium and low level of deliberative capacity. Thereafter, the components are added into a single index of deliberative capacity on an ordinal scale that ranges from 0 to 6. The variables/questions are:

Generalized trust: *Most people can be trusted or you can't be too careful in dealing with people*
Equality: *It is important that people are treated equally and have equal opportunities*
Other-regarding ability: *It is important to understand different people*

The ESS4-2008 consists of 29 countries – however, only citizens living in polities with considerable experience of democracy are included. According to the Freedom House ratings, Russia is an authoritarian state, Turkey was only partly democratic in 2008, and Ukraine had been rated as free only since 2005. Consequently, these three countries are excluded from the analysis.[2]

To begin with, the consistency between the indicators of deliberative capacity is explored. As mentioned earlier, the dimensions are interrelated but at the same time each one of them serves a distinct purpose. Index construction requires some internal consistency; that is, the indicators that the index consists of have to be rather highly correlated (Mastekaasa, 1987: 170). Cronbach's Alpha is 0.334 which suggests that there is some lack of consistency; the variable that measures generalized trust correlates weakly with the other two. However, since the purpose of the study is, first and foremost, to develop a concept of deliberative capacity, generalized trust will not be removed from the empirical analysis. Rather, in addition to the index, each dimension will be analyzed separately in order to reveal differences between them. Conceptually, generalized trust is related to the other two dimensions; it is therefore suspected that the inconsistency is due to the operationalization of the dimensions. The questions as well as the response options are similar for the second and the third dimension, whereas they differ with regard to generalized trust.

Table 1 Index of deliberative capacity of individuals. Frequencies.

Index	Frequency	Valid Percent
6	1 933	4.0
5	5 069	10.5
4	9 353	19.4
3	11 450	23.8
2	11 061	23.0
1	6 660	13.8
0	2 607	5.4
Total	48 133	100.0
Missing	1 846	
Total	49 979	

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[2] Respondents from the following 26 countries are included in the study: Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Latvia, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom.

In Table 1, the frequency of the index is reported. The variable is normally distributed, much due to the fact that the cut-off points between high and medium as well as medium and low capacity on each dimension created categories of more or less equal size. 4 percent of the respondents score 2 on all dimensions, i.e. they have the highest possible value on the index of deliberative capacity. The median value 3 is the most frequent one, and close to the mean 2.86. The standard deviation of the index is 1.49.

Determinants Of Deliberative Capacity
Now we are ready to proceed with the second part of the study, i.e. examining determinants of individual deliberative capacity. Three different kinds of determinants are included: socio-demographics, civic and political participation, and political competence. Beginning with the socio-demographic approach, many scholars have pointed out that individual characteristics such as class, education, age, gender and race constitute externally induced inequalities that affect the autonomy and capacity of the participants in a deliberative context (e.g. Mansbridge, 1983; Gutmann and Thompson, 1996: 132; Young, 1996; Rosenberg, 2007: 13). Particularly, as in other forms of political participation, education is likely to influence the ability of citizens to deliberate (Verba et al., 1995). Education gives people more sophisticated reasoning skills, and provides them with cognitive and attitudinal tools to appreciate the common good and tolerate different people. On the whole, high education is likely to make for more empathic and cognitively competent deliberators (Nie et al., 1996).

Table 2　Socio-demographic characteristics, index of deliberative capacity and index dimensions. Mean values.

	Deliberative capacity	Generalized trust	Equality	Other-regarding
Age				
15-29	2.86	1.03	1.04	0.79
	(9 521)			
30-44	2.87	1.02	1.04	0.81
	(12 140)			
45-64	2.88	1.00	1.07	0.81
	(16 110)			
65-	2.79	0.95	1.06	0.79
	(10 205)			
	***	***	*	*
Gender				
Female	2.92	0.98	1.10	0.85
	(26 050)			
Male	2.78	1.03	1.00	0.75
	(22 066)			
	***	***	***	***
Education				
Less than lower secondary educ.	2.62	0.83	1.06	0.73
	(5 992)			
Lower secondary educ. completed	2.69	0.91	1.04	0.74
	(9 415)			

Upper secondary educ. completed	2.77 (18 921)	0.97	1.04	0.77
Post-sec. non-tertiary educ. completed	2.95 (1 056)	1.03	1.05	0.87
Tertiary education completed	3.22 (12 663)	1.21	1.09	0.92
	***	***	***	***

Note: N in parenthesis, ******* = significant at the 0.001-level, ***** = significant at the 0.05-level

In Table 2, patterns of deliberative capacity with regard to age, gender and education are given. The youngest respondents in ESS4-2008 were 15 and the oldest one was, allegedly, 123 years old. The table shows mean values in four age categories. The average deliberative capacity is practically at the same level in the first three categories, whereas the category with people over 64 has a lower mean value. The difference is mainly due to a lower level of generalized trust among the oldest people. Women have a higher level of deliberative capacity than men. The level of generalized trust is somewhat higher among men but women, on the other hand, have on average more other-regarding abilities and evaluate equality and equal opportunity to a greater extent. The education variable consists of five categories. The level of deliberative capacity consistently increases from lower to higher levels of education; from 2.62 in the first category to 3.22 among those with the highest level of education. This is also true of generalized trust and other-regarding ability. By contrast, there are only differences with regard to how equality and equal opportunities are evaluated. Yet even here, those with the highest level of education score the highest mean value.

In addition to socio-demographic attributes, we may assume that political and societal activities affect the capacity to participate in deliberative practices. Three such variables are included: civic participation, electoral participation and non-institutionalized political participation. It has been argued that participation in informal and loosely structured associations and interest groups generates reciprocity and trust between people, which is regarded as necessary for a responsive and vigorous democracy. Voluntary organizations infuse in their members habits of cooperation and public-spiritedness, and function as "schools of democracy", where social and civic skills necessary to partake in public life are taught (Putnam, 2000: 338). In the volume Talking Together, Jacobs et al. (2009) find a positive effect of organizational membership on discursive participation. A dummy variable is used in the analysis below, distinguishing between those who take part and those who do not take part in such activities. Conventional political participation, foremost expressed by voting in elections, may also have an impact on the capacity to deliberate. In order to make a reasonable choice, people need to gather information about politics and societal affairs, which in turn is a prerequisite for taking part in discussions on politics. A related argument is that participation in one form of politics breeds participation in other forms of politics. Having voted or not in the last parliamentary elections constitutes a dummy variable in the analysis.

However, deliberative capacity is largely regarded as an alternative to traditional political participation. Similarly, non-institutionalized political participation is an alternative to traditional forms of participation associated with political parties, and while voter turnout has decreased in Western democracies during the last few decades, more people than ever before are engaged in non-institutionalized participation such as taking part in demonstrations,

signing petitions and boycotting products and services for political or ethical reasons. Many decades ago, this form of participation was considered a threat to democratic stability (Crozier et al., 1975) – today, however, it is a popular form of political engagement involving a considerable share of the people (Norris, 2002). It has been argued that these non-institutionalized forms of participation are less demanding and more individual, leading to the expression of ill-considered and predominantly self-interested demands (Esaiasson, 2010), which suggests that they may be negatively associated with deliberative capacity. On the other hand, since non-institutionalized participation is in some kind of state of opposition to traditional political participation, we may assume that it is related to a demand for alternative forms of decision-making. Assuming that this is the case, the crucial question is whether those engaged in these forms of participation also possess deliberative capacity. A similar dummy variable as for the other two participation variables is included.[3]

Table 3   Civic and political participation, index of deliberative capacity and index dimensions. Mean values.

Civic and political participation	Percentage	Deliberative capacity	Generalized trust	Equality	Other-regarding
Organizational activity	Yes (12.1)	3.29	1.31	1.10	0.89
	No (87.9)	2.80	0.96	1.05	0.79
		***	***	***	***
Electoral participation[1]	Yes (77.5)	2.92	1.04	1.06	0.82
	No (22.5)	2.59	0.85	1.01	0.73
		***	***	***	***
Non-institutionalized participation	Yes (27.8)	3.23	1.20	1.13	0.90
	No (72.2)	2.71	0.93	1.02	0.76
		***	***	***	***

Note: *** = significant at the 0.001-level
[1] Only respondents with the right to vote are included.

In Table 3, mean values for those who have and those who have not taken part in these forms of activities are given. The level of deliberative capacity is higher in each form of participation compared to non-participation; the same is true with regard to each dimension. Neblo et al. (2010) found that those who are motivated to deliberate are less likely to vote in elections than those who lack motivation – this is not the case regarding the capacity to deliberate. Rather surprisingly, the largest difference appears between those who take part and those who do not take part in non-institutionalized activities. However, the highest level of deliberative capacity – 3.29 – prevails among those who are active in voluntary organizations. Generalized trust, in particular, is high among these citizens, which is quite natural since organizational activity and generalized trust is usually regarded as the main components of social capital. The degree of generalized trust is also considerably higher in the other two forms of participation as compared to non-participation.

The third explanatory model is called political competence; it consists of the variables political interest and internal efficacy. Interest in politics is a general prerequisite for all political activity. Therefore, one should be cautious of using political interest as an explanatory variable in these kinds of studies. Here, however, the dependent variable is not participation per se; rather, it concerns the conditions for engaging in a specific form of political procedure. The

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[3] See Appendix for details concerning the operationalization of the variables.

decisive point is that political interest is not part of the concept of deliberative capacity. One can value equality for all, one can be other-regarding, and one can trust people that are different without taking a special interest in politics. Indirectly, however, we may assume that political interest is related to these attitudes and cognitive abilities because equality matters are regulated through politics, and trusting as well as understanding other people are social expressions which may be associated with political relations.

Internal political efficacy is a subjective measure of a person's evaluation of his/her political competence. It is a belief that one can understand politics and therefore participate in politics. It is not only concerned with skills and political knowledge but also with the ability to comprehend and resolve political problems. In addition, it deals with one's confidence in the ability to perform these tasks (e.g. Pateman, 1970; Mattei and Niemi, 2005). The capacity to justify one's own views and consider the arguments of others in a deliberative discussion will suffer if political competence is lacking. Political efficacy has been regarded as a determinant of voting behavior and voter turnout – similarly, it can be related to deliberative processes. In fact, a person with a lack of internal efficacy is ill-endowed to engage in deliberative political practices, which requires much more from the individual than, for instance, voting in elections. In a deliberative process, people must be able to interpret new facts and arguments correctly, and, furthermore, they have to be able to evaluate them critically. Accordingly, internal efficacy is expected to enhance deliberative capacity. Political interest is measured on a four- and internal efficacy is measured on a five-grade scale.

Table 4 Political competence, index of deliberative capacity and index dimensions. Correlation analysis.

	Deliberative capacity	Generalized trust	Equality	Other-regarding
Political interest	.156***	.155***	.049***	.107***
Internal efficacy	.084***	.095***	.013***	.060***

Note: * = significant at the 0.001-level**

As we see in Table 4, both interest and efficacy are positively related to deliberative capacity as well as each of the three dimensions. Political interest is to a higher degree than internal efficacy associated with deliberative capacity, and of the dimensions, generalized trust is more strongly related to political competence than the other two. These findings are rather similar to those reported by Himmelroos (2012) with regard to activity and Neblo et al. (2010) concerning the willingness to deliberate. In the following, multivariate patterns are analyzed. All variables introduced above are included in the regression models in Table 5. Analyzing them separately (not presented in table format), the civic and political participation model has the largest explanatory power, whereas the other two are at a somewhat lower level. However, the explanatory power is small. The same is true of the combined models in Table 5 for the index of deliberative capacity as well as the single dimensions.

The most important variables explaining deliberative capacity are gender (female), education, non-institutionalized activity, and political interest. Theoretically, the last mentioned is the least interesting, and the importance of education comes as no surprise. Education provides citizens with many of the abilities that are needed in a deliberative discussion. Electoral and organizational activity has a positive effect on deliberative capacity, yet non-institutionalized activity clearly surpasses these two which is somewhat surprising. Non-institutionalized activity is a mode of citizen participation for the purpose of getting people's voices heard between and outside elections. The results suggest that citizens engaged in such activities, by

contrast with those who are at ease with traditional forms of participation, may be enlightened in a different way and have skills appropriate for deliberation. Considering, first, that voter turnout has been on the decline and non-institutionalized activity has become more popular, and second, deliberative democracy is regarded as a complement to representative democracy, it is good news that this form of activity is positively associated with deliberative capacity. The difference in deliberative capacity between women and men is caused by higher scores on equality and other-regarding ability among women, which suggests that there are differences in empathic ability, feeling and understanding.

Table 5   Determinants of deliberative capacity. OLS regression.

	Deliberative capacity	Generalized trust	Equality	Other-regarding
(constant)	2.022	.611	.902	.513
	(.026)	(.013)	(.013)	(.013)
	78.996***	47.023***	67.583***	40.107***
Age 15-29	.001	.013	-.006	-.004
	(.024)	(.012)	(.013)	(.012)
	.025	1.025	-.457	-.367
Age 30-44	-.062	-.012	-.022	-.027
	(.021)	(.011)	(.011)	(.011)
	-2.926**	-1.146	-1.993*	-2.577**
Age 45-64	-.032	-.024	.005	-.014
	(.019)	(-.015)	(.010)	(.010)
	-1.699	-2.513*	.515	-1.438
Gender[1]	.217	-.011	.105	.119
	(.014)	(.007)	(.007)	(.007)
	15.174***	-1.472	14.056***	16.609***
Education	.391	.272	-.008	.123
	(.023)	(.012)	(.012)	(.012)
	16.641***	22.683***	-.688	10.502***
Organizational activity	.226	.208	.006	.017
	(.022)	(.011)	(.012)	(.011)
	10.108***	18.216***	.522	1.517
Electoral participation	.149	.100	.017	.034
	(.018)	(.009)	(.009)	(.009)
	8.409***	.053***	.070	3.840***
Non-institutionalized participation	.307	.147	.080	.080
	(.017)	(.009)	(.009)	(.008)
	18.378***	17.221***	9.103***	9.525***
Political interest	.485	.194	.118	.175
	(.027)	(.014)	(.014)	(.014)
	17.971***	14.076***	8.375***	12.942***
Internal efficacy	.149	.049	.019	.078
	(.027)	(.014)	(.014)	(.013)
	5.546***	3.594***	1.351	5.796***
R-square	.059	.068	.010	.025
F-sig.	***	***	***	***
N	43 075	44 433	43 393	43 316

Note: In each cell, from top downwards, figures indicate the regression coefficient, the standard error in brackets and the T-value, *** sig. < 0.001, ** sig. < 0.01, * sig. < 0.05
All independent variables range from 0 - 1
[1] female = 1, male = 0

CONCLUSION

The main purpose of this article was to create a concept and a measure of deliberative capacity of individuals. The concept is based upon three dimensions – *generalized trust*, *equality* and *other-regarding ability* – that encompass essential cognitive and attitudinal characteristics needed. In a deliberative discussion, citizens benefit from interacting without mistrust towards people they do not know on a personal level, and believing that their intentions are good. Deliberation is guided by the principle of equality; it is a process of mutual justification where citizens approach each others on equal terms. The third dimension deals with the ability to understand and cooperate with people who are different. Good deliberation presupposes reciprocity, a fundamental respect for other people and their points of view, and critical self-reflection. On the basis of these three variables, a measure of deliberative capacity on a seven-point scale was constructed by means of survey data. One may argue that the cognitive, social and dynamic aspects of deliberation are too complex to capture by means of survey methods. However, the same procedure has been used in other related topics as well; therefore the procedure is considered justified. The analysis consisting of respondents from 26 European countries clearly showed that there are differences between individuals with regard to their deliberative capacity.

Empirically, generalized trust differed from the other two dimensions – the correlation between generalized trust, one the one hand, and equality and other-regarding ability, on the other, was rather weak on the basis of the data used – which calls into question whether generalized trust should be considered as a part of the deliberative capacity. It is first and foremost associated with social capital, yet it has been argued here that trusting people that we do not know is conceptually related to the attitudinal and cognitive ability of evaluating equality for all and understanding people that are different. Arguably, deliberative capacity is also related to social capital; we may assume that many people that possess social capital are also high on deliberative capacity. The problem in this regard is inadequate construct validity in the data available for the present. Theoretically, it has been claimed, generalized trust is an essential part of deliberative capacity.

The second purpose of the study was to examine the determinants of deliberative capacity. The explanatory power of the regression models was weak, yet the ambition has not been to provide a comprehensive explanatory framework of individual deliberative capacity. The empirical analysis showed that there are differences in deliberative capacity, albeit not very immense, with regard to those determinants that have been analyzed. The deliberative capacity consistently increases with higher education, women score on average better than men, and people involved in associational activities and voting in elections have greater deliberative skills. Interestingly, individuals engaged in non-institutional forms of participation have a considerably higher level of deliberative capacity than others. Political interest is positively related, whereas internal efficacy is not as strongly associated with deliberative capacity as one might expect.

APPENDIX

Index of deliberative capacity

Data from ESS-4 2008:

Variable 1: *Most people can be trusted or you can't be too careful in dealing with people*

Using this card, generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people? Please tell me on a score of 0 to 10, where 0 means you can't be too careful and 10 means that most people can be trusted.

Values from 0 to 3 (30.0 percent of all respondents) are recoded into 0, values from 4 to 6 (39.7 percent of all respondents) are recoded into 1, and values from 7 to 10 (30.3 percent of all respondents) are recoded into 2.

Variable 2: *It is important that people are treated equally and have equal opportunities*

He/she thinks it is important that every person in the world should be treated equally. He/she believes everyone should have equal opportunities in life.

Very much like me 1; Like me 2; Somewhat like me 3; A little like me 4; Not like me 5; Not like me at all 6

Values from 3 to 6 (26.7 percent of all respondents) are recoded into 0, value 2 (41.2 percent of all respondents) is recoded into 1, and value 1 (32.1 percent of all respondents) is recoded into 2.

Variable 3: *It is important to understand different people*

It is important to him/her to listen to people who are different from him/her. Even when he/she disagrees with them, he/she still wants to understand them.

Very much like me 1; Like me 2; Somewhat like me 3; A little like me 4; Not like me 5; Not like me at all 6

Values from 3 to 6 (39.2 percent of all respondents) are recoded into 0, value 2 (41.5 percent of all respondents) is recoded into 1, and value 1 (19.3 percent of all respondents) is recoded into 2.

Voted in last legislative elections
Some people don't vote nowadays for one reason or another. Did you vote in the last [country] national election in [month/year]?

Yes 1; No 0

Activity in voluntary organizations
There are different ways of trying to improve things in [country] or help prevent things from going wrong. During the last 12 months, have you done any of the following? Have you worked in another organisation or association?

Yes 1; No 0

Non-institutionalized political participation
There are different ways of trying to improve things in [country] or help prevent things from going wrong. During the last 12 months, have you done any of the following? Have you…

Signed a petition?
Taken part in a lawful public demonstration?
Boycotted certain products?

A dummy is constructed, distinguishing between those who have performed at least one of the actions from those have not performed any of these actions.

Political interest
How interested would you say you are in politics?
Very interested 4; quite interested 3; hardly interested 2; not at all interested 1

Internal political efficacy
How often does politics seem so complicated that you can't really understand what is going on?
Never 5; seldom 4; occasionally 3; regularly 2; frequently 1

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Social, Human Capital and Innovation: An Exploratory Study of European Atlantic Organisations

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ABSTRACT
At European Union level, territorial cooperation initiatives are aligned with operational programs focused in innovation as a policy target for socioeconomic development. The project HARVEST Atlantic is a project developed under the Atlantic Area Programme that intends to identify and exchange good practices and sustainable solutions based on innovation for the maritime and marine economy. Based in a transnational survey applied in Portugal, Spain, Scotland and Ireland, with a sample of 243 organisations, this article was structured in two empirical components. The first component, using the SPSS - Statistical Package for the Social Sciences (version 21.0), focused the descriptive analysis of selected key dimensions of the survey. A second component used structural equation model techniques (software AMOS program GRAPHICS) to create a model relating innovation with social (relational) capital and human capital. Results show differences between the four countries of North Atlantic in the impact that innovation activities have had on organizational behaviour in the period 2011-2012. We validated the model in which relational capital and human capital are significant for the impacts generated by innovation activities (and consequent improvements in the performance of organisations).

Key-Words: Atlantic Area, Innovation activities, Human Capital, Relational Capital, Social Capital, Structural Equation.

INTRODUCTION

Why specific industries increase performance in their overall production over time, while in others, performance gradual declines? Innovation became an increasing important means of developing and maintaining industrial competitive advantage (Soriano & Huarng, 2013). Innovation is the business activity that most closely relates to economy growth. At European Union level, following the challenges of the Lisbon Agenda, member-states tried to introduce regional and national innovation strategies in order to make the European economy the most competitive knowledge-based economy in the world. The development potential of any kind of organization is embedded in its knowledge-based assets.

In the last decade, firms all over the world have implemented new knowledge and management systems. European countries of the North Atlantic Coast as for instance, Portugal, Spain, Scotland and Ireland (not forgetting France, but not part of this study) made a huge effort in trying to gain competitive advantage in the maritime and marine economy. It is widely believed that knowledge, in terms of human and social capital, is the main production factor in today's economic environment. Investments in intangible assets are viewed as the most important source of performance. Resources that are valuable, rare, and impossible to copy or replace are the key for long-lasting competitive advantage (Kozak, 2011).

This article integrates literature and an empirical study regarding human capital, social capital and innovation (in terms of impacts in companies due to the introduction of innovative activities), combining country level perspectives to understand cross-country differences on improvements in the North Atlantic (Portugal, Spain, Ireland and Scotland). It is also our intention to validate a structural model that incorporates the connection of relational and human capital with innovation.

Problem And Purpose

In the knowledge economy, the value of countries, regions, organizations and individuals is directly related to their knowledge and human capital (Edvinsson & Bounfour, 2004). The competitiveness of countries in attracting foreign investors is often determined by their specific and unique intangible resources. Intangible investments in research and development and innovation are viewed as the most important sources of performance. Educated and skilled workers who can continuously upgrade and adapt their skills to efficiently create and use knowledge. An effective innovation system of firms, research centres, universities, consultants, and other organizations should keep up with the knowledge revolution and tap into the growing stock of global knowledge and assimilate and adapt it to local needs. Innovation must be considered together with competence building and advanced training of individual skills through the complex interactions between formal and informal qualifications. Successful competitive industries depend on knowledge flows and integration of existing academic knowledge in the innovation process. To ensure long-term growth employment, communities in the Atlantic Area will need to cope with the decline in traditional industries, *e.g.* fisheries and shipbuilding and a decline in mass tourism. The policy document "Study on Deepening Understanding of Potential Blue Growth in the EU Member States on Europe's Atlantic Arc Sea Basin Report"[1] suggests actions at EU and EU member-state level: a closer interface between

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[1] This study was used to illustrate several contextual statistics used in the presentation of countries. The full reference is: Study on Deepening Understanding of Potential Blue Growth in the EU Member States on Europe's Atlantic Arc Sea Basin Report FWC MARE/2012/06 – SC C1/2013/02. Client: DG Maritime Affairs and Fisheries. Rotterdam/Brussels, 19th December 2013.

regional clusters of maritime industries and educational establishments are seen as a way out of the economic slowdown, since local and regional agglomerations of companies and education institutes ensure a skilled workforce and to promote greater labour mobility within sectors. At EU level, territorial cooperation projects in line with the operational programs currently developed for the new ERDF programming period (2014–2020) aim at supporting these goals.

In this context, the project entitled HARVEST Atlantic was developed under the Atlantic Area Program to identify and exchange good practices and sustainable solutions based on innovation, in order to improve the socioeconomic situation of the Atlantic seaside territories. This article is a part of the global study of this project that tried to better understand the current state of the countries analyzed and think about the prospects for the future. This article shows the differences between the four countries of North Atlantic Coast - Portugal, Spain, Scotland and Ireland - in social and human capital, and in the impact that innovation activities have had on different organisations in the period 2011-2012. Secondly, we test a model in which relational capital and human capital influence the impact in innovation activities.

REVIEW OF LITERATURE

Social and Human Capital as determinants of Innovation

Innovation is a result of a process of development and learning that goes beyond organizational barriers, from the scientific and technological developments to those that appear from the interaction with other sources of knowledge. These interactions have the capacity to make dynamic capabilities emerge (Senge, 1990; Eisenhardt & Martin, 2000; Teece, Pisano & Shuen 1997; Zollo & Winter, 2002) and this situation is directly related with the concept of relational capital and its positive influence over organizational innovation (Martín & Navas 2009). In this sense, we can stress that organizations in a certain environment can combine resources in order to establish networks that stimulate inter-organizational linkages, as it is proposed by the literature of regional and national innovation systems. In these systems, the identification of agents and relationships (Quintero-Campos, 2005) serve as a basis for the creation and spread of knowledge and greatly influences the development of innovation policies (Lundvall, 1992). Additionally, a number of recent studies have consistently found that human capital not only enhances the ability of a country to develop its own technological innovation but also increases its capacity to adopt technologies already developed elsewhere and thereby facilitates economic catching-up processes (*e.g.*, Griffith, Redding & Reenen, 2004; Benhabib & Spiegle, 2005; Kneller & Stevens, 2006; Madsen et al. 2010, among others). Thus, relational and human capital may be seen as antecedents of innovation.

Human capital and innovation

Human capital represents the knowledge and skills that individuals bring to an organization (Dimov & Shepherd, 2005). It can be acquired and developed through education ('general' human capital) and professional experience/skills ('specific' human capital) contributing to both the explicit and tacit knowledge of the firm. It is necessary for performing the required Structural capital (organizational) that includes information systems, knowledge encoded in the form of databases, processes and organizational procedures (which are not in the minds of the employees, but on external means), trademarks, patents, and infrastructure required to support the application of the organizational strategies. The vast majority of the empirical works on human capital involve country level analyses, generally yielding positive results (*e.g.*, Barro & Lee, 1993; Hanushek, 2013, among others), focusing on issues of economic growth (Wößmann, 2003; Teixeira & Fortuna, 2010) or rate-of-return analysis (Sianesi & van Reenen, 2003; Folloni and Vittadini, 2010). Empirical studies on human capital at firm or establishment

level are in much inferior number than those related to more aggregate analyses (Teixeira, 2002; Mendes, Nunes & Sequeira, 2012). Notwithstanding, in existing literature on firms and human capital there is a wide consensus that human capital leads to growth or increased performance of business ventures (Unger, Rauch, Frese & Rosenbusch, 2011). The model of Vandenbussche and colleagues (2006) defends that the growth of firms is associated to educated people. In the line with neo-Schumpeterian literature and the Resource-based view, one of the determinants of innovation propensity of firms is shown to be human capital (or skilled labour). In this context, human capital is considered as reflecting a firm's capacity to absorb, assimilate and develop "new knowledge and technology" (Bartel & Lichtenberg, 1987; Cohen & Levinthal, 1990). The more new knowledge and technology is absorbed, the more innovation propensity in the firm is expected (Crepon, Duguet & Mairesse, 1998; Hall & Mairesse, 2006).

Social Capital And Innovation

Social capital is the sum of the actual and potential resources embedded within, available through and derived from networks of relationships by an individual or social unit (Nahapiet & Ghoshal, 1998). Relational capital means external links with suppliers, customers and other stakeholders of the organization, which allows to buy and sell goods and services in an efficient and effective manner (through knowledge of customer preferences and of the factors that lead to a satisfactory relationship with them, and so on). Research on social capital highlights two main dimensions of the inter-organizational relationships: the structural dimension and the relational dimension (Granovetter, 1992; Nahapiet & Ghostal, 1998). The first one, the structural dimension refers to the overall pattern of connections between actors, that is, who you reach and how you reach them (density, connectivity and hierarchy are measures of the structural dimension). Social capital approach suggests that factors relevant to the generation of innovation include not only the number of partners and the structure of the network but also the level of commitment, cohesiveness and trust embedded in the inter organizational relationships (Adler & Kwon, 2002; Mu, Peng & Love, 2008; Tidd, 1995). The second one, the relational dimension, is the dimension that we are going to study in this article. It describes the kind of personal relationship people develop with each other through a history of interactions (respect, trust and friendship are usual aspects included in this dimension). This ability creates relational value with external elements that are part of the interested company, commonly called stakeholders (Joshi, Cahill & Sidhu, 2011), and centered in knowledge and in inter actions with various external parties: alliances, clients, investors, consulters, universities, distributors of networks, partners and suppliers. Even more, the relational dimension could better explain innovation performance (Moran, 2005), given that innovation mostly depends on the quality of relationships established between the people involved (relational dimension), rather than on the density, connectivity and hierarchy of such relationships/structural dimension).

This paper departs from the perspective that current levels of social capital are formed by historical institutions and investments, such as early literacy, past political institutions and universities. It suggests that innovation is an important channel by which social capital improves income growth. Therefore, the overall hypothesis of the social capital theory in the matter of innovation is that: *"Firms in communities with a large stock of social capital will (...) always have a competitive advantage to the extent that social capital help reduce malfeasance, induce reliable information to be volunteered, cause agreements to be honoured, enable employees to share tacit information, and place negotiators on the same wave-length. This advantage gets even bigger when the process of globalization deepens the division of labour and*

thus augments the needs for co-ordination between and among firms'' (Maskell, 2001, p. 7). The social capital framework provides an interesting perspective from which to explain the effect of inter-organizational relationships on innovation (Subramaniam & Youndt, 2005) in terms of magnitude of change, degree of novelty, or innovativeness (Gatignon, Tushman, Smith & Anderson, 2002). Since businesses are becoming more complex, dynamic and globally competitive knowledge (that an organization has) and intelligent workers (who know how to use and develop this knowledge) become valuable intangible assets (part of the intellectual capital of the organization) which increases the capacity of creating value for its members (Sumedrea, 2012).

The Atlantic Coast

Five countries constitute the European Atlantic Area: Portugal, Spain, France, Ireland and the United Kingdom, sharing the same design they have extensive coastal areas, most of the population live in these areas and work in sectors related to the maritime and marine economy. Sea is the source of central economic activities and defines important directions for progress and economic development.

Portugal[2]

Po The coastline of Portugal measures approximately 1,860 km, thus including the continental territory (943 km) and the archipelagos of Azores (667 km) and Madeira (250 km). In total, this represents 2.7% of the total EU coastline. Portugal is undergoing a period of fiscal adjustments. In 2012, the GDP amounted to € 165 bn which represents a decrease of 3.2%, as compared to 2011[3]. In the first quarter of 2013 GDP further decreased with 3.9% in real terms (in comparison to the same quarter in the previous year). An important sector in Portugal is fisheries, representing slightly less than 2% of the country's GDP in 2012. In 2011, industrial production of fishery and aquaculture dropped by 2.2%. This was seen as a result of the structural adjustment of the economy produced by technological improvements in the first sector, and the subsequent diversification of the economic activity towards the industry and service sectors. Within the fisheries sector aquaculture has shown an increase and is now contributing around 5% of the total fish production. In 2011, 13,156 individuals worked in the fishing sector, representing 0.3% of the total employed population[4]. In the maritime and marine economy, tourism is another important sector showing an increase of GVA and employment contribution with coastal and nautical tourism, including yachting and marinas and cruise tourism, despite the economic crisis. Tourism is gaining an important weight in the economy and is currently representing 8.8% of the national GDP[5].

Spain

Spain has the longest coastline of all EU member-states, with a total of 7,876 km - of seas and oceans[6] bordering the Iberian Peninsula and the Canary and Balearic Islands. This equals

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[2] Study on Deepening Understanding of Potential Blue Growth in the EU Member States on Europe's Atlantic Arc Sea Basin Report FWC MARE/2012/06 – SC C1/2013/02 .Client: DG Maritime Affairs and Fisheries.Rotterdam/Brussels, 19th December 2013

[3] Statistical National Office Portugal (INE), 2011, Website Data, Table A.1.1. Gross domestic product at market prices (annual) and Table A.1.1.8 - Gross domestic product at market prices (volume change rate; annual). Please note that the figure on GDP is a preliminary data calculation by Statistics Portugal (INE). Further information provided in Flash-sheet "Destaque" of 11th of March 2013 set the GDP for 2012 in €165.4 bn.

[4] Fishery Survey, 2012, Statistical National Office Portugal (INE)

[5] Yearbook of tourism statistics, 2009, Turismo de Portugal.

[6] Statistical National Office (INE), Spain, 2008.

12.1% of the European coastline[7]. The Economic Exclusive Zone (EEZ) covers 552,000 km[2] for the continental mainland and 455,000 km[2] for the Canary Islands. Its coastal population living at 10 km from sea amounts to 13,000,000 which represent 33.2% of total population. Spain borders two sea-basins: the Mediterranean and the Atlantic. Spain also has been heavily affected by the economic crisis, which marked a period of serious economic decline, reversing the economic expansion that was observed in the preceding period. In the first semester of 2013, an economic downturn of - 0.5% GDP was recorded (total GDP value of € 255 bn)[8]. Fiscal adjustments policies and the bank system restructuring process have had important consequences on the national demand, counterbalanced by a sluggish increase in exports. In 2011, around 1% of GDP in Spain stems from fishery activities, representing a GVA of € 2 bn. Compared to 2010, this presents a 9% increase. Aquaculture formed some 30% of these fishery activities. In addition, other sea related activities are reporting positive trends, such as maritime transport and the coastal tourism. Maritime transport and port activities represent for Spain around 1.1% of GDP[9]. Also the tourism sector, notably on the Mediterranean coast is an important source of income for the country.

Ireland

Ireland is a truly maritime nation with its coastline extending over 5,631 km (3,500 miles) when taking the land borders to the sea into account and 7,500 km when the entire sea area of Ireland (seabed territory belonging to Ireland) is taken into account. Despite the future economic outlook remaining uncertain and with some worrying signs for the Irish economy, the overall forecast is positive with a growth rate of 1% in 2013 and increasing to 3% in 2015. Unemployment has continued to decline since the peak at the start of 2012 (15%), a trend that is to continue, while employment has also started to increase in the second half[10] of 2012 and is expected to continue to show signs of recovery in 2013 (growth of 0.2%). The continued net emigration that has started in mid 2009 is expected to continue but at a decreasing rhythm. The main ports in Ireland are located in: Dublin, Howth (near Dublin), Drogheda, Rosslare, Waterford, Cork, Baltimore, Shannon Foynes and Galway[11] this also reflects the main employment locations in the Irish ocean economy. The sector is dominated by marine tourism and maritime transport. Together they account for 54% of the sector's direct GVA. They are followed by: oil & gas, marine manufacturing and fishing as the five major sub sectors in the maritime economy.

Scotland

The coastline of Scotland, part of the United Kingdom, is around 10,000 km (mainland). The Eastern seaboard faces the North Sea and the Western and South Western seaboard the Atlantic Arc. On the Eastern seaboard, the principal conurbations are Edinburgh in Scotland. On the Western seaboard, the principal conurbations are Glasgow in Scotland, Most of the aquaculture occurs along the West Coast of Scotland and catching fish is mainly based in Peterhead and Fraserburgh on the East Coast of Scotland. The North Sea is important for the

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[7] European Union coastline is around 66,000 Km.

[8] Statistical National Office, Spain. Data: 1st quarter 2013.

[9] Source of information "Puertos del Estado".

[10] Employment figures recovered more slowly than unemployment figures.

[11] Please note: this listing of main ports in Ireland includes both shipping ports and fishery harbours. In: Marine Institute, Ireland, 2011: OUR OCEAN WEALTH: Towards an Integrated Marine Plan for Ireland Seeking Your Views on New Ways; New Approaches; New Thinking, P.12. Available here: http://www.ouroceanwealth.ie/Briefing%20Documents/Our%20Ocean%20Wealth%20Briefing%20Documents %20for%20Consul tation%20Part%20II%20Sectoral%20Briefs.pdf.

economy through the production of oil and gas, in particular the city of Aberdeen, and renewable energy is playing an increasing role, with substantial investment in offshore wind in the shallower southern part of the North Sea.

METHOD

We selected the strategic planning methodology known as ITSGA - Information Technology Strategic generic Actions (Andreu, Ricart & Valor, 1997), which aims to identify strategic actions produced by the collected information, whose application can deliver improvements in three variables: relational and human capital and innovation (activities' improvements). The sample of 243 organisations from the maritime and marine economy was collected during 2013 in the four countries (Portugal, Spain, Scotland and Ireland) by the HARVEST Atlantic project partners [six organizations with different and complementary knowledge and competences, Mancomunidad de Municipios Sostenibles de Cantabria (ES), Universidad de Cantabria (ES), South West Regional Authority (IE), Cork Institute of Technology (IE), Glasgow Caledonian University (UK), and Universidade do Algarve (PT)].

The processing and analysis of data was structured in two parts: a first part with the SPSS - Statistical Package for the Social Sciences (version 21.0), and using descriptive statistics allowed to present the differences between the four analyzed countries in relation to selected questions. In the second part, we applied an estimation procedure using the structural equation techniques, using the AMOS program GRAPHICS. In this study, we followed absolute, incremental and adjustment careful measures. We also presented the significance of structural relationships by the value of ANOVA as recommended by Hair and colleagues (2010) and Willow (2007, 2012), and the coefficient of determination (R^2) to identify the proportion of the variance of the dependent variable explained by the independent variables (Hair et al, 2010; Maroco, 2010).

RESULTS AN DISCUSSION

Impact that innovation activities have had on enterprise in the period 2011-2012

The concept of innovation has had, over the last years, a greater emphasis, penetrating not only in the scientific and political discourse but also become one of the companies' challenges in the competitive markets. In the HARVEST countries, in general, as it is possible to see in figure 1, the companies surveyed were highly engaged in innovation activities in 2012, except the Spanish companies (Report of the Harvest Atlantic program, in press, p. 22).
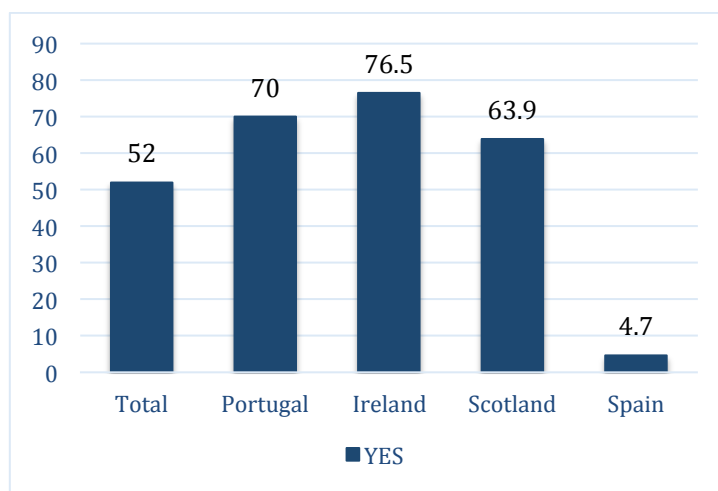

Figure 1 – Engage in Innovation Activities 2012 (% from total number of entities).
Source: Report of program Harvest Atlantic, in press, p. 22

Although, had different impacts of improvement in HARVEST regions (Table 1).

Table 1 – Improvement indicators (impact of activities) in Harvest regions in the period 2011/2012.

Improvement Indicators	Portugal	Ireland	Scotland	Spain	Asym. Sig
1. Increased range of goods	11,5%	30,9%	66,7%	10,4%	p=,000
2. Improved quality of goods or services	12,8%	24,7%	72,7%	8,3%	p=,000
3. Improved production flexibility	5,5%	17,3%	54,5%	0%	p=,000
4. Reduced unit labour costs	3,8%	13,6%	39,1%	33,3%	p=,000
5.Increased Capacity	5,1%	22,2%	41,7%	43,8%	p=,000
6. Reduced materials and/or energy produced per unit	1,3%	3,7%	30,4%	18,8%	p=,000
7. Improved environmental impact and safety aspects	3,8%	12,3%	52,2%	18,8%	p=,000
8.Met regulations or standards	6,4%	8,6%	41,7%	20,8%	p=,000

Portugal, Ireland and Scotland indicated the same first and second place for the impacts that innovation activities have had in the period 2011-2012: "Increased range of goods or services" and "Improved quality of goods or services". However, these differences are significant in both the first (X^2=37.7, p=, 0.000) and the second activity (X^2=42.62, p=0.000). That is, the two activities are more marked in Scotland, followed by Ireland and finally by Portugal (3rd place). Spain stands out in these three countries, since the most prominent impact in terms of innovation capacity is "Increased capacity" and the second one "Reduced unit labour cost" (in bold in table 1).

One possible explanation for this result is that the Spanish maritime market is already saturated and therefore activities found the best way for this country to increase the return are to reduced unit labor costs and increased capacity. In the other hand, Portugal, Scotland and Ireland due to its smaller size maritime market are unable to have a big industries and therefore wager more on the diversity of small businesses and on the quality of its products. Regarding the **third impact of innovative activities** taken in the four countries, we can say that Portugal and Spain had the same actions: 8. "Met regulations or standards". A plausible reason for these results can be due to the later entrance in the EU of these two countries and the fiscal adjustments policies and the bank system restructuring process also have had important consequences in these two countries. Diverging from the two previous countries, the third most referred impact in Ireland is: "Increased capacity" and in Scotland "Improved production flexibility". Probably due a structural questions of these countries which could be explored.

Social capital: cooperated of enterprises with any of the following to drive innovation activities in the period 2011-2012

The most advanced organisations have established a higher stock of social capital and innovation as an important channel by which social capital induces improvements in performance. In the HARVEST countries, in general, as it is possible to see in Table 2, the percentage figures given by four countries in the first and second place are bolded.

Table 2 – Cooperated with any drive innovation activities in Harvest regions in the period 2011/2012.

Cooperated with	Portugal	Ireland	Scotland	Spain	Asym. Sig
1.Other enterprises within your enterprise group	5,5%	14,8%	15,4%	8,3%	0,174
2.Suppliers of equipment, materials, components or software	5,1%	14,8%	23,1%	33,3%	0,000
3.Clients and consumers	9,0%	23,5%	19,2%	31,3%	0,015
4.Competitors	2,6%	4,9%	8,0%	12,5%	0,136
5.Consultants	6,4%	23,5%	28,0%	29,2%	0,004
6. Commercial laboratories/R&D enterprises	10,3%	16,0%	4,0%	12,5%	0,393
7.Universities or other higher education institutes	15,4%	21,0%	24,0%	2,1%	0,020
8.Government research organizations	10,3%	14,8%	12,0%	14,6%	0,829
9.Private research institutes	9,0%	4,9%	4,0%	14,6%	0,222

As we can see in the table 2, Portuguese organisations preferably cooperate with universities and research institutions. Similarly to what happens in Portugal, Scottish entities also cooperate with universities but already extend their cooperation to consulting ("Consultants"). In turn, Ireland uses the same principle of universities' resources but extend these contacts to consults "Consultants") and clients ("Clients and consumers"). Spain stands out for not resorting to university institutions and research and showing preference for suppliers and clients, probably due to its mature state of competition in a more aggressive market.

Table 3 indicates firstly, a low rate of acquisition of external R&D for the four countries analyzed without no significant differences between countries (p=0.897) (in bold in the table).

Table 3 – Type of activities innovation was done in Harvest regions in the period 2011/2012.

Activities	Portugal	Ireland	Scotland	Spain	Asym. Sig
Internal or external marketing activities aimed at the introduction for the enterprises' innovation (including market research and advertising of new innovations but exclude routine marketing activity)	11,5%	29,6%	44,1%	10,4%	p=,000
Internal or external training for the personnel directly related to innovation activity	7,7%	16,0%	44,4%	0,0%	p=,000
Internal New product or service development	15,4%	29,6%	61,1%	55,8%	p=,000
Acquisition of external R&D	11,5%	13,6%	16,7%	12,5%	p=,897
Acquisition of machinery and equipment (including computer hardware) in connection with product or process innovation	6,4%	21,0%	52,8%	16,7%	p=,000
Acquisition of other external knowledge (such as licenses to use intellectual property (e.g. Patents, know-how; or specialized services e.g. consultants universities)	7,7%	8,6%	30,6%	31,3%	p=,000
All design functions (including industrial, product, process and service design and specifications for production or delivery	3,8%	12,3%	47,2%	14,6%	p=,000

Of all the analyzed countries, Scotland proved to be the presenting higher percentage rates on all type of innovation activities' indicators (see the bold column), except in "Acquisition of

other external knowledge" in which Spain takes the first-place, achieving an relatively higher rate (31.3%) than Scotland (30.6%). Both countries (Scotland and Spain) perform significantly more than the remaining countries evaluated. All countries indicated as first type of activities was done in the period 2011/2012, "Internal New product or service development". There seems to be a consensus on the part of the organisations in the four countries in greater investment in internal development of new products and services. This seems the best way to realize that these companies to add value to existing products and services need to find a differentiation character within the sector.

Human capital: Percentage of staff in organization holds the following qualifications
In European societies characterized by knowledge, companies make a continuous effort to improve and generate new forms of knowledge, skills and experience in an attempt to make an effective management of their intellectual capital, in order to succeed and thrive in the competitive environment of the markets (Report of programme Harvest Atlantic, *in press*, p. 25) (Fig. 2).

According to the survey implemented in the HARVEST project, taking into account the organisations inquired, the work teams are highly qualified: more than 60% of staff holds an MSc and/or a PhD; less than 50% holds a certificate/diploma or none (qualification and about 55% of the collaborators of the firms surveyed holds a BSc or other type of qualification (Report of the Harvest Atlantic program, in press).
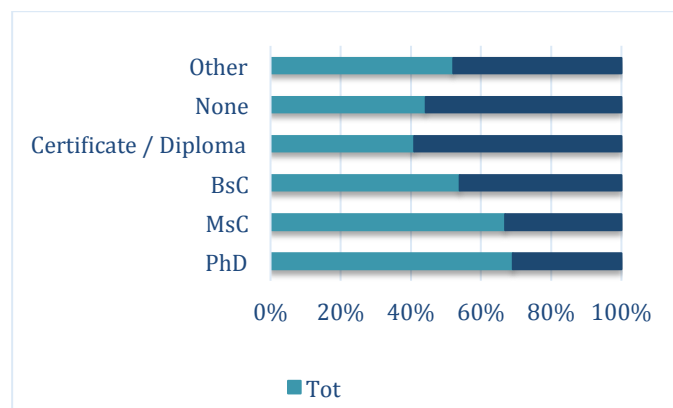
Figure 2 – Staff Qualifications (% from total number of entities interviewed).
Source: Report of programme Harvest Atlantic, in press, p.26)

As we show in Table 4, Scotland and Spain are significantly ahead either in PhD or in Msc employment.

Table 4 – Differences of percentages between countries (Portugal, Ireland, Scotland and Spanish) on staff qualifications in organizations.

Qualifications in…	Portugal	Ireland	Scotland	Spain	Asym. Sig
1.PHD	12,8%	19,8%	100%	81,0%	,000
2.Msc	12,8%	23,5%	100%	59,5%	,000
3.Bsc	11,5%	32,1%	33,3%	16,7%	,018
4.Certificate/Diplom	12,8%	35,8%	33,3%		,003
5.None	--------	23,5%	100%	14,3%	,000
6.Other	6,4	-------	100%	16,7%	,000

Scotland still makes reference to 100% of "None" e "Other". Regarding this aspect, we can simultaneously measure personnel who have no skills, and therefore with high contrast with de staff with great qualifications.

Before identifying the qualifications of the companies' collaborators, the organizations surveyed were asked about their qualifications shortages that could be met by third level institutions. In average, about 60% of the companies surveyed stressed that they have qualification shortages Figure 3 shows that the majority of the companies operating in the sectors under study in the HARVEST project do have qualification shortages that third level institutions could meet. These shortages are more evident in the dimensions of BSc and certificate or diplomas, where almost 80% is reported. Almost 60% of the totality of the companies inquired underline that their staff has qualification shortages regarding MSc and other qualifications. The area where the qualification shortages are less evident is PhD (Report of programme Harvest Atlantic, 2014 in press).

The areas where staff shortages are more manifest are "Operations management skills" and "Market/business development skills". The country who feels most staff shortages evident is Spain, particularly in the areas "Sales and marketing skills", "Operations management skills" and "Finance/administration skills", followed by Ireland and Portugal with the same type of staff shortages ("Market/business development skills" and "Product/service innovation or development". Scotland indicates only "Operations management skills" deficits (see table 5).
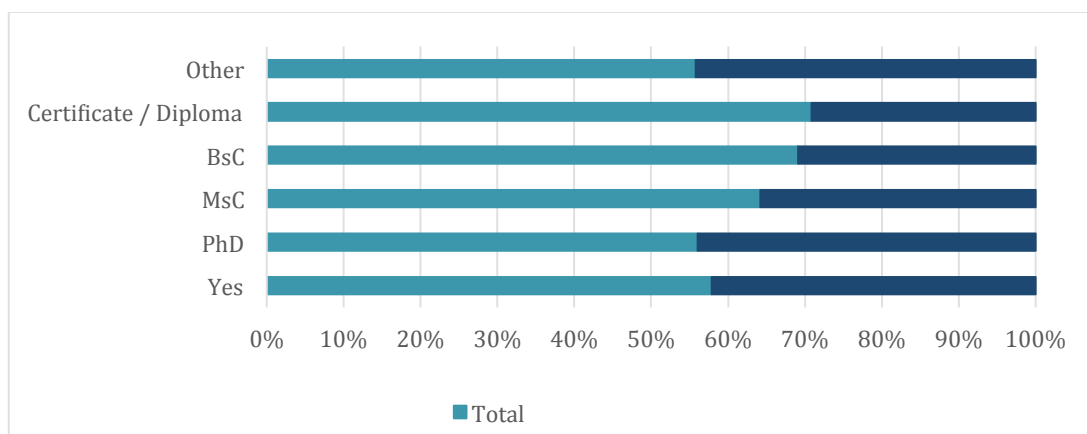
Figure 3 – Qualification shortages that third level institution could meet (% from total number of entities interviewed).
Source: Report of programme Harvest Atlantic, in press, p.27)

Table 5 – Percentage areas shortages.

Areas shortages	Portugal	Ireland	Scotland	Spain	Sum	Asym. Sig
1.Market/business development skills	5,1%	8,6%	0,0%	16,7%	30,4	,240
2.Product/service innovation or development	3,8%	9,9%	0,0%	0,0%	13,7	,153
3.Sales and marketing skills	5,1%	8,6%	0,0%	23,3%	37	,002
4.Operations management skills	3,8%	6,2%	3,1%	17,5%	30,6	,031
5.Finance/administration skills	2,6%	2,5%	0,0%	20,8%	25,9	,000
6.Other	-----	-----	-----	-----		------
Sum	20,4	35,8	3,1	78,3		

Structural Model

In this section we present a recursive model with the following three variables: relational

capital (RelCap), human capital (HmCap), and innovation (Innov). The independent variables are relational capital and human capital; the dependent variable is innovation. As we can see, the analyzed model has a total of 21 items: 8 items in relational capital, 6 items in human capital and 7 items in innovation (Figure 4).

The results of the confirmatory analysis revealed that there are items with a communality smaller than 0.50 which led us to eliminate these items: relational capital (4 and 7), human capital (5 and 6) and innovation (3 and 7).

CAPITAL RELATIONAL INDICATORS
- Other enterprises within your enterprise group
- Suppliers of equipment, materials, components or software
- Clients and consumers
- Consultants **(eliminated)**
- Competitors
- Commercial laboratories/R&D enterprises

HUMAN CAPITAL INDICATORS
1.PHD
2.Msc
3.Bsc
4.Certificate/Diploma
5.None (eliminated)
6.Other (eliminated)

INNOVATION INDICATORS
- Increased range of goods
- Improved quality of goods or services
- 3. Reduced unit labour costs (**eliminated**)
- Increased Capacity
- Reduced materials and/or energy produced per unit
- Improved environmental impact

Figure 4 – Equation Model evaluated.

Figure 5 illustrates the evaluated model with the selected items we need consider for obtaining an adequate model.
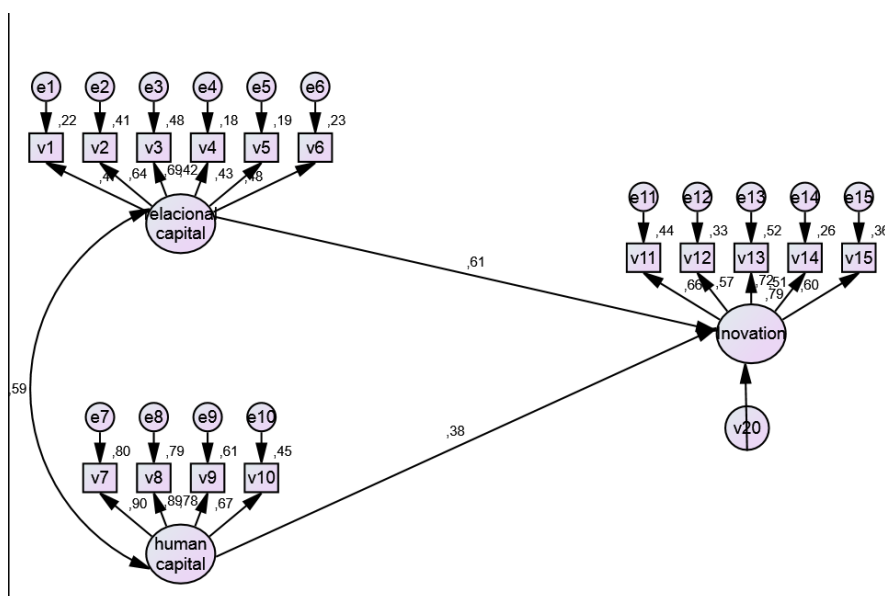
Figure 5 – Diagram of the validated model.

Table 6 shows the validated model has reached a solution with a χ^2 = 197.592, df = 99 (p = 0.000) with a = 1.996 χ^2/df (clearly below the value 3). The GFI and CFI those all indexes above 0.90 and the RMSEA value of 0.067 is markedly below the expected values (≤ 0.08). 67.4% of the variance is explained by the two independent variables, relational capital and human capital. The significance of the structural relationships between the independent variables "relational capital" and "human capital", with the dependent variable "innovation" showed good absolute values (F = 16.39, p = 0.000 for relational capital - innovation; F = 20.36, p = 0.000; for human capital - innovation).

Table 6 – Measures of goodness of fit of the model validated.

Measures of model fit	Acronym	Reference value	Validated Model
Absolute adjustment measures			
Chi-square	χ^2	---	197,592
Degrees of freedom	df	-----	99
Quality index adjustment	GFI	>0.90	.91
Root Mean Square of waste	RMR	----	,007
Root Mean Square Error of Approximation	RMSEA	Between 0.05 e 0.08	,067
Adjustment incremental			
Incremental adjustment Index	IFI	>.090	.93
Adjustment Normalised Ratio	NFI	>.090	.90
Adjusted goodness of fit index	AGFI	>.090	.92
Adjustment Thrifty Measures			
Measures Index Adjustment Normalized Thrifty	PNFI	---	0,42
Normalized chi-square	χ^2/df	<3	1,99

The three subscales have acceptable reliability (Relational Capital: α = 0.79; Human Capital: α = 0.83; Innovation: α =0.72), with a reasonable Alpha the Cronbach.

The validated model shows that Relational Capital has a positive influence on Innovation, in

comparison with previous research, our results are consistent with Subramaniam and Youndt (2005) and Gatignon and colleagues (2002) as social capital has a direct positive effect on innovative capability of enterprises. Organizations have a pool of techniques which can have a bearing on the social environment of the company, and managers should pay attention to this particular side of their responsibilities. As Addler and Kwon (2002) suggest, in order to fostering social capital in organizations, managers need to do more than merely encourage social interactions among employees, both must nurture and provide resources aimed at a greater connection between the internal and external knowledge in order to facilitate discussion of processes, innovations, technology, distribution channels and other vectors of development across the range of activities. We believe than an important part of these resources comes from relational capital, which contribute to improve social capital.

Similarly, Human Capital had a positive effect on Innovation. These results support the model of Vandenbussche and colleagues (2006) in which as they move closer to the educated people and in the line with neo-Schumpeterian literature and the resource-based view, one of the determinants of innovation propensity of firms is Human Capital. Unger and colleagues (2011) also assume that human capital leads to growth or increased performance of business ventures.

The maritime and marine economy presents complex technologic problems based in most of its development vectors that require the involvement of a highly qualified workforce. The recognition, maintenance and improvement of professional skills are critical to ensure specialized staff in maritime organisations. In this context, firms and other relevant actors must have a strategic vision to employ qualified human capital, as active and important participant in the production and management. This new process vision has led many organizations to adopt methods and techniques not only to attract but also to retain their employees. Finally, our results indicated that Relational and Human Capital should be related to influence innovation. These findings support the model of organizational performances and added value of Sunedrea (2012) in which we could say that the potential value of human capital – stored in the form of the degree of employees – becomes product innovation just if this knowledge has been extended to the social relations. Meanwhile, the existence of human capital alone is not enough. It is decisive to join highly skilled workforce, in a genuine way, to establish and develop contacts, relational capital, as a differential strategy to handle with competition and prosper within innovative activities.

CONCLUSIONS AND IMPLICATIONS

A holistic perspective facilitates a deeper understanding of how to combine external social capital and human capital of employee's in order to improve innovation. Based in a survey applied to 243 organisations of the maritime and marine economy in Atlantic countries in Europe (Portugal, Spain, Scotland and Ireland), our results show that human and social capital represent explanatory facts of business development under economic turbulence. In the period between 2011 and 2012, these organisations perceived innovation and persisted in innovation activities, although, with lack of investment in R&D. Therefore, maritime companies must make a greater effort to promote closer linkages between tacit (especially emergent from the sector) and scientific knowledge (from universities and research) through the formation of 'translators' which form the bridge between academia and industry. It will also be necessary to develop scientific/academic and applied research focused on specific problems of the regions and that the governments activate the role of regional centres of research in order to promote entrepreneurship and technology transfer, in contact with businesses.

The large investment made by these maritime organisations between 2011 and 2012 had a greater focus on new products and services. Lord (2000) refers that new products play several roles for the organization; they help to maintain growth and thereby protect the interests of investors, employees, suppliers of the organization. Patrick (1997) defends that new products help to keep the firm competitive in a changing market because the investment community values new products. New products affect the top line and, therefore, enhance the value of the firm and shareholder value.

The structural model validated shows the potential value of human capital – stored in the form of qualification of employees – to become product innovation if this knowledge is extended to additional social relations. Our results suggest that, only under these conditions, organizational capital contributes to innovation performance. Given the fact that we have used a convenience sample, considered a limitation of this study, a proposal that we leave for future research is the extension of the study to a larger sample of organisations in the North Atlantic coast. We hope that these results contribute for the body of knowledge of firm innovation and its determinants.

To conclude, it is essential to create a modern maritime and maritime economy bet on improving professional and relational skills without neglecting the value of traditional activities. The recognition, maintenance and improvement of human and relational capital is crucial to maintain and ensure specialized contacts in the whole range of activities related to the sea and it is essential to the internal development of products and services as a strategic tool to move forward in the concretization of the sea's economic potential.

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The Cultural Area of The Suicidal Behaviour

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ABSTRACT

There is a cultural fluctuation of suicide. This is known since Durkheim. For this study the authors tried to outline a cultural parameter which influences suicide. Research on a group of 602,206 inhabitants in a romanian county (Bihor) of two nationalities: 70.92% Romanians and 29.05% Hungarians has been carried out. The suicide rates between 01.01.1994 and 31.12.2003 have been analyzed. The data used came from official records – the County Forensic Pathology Laboratory. Suicide rates on distinctive ethnic areas measured in cases per 100,000 population were as follows: rural areas – 34.8 cases in 100,000 population in Hungarians and 3.96 cases in 100,000 population in Romanians; urban areas – 34.37 per 100,000 in Hungarians and 6.55 per 100,000 in Romanians; areas with mixed population (Romanians and Hungarians) 1/1 – rate of suicide 1/1 (16.58). In conclusion, there are Areas of Cultural Vulnerability to Suicide that require the setting up of Principles of Cultural Prophylaxis of Suicide.

Keywords: suicidal behaviour, cultural fluctuation, Area of Cultural Vulnerability, cultural prophylaxis of suicide.

INTRODUCTION

Optional human behaviour is a continuative development of automatic ethologic behaviour [1]. For instance, this truth is obvious for instinctive behaviour (i.e. feeding, reproducing etc.). All other types of behaviour are social and spiritual developments which spring from the biological necessities enrooted in us. But development may make them become so different from our organic needs, that the intermediation made by different stages of attitudinal and behavioral state may make the connection simply impossible. As they become less biological, these types of behaviour become more and more dependent on the spiritual values, determining the attitudinal states with behavioral consequences [2, 3, 4].

LITERATURE REVIEW

Suicidal behaviour is such an example. It depends on the spiritual values of a certain place and time according to the demonstration of suicidology classic E. Durkheim [5] almost 100 years ago. From a historical point of view, there are few countries that have rigorous data about suicide [6]. Even today, not all countries reveal rigorous statistics. Despite their limitation, these statistics provide a clearly enough evolutionary tendency of the general and geographical specifics [7]. Both old and new statistics show a striking difference between countries and even regions of the same country [8]. In 1990, Romania had a suicide rate of 11.4 cases in 100,000 population. In 1996 the suicide rate in Romania was of 21.3 cases in 100,000 in men (M) and

4.3 cases in 100,000 in women (W), with an average of about 12.8/100,000. Today in Romania the difference of suicide rates between provinces varies between 6 and 18 cases/100,000.

The marked difference between areas with catholic religious frequency and those of protestant frequency is already classical. Even more, in the past it became obvious that there were big differences between locations of the same religious and cultural background. Apart from what has been discussed above, another factor is the role of the collective mentality of certain groups of population, that of the We-ity groups. Therefore, about 1/5 (19%) of suicides occur in people who do not suffer from any psychiatric disease [5].

Purpose
The purpose of this study is to analyze the profile of the suicidal behaviour of a larger population group, made up of culturally distinctive subgroups, in a geographical location, in the same time frame in order to find a cultural parameter which influences suicide.

MATERIAL AND METHOD

The studied population group was taken from Bihor County, Romania, region having 635,290 inhabitants in 1994 and 602,206 inhabitants in 2002 (the last census), the decrease being due to massive emigration after 1990. This county is situated in North-West Romania, close to the Hungarian border. The ethnical structure is as follows: 70.92% Romanians (R), 29.05% Hungarians (H) and 0.03% other nationalities. Female/Male ratio was of 51.38% / 48.62% in 2003. All suicides (886: 488 R; 402 H) committed in this area between 01.01.1994 and 31.12. 2003 (10 years) have been analyzed. The data were obtained from official documents of Bihor County Forensic Pathology Laboratory. Data gathered was: frequency, sex, nationality, age, locality (population group categories and distribution), method of suicide, the existence or nonexistence of a psychiatric disease, the existence of attempted suicide prior to suicide. Because of the fact that one suicide rate is a multiple of the other, there was no need for a statistical, mathematical analysis.

RESULTS AND DISCUSSIONS
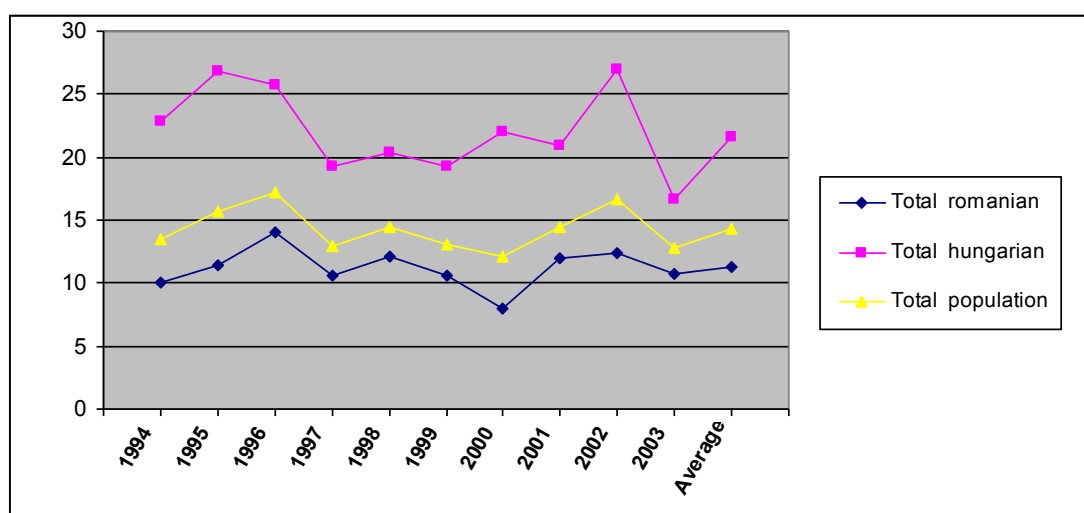
Fig. 1 The dynamics of suicide rates in groups of population by year and average

The suicide rates in Figure 1 are the rates of cases gathered from Bihor County, Romania for every year studied (from 1994 to 2003) by ethnicity measured in cases per 100,000 population.
From Figure 1, a big difference between the suicidal rate in Romanian (R) and Hungarian (H)

population can be observed. The average global rate, over the 10 years, was of 21.651/100,000 in H and 11.306/100,000 in R, almost doubled in H than in R. Over the 10 years, the fluctuation of the suicidal rate in Hungarian population varies between 16.63 and 12.29 (1.62 times) and in the Romanian population between 8.02 and 12.29 (1.53 times). Living in the same geographical area, under the same administration, both Romanian and Hungarian people are subjected to the same social, economical and political stress levels. We call the people's suicidal reaction to this type of stress the "suicidal resonance". The suicidal resonance to situations is similar in both populations. Therefore, situational suicidal resonance cannot explain the big difference between the two suicide rates. The curve of the suicide rate in both ethnic groups has similar ups and downs. The difference consists only in the size of the ratio.
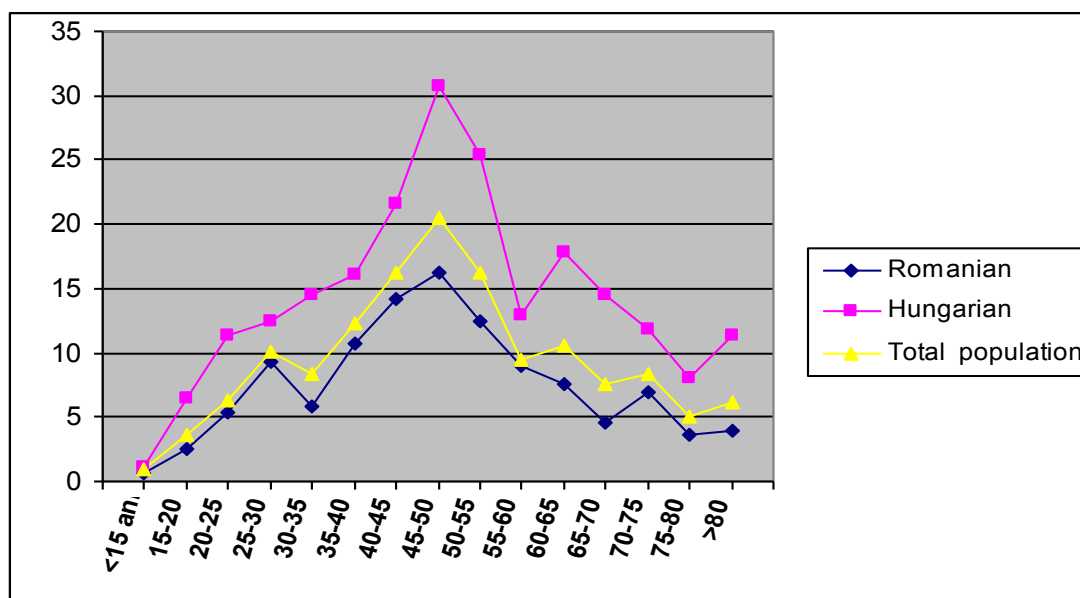
Fig. 2 The dynamics of suicide rates by age groups and groups of population

Figure 2 shows the different suicide rates by age groups for every ethnicity as well as for the total population of Bihor County, Romania for the 10 year period that was studied expressed in cases per 100,000 population.

The curves of the suicidal rate, according to age groups (Figure 2), show a similar tendency of the dynamics of the phenomenon according to age, with the same difference between suicide rates in R and H population regardless of age (a similar global tendency) [9, 10]. Suicide peaks are noted at the age of the three existential balances: the 25-30 age group, the marriage completion period in general population, the 45-50 age group, the critical hormonal period and the biological balance, and the 60-75 age group, the retirement age. Vulnerability in the last two age groups also has a biological component.

Nevertheless, all these vulnerable factors in the general population have similar expressions in suicide rate in R as well as in H. However, the difference between the final suicide rates between the two nationalities could not be explained by these parameters.

Regarding known alcoholics from the lot (12.453% R and 13.442% H) the psychiatric patient to suicidal ratio is almost the same. This points out that psychiatric diseases cannot be held responsible for the high suicide rates in H population. Alcohol intake at the time of the suicidal act has an almost identical percentage in both ethnicities: 51% R and 49% H. In conclusion, in 1

out of 2 people alcohol favored the suicidal act regardless of ethnicity. Rough methods such as hanging, defenestration, shooting, drowning, self arson, electrocuting and wounds are preferred by the H population while the softer methods (e.g. self poisoning) are more frequently used by R. We already know [3, 8, 11] that accomplishment methods are learned by imitation. These are suicidal trends in a certain geographical area within a given population, similar with those observed by other authors [12, 13, 14]. The two groups of population in this study have different suicidal trends. In the collective mentality of the two populations there are different outlooks about methods of suicide accomplishment.

Table 1. The suicide rate on ethnic areas over the 10 studied years

H Villages[$]	R Villages[%]	Villages with mixed population[^]		H Towns[§]	R Towns[`]
34,8	3,96	16,58		34,37	6,55
		R=15,6	H=17,66		
8,78 times higher in Hungarian population		Closest to the general rate		5.24 times higher in towns with Hungarian majority	

$-villages with exclusive Hungarian population;
%-villages with exclusive Romanian population;
^-population ratio of aproximatively 1/1: R-romanians, H-hungarians;
§-towns with Hungarian majority, aproximatively 60%;
`-towns with almost exclusive Romanian population

Table 1 shows the big differences between half-closed rural communities with R or H population. There, H suicides are 8.78 times higher than R. The difference between urban areas with a majority of H population and urban areas with almost exclusive R population is still very big: 5.24 times higher in H. A fact worth noting is that rural and urban suicide rates in H communities are almost identical. This suggests the presence of a common contributing factor in H villages and towns regardless of education or cultural background.

Villages are half-closed communities that require a high degree of homogenous mentality, leading to a unique collective mentality of the entire community. From this point of view, rural settlements with a mixed R and H population of 1/1 are closest to the general suicide rate of Bihor County. The influence proves to be mutual.

As seen above, the difference between suicide rates in H and R population within the same geographic area cannot be explained by the situational suicidal resonance. The suicide rate is similar in tendency on age groups, stages of biological vulnerability and gender difference. It differs, however, by accomplishment methods (involves imitation, trends and outlooks about suicide accomplishment). It differs as well by grouping the two populations in different collectivities with different religions and different We-ities. We call We-ity the spiritual, attitudinal and behavioral baggage of a populational group, as opposed to Alterity. On the other hand, the only contributing suicidal factors that could be pointed out were the cultural factor and the collective mentality of a community with its culture of suicide. These become part of what we call Culturally Vulnerable Suicide Areas.

CONCLUSIONS

o The suicidal phenomenon has been slowly increasing for the past 10 years (12.04-17.44) in Bihor County, Romania, with natural situational fluctuations.
o The general 10 year suicide rate for Romanians was 11.30/100,000 and 21.65/100,000 for Hungarians. In almost exclusively Hungarian villages the suicide rate was about 9 times higher than in exclusively Romanian villages. In almost exclusively Hungarian cities the

suicide rate was over 4 times higher than in almost exclusively Romanian cities. In mixed population towns close to 1:1 population ratio, the general suicide rate is included in the general fluctuation range.

o The only explanation found for the differences resulted from this study was the existence of a Culturally Vulnerable Suicide Area.

o These Cultural Vulnerable Suicide Areas require special monitoring so that principles of cultural prophylaxis of suicide could be issued.

o Influencing the collective mentality in this areas can only be done by an enlarged group consisting of psychiatrists, sociologists, psychologists, philosophers, teachers, priests and people of culture by engaging political factors, each of them using their own means of intervention in coordination with the other.

PROPOSALS

We suggest the WPA, in collaboration with national psychiatry associations, sociologists and psychologists, to initiate a project of registration of geographical areas with cultural vulnerability to suicide. Once registered, the common cultural issues of these areas could be understood, and thus we could proceed to the real prophylaxis of suicide.

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The Influence of Ethnic Affiliation on Preference for Inter-Ethnic Interactions Among Undergraduate in Lagos Nigeria

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ABSTRACT

The study investigates preference for inter-ethnic relationship as a function of ethnic affiliation among undergraduate students in University of Lagos, Nigeria. The sample for the study comprises of 684 undergraduates 284 of them were male while 400 were female with age range of between 18 to34 years. A questionnaire on preference for interaction with persons from various ethnic groups in Nigeria was designed and administered to assess respondents' willingness to interact with persons of the diverse ethnic groups at various levels of intimacy. Data collected was analyzed using frequencies and Chi-square The result revealed the prevalence of two major ethnic groups (Yoruba and Igbo) among the respondents. Chi-square analysis of the results shows that more of the participants from each of these two groups prefer to relate with members of their own ethnic group than members of the other ethnic groups. Logistic regression further revealed that young adults were more tolerant of other ethnic groups than their old adult's counterparts. Similarly, males reported more tolerance to ethnic differences compared to their female counterparts. Also, Yoruba participants were more tolerant to other ethnic groups compared to both Igbo's and the other ethnic groups. However there is gender difference in spousal preference such that more male than female preferred inter-ethnic marriages while the reverse was the case for intra-ethnic marriages. This finding is attributed to patriarchy which is prevalent in the country. However, for less intimate relationships, a substantial number prefer inter-ethnic relationships.

Key words: Ethnic affiliation, Interpersonal relationship. Inter-ethnic Preferences, Patriarchy

INTRODUCTION

Ethnic affiliation is one of the major characteristics of persons in multi-ethnic society, where interpersonal interaction is more or a norm among young and old (Clore & Byrne, 1974; Kelley, et al, 1983; Afifi & Metts, 1998; Felmlee & Muraco, 2009; Cupach & Carson, 2012). Nigeria as a typical multi-ethnic nation has been faced with issues of ethnic clashes, misunderstanding and suspicion. In an attempt to eradicate these vices and foster unity, the government has in the past introduced policies and institutions that encourage interactions of youths from the diverse ethnic groups. Prominent among these are establishment of Federal Secondary Schools and universities and the National Youth Service Corp whereby graduates serve outside their

states of origin. All these are avenues for youths to interact and appreciate the various ethnic groups thus fostering unity. In order to evaluate the potential for reducing the boundaries and social distances between the peoples of various ethnic groups, it is important to have a clear sense of the level of inter-ethnic friendship and the attitudes that Nigerian citizens have about broadening and deepening them. Relationships run right through everyday life, and for this reason everyone is interested in how relationships work and how to make them work better. Paradoxically, study of relationships is difficult because taken-for-granted assumptions make it hard to stand back and think about how they work.

The importance of relationships, both sexual and non-sexual, is 'obvious', particularly when friendship network, characteristics and psychological wellbeing in late adolescence is of great concern (Almquist, et al 2014). According to Duck (1999), we need merely to reflect for a moment on the sources of our greatest pleasure and pain to appreciate that nothing else arouses the extremes of emotion that are experienced in the course of personal relationships with other human beings Relationships make life meaningful, whether they are good or bad. Most relationship research has focused on 'voluntary' relationships. When describing relationships breaking up (or down), we often use language that implies a degree of choice. Traditionally, social psychologists have been interested in *interpersonal attraction*, which relates to the question: 'How do relationships start?' But during the last 20 years or so, the emphasis has shifted to relationships *as a process* (Duck, 1999), reflected in two further questions: 'What makes people stay in relationships (maintenance and progression)?' and 'Why and how do relationships go wrong (breakdown or dissolution)? *Affiliation* is the basic human need for the company of other human beings. The need to belong and to be accepted by others is one of Maslow's basic survival needs, and is also a major motive underlying conformity.

Conformity can be explained in terms of the need to evaluate our beliefs and opinions by comparing them with other people's, especially in ambiguous or unstructured situations. This is the central idea in Festinger's (1954) *social comparison theory*. According to Duck (1988), we are more 'affiliative' and inclined to seek others' company under certain conditions than others, for example, when we are anxious, when we have just left a close relationship, and when we have moved to a new neighbourhood. *Anxiety* is one of the most powerful factors. Kulik and Mahler (1989) reached the same conclusions when studying patients about to undergo coronary-bypass surgery. Most preferred to share a room with someone who had already undergone coronary surgery, rather than another patient waiting for the same operation. The main motive for this preference seemed to be the need for information about the stress-inducing situation. Not only were those assigned a post-operative roommate less anxious, they were more mobile post-operatively and had faster post-operative recoveries (Kulik *et al.*, 2003).

The Problem
The government of Nigeria in the past has envisaged the need for ethno-religious tolerance and so institute policies and avenues for youths to interact and appreciate the various ethnic groups thus fostering unity. The core objective of such policies across the globe was to reduce inter-ethnic boundaries and social distances between the peoples of various ethnic groups (Kelly, et al, 1983; Neziek, 1995; Holmes, 2000; Felmlee, 2001; Argyle, 2002). Be that as it may, Nigeria is a multiethnic society where little is currently known about how, young people mix with friends from different ethnic backgrounds and the potential impact of this on attitudes and preferences for a long lasting inter-personal interaction. The recent spate of inter-ethnic

intolerance, ethno-religious conflicts, inter-ethnic rivalries and Boko haram insurgency, is suspected implications of the level of ethnic intolerance in the country. Therefore, it has become a matter of utmost importance to have a clear sense of the level of inter-ethnic friendship and the attitudes of Nigerian citizens towards themselves. Relationships run right through everyday life, and for this reason everyone is interested in how relationships work and how to make them work better (Argyle & Furnham, 1983; Berscheid & Reis, 1998; Berscheid & Amazzalorso, 2004; Fujino, 1997).

Paradoxically, the question that bothers the mind of concerned researchers is that of "whether the intolerance is a matter of recent development or it has always been with us". It is worthy of note that Nigeria is a multiethnic society, unfortunately little or nothing is currently known about and how, young people mix with friends from different ethnic backgrounds and the potential impact of this on attitudes and preferences for a long lasting inter-personal interaction. The government of Nigeria, probably envisaging the grave implication of multi-ethnic status of the country and the need to tolerate one another through mutual understanding and interaction instituted one year National Youth Service Corp (NYSC). During this one year of national service as it is popularly referred to, young people are posted to different ethnic and cultural settings, where opportunity will be created to appreciate the culture and ethnic differences in the country. Whether this programme or policy is a success or not in the light of current spate of high level inter-ethnic intolerance has left more questions than answers. This paper explores the links between young People's interethnic friendships and their preferences patterns and behaviours. The study examines these links using quantitative and qualitative methods among a sample of young adults in the University of Lagos.

Objectives of the Study

o To examine the pattern of ethnic affiliations and interpersonal interactions among young adults.
o To examine the pattern of inter-ethnic preferences in choice of mates for inter-personal interaction.
o To investigate the influence of ethnic affiliations of young adult preferences for inter-ethnic interaction.

Significance of the Study
The paper therefore carefully provides baseline data for achieving the following:

o Exploration of the intra- and interethnic mix of young people's friendship groups as described by young people themselves.
o Provision of empirical data on patterns ethnic preferences in interpersonal interaction.
o Establishing the link between young people's background characteristics, their friendship groups (including the ethnicity of friends) and their reported preferences.
o Identification of the implications of the findings, including recommendations for inter-ethnic tolerance, harmed insurgency reduction based on education and peer support programmes.
o Provision of a benchmark for a comprehensive appraisal of objectives of the National Youth Service Corps (NYSC).

Research Questions

o What is the pattern of ethnic affiliations and interpersonal interactions among young adults of Yoruba, Igbo and other ethnic groups in Nigeria?
o What is the pattern of inter-ethnic preferences in choice of mates for inter-personal interaction?

o Will ethnic affiliations of young adult influence preferences for inter-ethnic interaction.

Interpersonal Attraction: Theoretical Underpinning

A general theoretical framework for explaining initial attraction is *reward theory* (Clore and Byrne, 1974; Lott & Lott, 1974). The more rewards someone provides for us, the more we should be attracted to that individual. A number of factors have been found to influence initial attraction through their reward value, including *proximity*, *exposure* and *familiarity*, *similarity* and *physical attractiveness*.

Proximity: physical closeness or *propinquity* represents a minimum requirement for attraction: the further apart two people live, the lower the probability they will ever meet, let alone become friends or marry. Festinger *et al.* (1950) studied friendship patterns in a university campus housing complex for married students. People were friendlier with those who lived next door, next most friendly with those living two doors away, and least friendly with those who lived at the end of the corridor. On any one floor, people who lived near stairways had more friends than those living at the end of a corridor. However, physical proximity has become less important with the creation and expansion of Internet dating sites, chat rooms and email. It's much easier now to become friends, even lovers, with individuals at great geographical distance (Buunk and Dijkstra, 2008).

Exposure and familiarity: Proximity increases the opportunity for interaction (*exposure*), which, in turn, increases *familiarity*. There is considerable evidence that, far from breeding contempt, familiarity breeds fondness (the *mere exposure effect*: Zajonc, 1968). For example, the more times university students saw photographs of men's face, the more they liked them (Zajonc, 1968). According to Argyle (1983), the more two people interact, the more *polarised* their attitudes towards each other become – usually in the direction of greater liking. This, in turn, increases the likelihood of further interaction, but only if the interaction is on an equal footing. People form friendships with those they encounter frequently (as the mere exposure effect would predict). Asian Americans date Euro-Americans when they are in close proximity (Fujino, 1997), high-school students form friendships within their own academic subjects (Kubitschek and Hallinan, 1996), and older, relocated adults make friends among their nearest neighbours (Dugan and Kivett, 1998; Felmlee, 2001). According to Fiske (2004), if someone resembles prior experience or the self, then at least we have the illusion of knowing 'what makes them tick'. In this respect, familiarity and similarity influence attraction in comparable ways.

We mostly seek out others who make us feel good about ourselves: People who resemble us or agree with us also reassure us. People who validate us and like us presumably won't do us any harm (Fiske, 2004). According to the *similarity-attraction principle*, if familiarity underlies attraction, and if the most familiar people are those who are like us, then people like us are attractive. This stems in part from *consistency theories* of attitude change ; the most relevant here is Heider's (1958) *balance theory*. We prefer and infer affective, cognitive and behavioural consistency – in ourselves and others: we like to agree with our friends and to befriend those who agree with us. This describes *interpersonal balance*, 'a harmonious state, one in which the entities comprising the situation and the feelings about them fit together without stress' (Heider, 1958).

Another theoretical explanation is provided by the filter model (Kerckhoff & Davis, 1962). The theory argued that relationships go through a series of filters, which are important if the relationship is to begin or progress. The more important the relationship is, the more effort and filtration. One of the most important selections is of our friends and partners. Relationships go though stages whereby

different criteria are used at successive stages. It starts with social variables, such as class and religion. Then it moves to internal values. Finally, it moves to personality traits. Note that we seek similarity in social variables and values, but personality traits may be complementary. The first filter revolves around the fact that we only meet a very small fraction of people living in our area (proximity filter). Most of those we meet tend to be of a similar social class, education level and maybe even the same ethnicity or racial group (similarity filter). The third filter is based on psychological factors. The chances of a short term relationship becoming more permanent depended most on shared beliefs and values. The fourth filter surrounds our emotional needs as the best predictor of relationship survival.

According to this *filter model* (i) Similarity *of sociological* (or *demographic*) variables determines the likelihood of individuals' meeting in the first place. To some extent, our choice of friends and partners is made for us; social circumstances reduce the '*field of availables'* (Kerckhoff, 1974) – that is, the range of people that are *realistically* (as opposed to *theoretically*) available for us to meet. There is considerable *pre-selection* of the types of people we come into contact with, namely, those from our own ethnic, racial, religious, social class and educational groups; these are the types of people we tend to find most attractive initially, since similarity makes communication easier and we have something immediately in common with them. At this point, attraction has little to do with other people's individual characteristics (this is the first 'filter'). (ii) The second filter involves individuals' *psychological characteristics*, specifically *agreement on basic values*. This was found to be the best predictor of the relationship becoming more stable and permanent. (iii) The third filter involves *complementarity of emotional needs, which was* the adjudged best predictor of a longer term commitment. Complementary behaviours take account of each other's needs, helping to make a perfect whole and making the relationship feel less superficial (Duck, 1999). The *Stimulus-value-role theory* (Murstein, 1987) also provides another perspective to how relationship gets started. According to Murstein's Stimulus-Value-*Role* (SVR) theory, intimate relationships proceed from: (i) a *stimulus stage*, in which attraction is based on external attributes (such as physical appearance), through (ii) a *value stage*, in which similarity of values and beliefs becomes much more important, and finally to (iii) a *role stage*, which involves a commitment based on successful performance of relationship roles, such as husband and wife. Although all three factors have some influence throughout a relationship, each one assumes greatest significance during one particular stage.

LITERATURE REVIEW

According to Berscheid and Ammazzalorso (2004), the concept of a relationship: refers to two people whose behaviour is interdependent in that a change in behaviour in one is likely to produce a change in behaviour of the other A 'close' relationship denotes an interaction pattern that takes place over a long period of time; the partners' influence on each other is strong and frequent, and many different types of behaviour are affected (Kelley *et al.*, 1983). In common with other close relationships, romantic relationships involve interdependence, strong feelings, committed intent and overlapping self-concept. But unique to romantic relationships are passion and exclusive commitment (Fiske, 2004). According to Moghaddam *et al.* (1993), interpersonal relationships in western cultures tend to be *individualistic*, *voluntary* and *temporary*; those in non-western cultures are more *collectivist*, *involuntary* and *permanent*.

Argyle and Henderson (2014) conducted four studies on the rules of friendship. Studies 1 and 2 established the strength of endorsement of 43 friendship rules in British, Italian, Hong Kong and Japanese samples. Study 3 found differences in reported rule-keeping between sustained and lapsed friendships by self and other, and between sustained relationships rated high and low in quality. Study 4 examined the role of rule breaking in friendship breakdown, and

dissolution of friendship was attributed to the breaking of a number of our endorsed rules. Six rules were endorsed as very important in Study I and distinguished between behaviour in lapsed and current friendships; also relationship breakdown was related to failure to keep to these rules. They dealt mainly with the exchange of rewards and intimacy. Dissolution of friendships was also attributed to the breaking of third party rules.

Jeffrey (2012) in a multi-study investigation of friendship standards, the dimensions of ideal expectations identified and confirmed the factor structure of ideal friendship standards. Study 1 conducted an exploratory factor analysis on 30 existing subscales of friendship expectations. Study 2 reduced 181 items from past subscales and single-item measures of friendship expectations to 51 items measuring six factors. Study 3 used an international internet sample to conduct a confirmatory factor analysis on the six factor model. Samples from studies 2 and 3 were combined and factorial invariance was demonstrated by sample, by participant sex, and by age. The six factors of expectations (i.e., symmetrical reciprocity, agency, enjoyment, instrumental aid, similarity, and communion) constitute the ideal standards of friendship.

Jeffrey (2011) in a similar study investigated sex differences in friendship expectations. The study contends that friendship expectations are prescriptive normative behaviours and highly valued qualities in ideal same-sex friends. The paper reports the results of five meta-analyses of sex differences from 37 manuscripts. A small difference favouring females was detected in overall friendship expectations. Friendship expectations were higher for females in three of four categories: symmetrical reciprocity (e.g., loyalty, genuineness), communion (e.g., self-disclosure, intimacy), and solidarity (e.g., mutual activities, companionship), but agency (e.g., physical fitness, status) was higher in males. Overall expectations and symmetrical reciprocity showed small effect sizes. Medium effect sizes for communion favoring females and for agency favoring males support predictions of evolutionary theory.

Almquist, Ostberg, Rostila, Edlinq and Rydgren (2011) examined f*riendship* network characteristics and psychological well-being in late adolescence by exploring differences by gender and gender composition among Swedish Adolescents born in 1990. The results indicate that males' and females' friendship networks were similar with regard to quality and trust, whereas males' networks were characterized by less self-disclosure and a stronger preference for same-gender friendships. Gender composition did not matter for the support levels. Emotional support was associated with psychological well-being but there were gender differences: females seemed to benefit more health-wise from having high-quality (and trusting) networks. Moreover, whereas self-disclosure among males was positively linked to well-being, this was not the case among females. None of these associations were moderated by gender composition. The study concluded in sum that friendship networks are beneficial for the psychological well-being among late adolescents, but there are some important differences according to gender.

Felmlee and Mraco (2009) examined same and cross-gender friendship norms in a sample of 135 adults (average age 73 years). Participants evaluated a friend's behavior, quantitatively and qualitatively, in vignettes in which the friend's gender was experimentally manipulated. Gender often significantly, though modestly, influenced normative evaluations. Women frequently had higher expectations of friends than men and placed a greater emphasis on intimacy. Women were more disapproving of violations of friendship rules, such as betraying a confidence, paying a surprise visit, and failing to stand up for a friend in public. However, both men and women were less approving of a man than a woman who greets another friend with a

kiss or who requests to stay overnight. Respondents' open-ended comments reflected positive attitudes regarding cross-gender friendships. Most findings demonstrated that men and women across a wide age range held similar cultural norms for close ties, norms of trust, commitment, and respect.

Afifi and Metts (1998) examined characteristics and consequences of expectation violations in close relationships. The study review relevant extant studies and conclude that research on expectation violations in relationships has adopted a conceptual framework of violations that constrains our understanding of the role that unexpected behaviors play in relationships. First, the relational literature has generally studied extreme and highly salient violations in relationships. Second, much of the research on relationship violations has considered only negatively valence behaviours. Third, violations have almost universally been assumed to increase uncertainty states. Finally, the available evidence about violations in relationship has been descriptive, rather than based on theoretical foundations. In order to address these four concerns, three studies of violations in relationships were conducted. The results (i) provide a typology of expectation violations in close relationships, (ii) confirm that relationship violations vary in intensity, valence and effect on uncertainty, and (iii) support the theoretical logic discussed in Afifi and Burgoon (1996) to predict the relationship outcomes of expectation violations

Cupach and Carson (2002) focusing on characteristics and consequences of interpersonal complaints associated with perceived face threat proposes that recipients' aversive reactions to complaints are a function of perceived face threat. One hundred and ninety-nine college students completed a survey asking them to describe in detail a recent complaint they had received from a friend or romantic partner, and to describe their response to that complaint. Respondents completed measures designed to assess their reactions to the complaint, including perceived face threat, negative affect, fairness, and damage to the relationship. As predicted, dispositional complaints were perceived to be more face threatening than non-dispositional complaints, and complaints delivered in public were more face threatening than complaints delivered in private. Both positive and negative face threat were associated with the complaint recipient's anger/hurt and defensiveness. Perceptions of positive face threat also were associated with perceptions of less fairness and greater perceived damage to the relationship, whereas perceived threat to negative face predicted the recipient's feelings of embarrassment and anxiety/depression. The findings indicate that the face-threatening nature of complaints is associated with adverse relational consequences. Perceived threats to positive face, which tend to convey relational devaluation, were more strongly associated with relational damage than were threats to negative face.

Neziek (1995) investigated social construction, gender/sex similarity and social interaction in close Personal relationships. In this study participants maintained a social interaction diary, a variant of the Rochester Interaction Record, to describe their close personal relationships. Relationships were defined using relative frequency of contact with different individuals and via participants' descriptions of relational partners. Individuals with whom participants had more contact were more likely to be described as close friends than were individuals with whom participants had less contact. The results suggest that the characteristics of same-sex relationships depend less on the specific partners composing the relationship than do the characteristics of opposite-sex relationships. As hypothesized, the characteristics of close same-sex relationships did not differ from the characteristics of other same-sex relationships, although interactions with best friends were more intimate than interactions with other same-sex partners. In contrast, the characteristics of close opposite-sex relationships differed from the characteristics of other opposite-sex relationships. Men and women who were romantically

involved had more contact with their romantic partners than with other opposite-sex persons, and they had more contact with their romantic partners than men and women who were not romantically involved had with their most frequent opposite-sex interaction partner. For women, interactions with most frequent opposite-sex interaction partners were more affectively rewarding and instrumentally positive if these men were romantic partners, whereas for men, the affective quality and instrumentality of interactions with most frequent opposite-sex interaction partners did not differ as function of whether these women were romantic partners.

METHOD

Survey research method involving the use of questionnaire was used for the study. Questionnaire on Ethnic Affiliation was designed for the study. Respondents were requested to provide information on their age, department in the university, and their ethnic group. A list comprising the major ethnic groups and the minority groups in Southern Nigeria suggested by the students was provided. The ethnic groups are Yoruba, Hausa, Igbo, Fulani, Efik, Ijaw, Edo, Itshekiri, "any other". They were asked to indicate the ethnic group they preferred to relate within the following capacities: a) spouse b) close friend c) ordinary friend d) acquaintance e) roommate f) employee in a four man firm g) someone with whom to share apartment or flat h) neighbour i) visitor in house.

Participants

Participants for the study were drawn from University of Lagos, a Federal university situated in Lagos, a mega city with people of diverse ethnic groups. A total of 684 undergraduate students participated in the study 284 were male while 400 were female. 377 of them belong to the Yoruba ethnic group, 157 were of Igbo origin while the remaining 150 belong to all the other ethnic groups in Nigeria. Their age range was 18 to 34 and they were drawn from all the faculties in the institution.

Procedure

The questionnaires were administered to the students in lecture rooms and hostels with the help of psychology students. Each student was given a copy of the questionnaire and requested to fill it and return on completion

RESULTS

The number of respondents of the various listed ethnic groups in Nigeria was calculated. The result show that 377 were of Yoruba origin, 157 Igbo while the remaining 150 belong to other ethnic groups in Nigeria. Consequently, respondents were classified into three categories namely; Yoruba, Igbo and 'any other'.
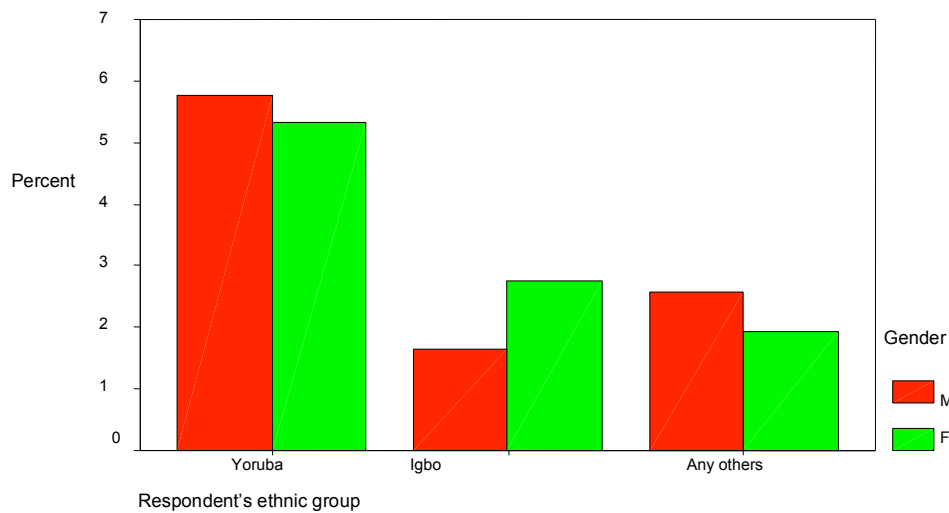
Fig 1 Percentage Distribution of Participants by their Gender and Ethnic Affiliations

Pearson Chi-square was used to compare the number of respondents in the three groups who indicate preference for interactions with persons of the three different groups. Table 1 shows the frequencies and the Chi2 obtained for each of the 9 types of interactions.

TABLE 1: Preference by Respondents' Ethnic Groups

	Preferences	Ethnic Group	Yoruba	Igbo	Others	X^2	pv
P R E F E R R E D	Spouse	Yoruba	288(77%)	30(20%)	58(39%)	236.04	P<.05
		Hausa	30(5%)	84(56%)	22(15%)		
		Igbo	58(8%)	43(29%)	70(47%)		
	Close friends	Yoruba	260(69%)	60(38%)	59(39%)	149.29	P<.05
		Igbo	22(6%)	73(46%)	29(19%)		
		Others	95(25%)	24(15%)	62(41%)		
	Ordinary friends	Yoruba	186(49%)	60(38%)	57(21%)	40.88	P<.05
		Igbo	90(24%)	45(29%)	14(9%)		
		Others	101(27%)	52(33%)	79(53%)		
	Acquaintance	Yoruba	174(46%)	32(20%)	37(25%)	64.14	P<.05
		Igbo	66(18%)	60(38%)	25(17%)		
		Others	136(36%)	65(41%)	88(59%)		
G R O U P S	Room mate	Yoruba	253(67%)	54(34%)	62(41%)	110.10	P<.05
		Igbo	39(10%)	73(46%)	31(21%)		
		Others	85(23%)	30(19%)	57(38%)		
	Employee	Yoruba	215(57%)	41(26%)	34(23%)	88.96	P<.05
		Igbo	53(14%)	60(38%)	38(25%)		
		Others	109(29%)	56(36%)	78(52%)		
	Apartment sharing	Yoruba	258(68%)	27(15%)	33(22%)	215.58	P<.05
		Igbo	43(11%)	74(47%)	24(16%)		
		Others	76(20%)	56(36%)	93(62%)		
	Neighbour	Yoruba	192(51%)	29(18%)	39(26%)	85.75	P<.05
		Igbo	66(17%)	78(50%)	44(29%)		
		Others	119(32%)	50(32%)	67(45%)		
	Visitor	Yoruba	200(53%)	28(18%)	47(31%)	124.06	P<.05
		Igbo	40(11%)	77(49%)	27(18%)		
		Others	135(36%)	52(33%)	76(51%)		

Table 1 shows significant influence of ethnic group on the preferences of respondents for all the types of interactions. It also revealed that more Yoruba respondents show preference for interactions with members of their ethnic group than other ethnic groups. On the other hand, Igbo respondents show preference for their own ethnic group in 7 out 9 categories of interactions. The exceptions are 'spouse' where more of them prefer Hausa and 'close friend' where more show preference for Yoruba. In addition, Hausa was not represented in the sample. Further analysis of spousal preference by gender was carried out. The result is presented in Table 2.

Table 2 on next page shows that most of the Yoruba's respondents (both male and female) preferred intra-ethnic marriages, However, the percentage was higher for the female (8 1%) than the male(71%) Only 17% of the male and 15% of the female indicate preference for Igbo spouses (interethnic marriages).

TABLE 2: Spousal Preferences by Gender Preferred Ethnic Group

			Yoruba	Igbo	Hausa	Total
Respondents ethnic groups	Yoruba	Male	116 (71%)	27 (17%)	20 (12%)	163
		Female	172 (81%)	31 (15%)	10 (5%)	213
	Igbo	Male	6 (13%)	7 (15%)	34 (72%)	47
		Female	24 (22%)	36 (33%)	50 (45%)	110
	Others	Male	22 (30%)	41 (56%)	10 (14%)	73
		Female	36 (47%)	29 (38%)	12 (16%)	77

Furthermore 12% of the male and 5% of the female preferred. A high percentage(72%) of the male Igbo respondents indicate preference for Hausa spouses while only 45% of their female counterparts stated they preferred Hausa spouses. Only 13% of the Igbo male indicate preference for Yoruba spouses while 24% of the female show preference for Yoruba as husbands thus showing that more female than male Igbo preferred Yoruba spouses.. Preference for intra-ethnic marriages was higher for the female Igbo(33%) than for their male counterparts(15%). However, only 5% female respondents preferred intra-Hausa ethnic marriages. As for the remaining respondents that were classified as 'others', 30% of the males and 47% of the females preferred Yoruba spouses. The reverse was the case for preference for Igbo spouses with 56% male and 38% female showing preference for Igbo.

Further, in order to investigate the influence age, gender and ethnic affiliations on ethnic tolerance as measured by the frequencies of inter-ethnic preferences under investigation, Logistic regression analysis was computed using frequencies of inter-ethnic preferences as levels of ethnic-tolerance index (dependent variables). The result is presented in Table 3.

Table 3: Summary Table of Logistic Regression Analysis

VARIABLES	VARIABLES IN THE EQUATION						95% CI for Exp. (B)	
	B	SE	Wald	df	Sig.	Exp.(B)	Lower	upper
Age (Young/old Adults)	.3143	.0201	.0532	1	.0312	3.076	.1120	3.076
Gender (Male/female)	.2341	.2098	.0237	1	.0432	4.257	.1003	4.846
Ethnic (Yoruba/Igbo)	.3324	.4011	.0312	1	.0510	6.345	.1240	6.345
-2 Log Likelihood	569.428							
Cox & Snell –R^	322.209							

Results of Logistic regression as presented in Table 3 revealed a significant positive progression in the observed ethnic tolerance. This implies that young adults were about 3.07

times more tolerant of other ethnic groups than their old adult's counterparts. Similarly, males reported about 4.25 times more tolerance to ethnic differences compared to their female counterparts. Also, Yoruba participants reported about 6.34 times more tolerant to other ethnic groups compared to both Igbo's and the other ethnic groups. This result is very instructive with far reaching implications for structuring enduring inter-ethnic interpersonal relationship. The results inter-alia revealed that despite the fact both Yoruba's, Igbo's and other ethnic groups preferred somebody of their ethnic group as spouse, close friend, ordinary friend, room-mates, employees, neighbours and visitors, Yoruba's reported a much better openness and ethnic tolerance, followed closely by Igbo's and other ethnic enough groups (i.e. Fulani's, Hausa's, Tiv's, Ijaw's, Efik's etc). This result is rather surprising because the fact the Igbo's and Yoruba's are widely travelled and are found almost in any town or villages in Nigeria, is reason to expect that their level of tolerance for other ethnic groups should be very high.

DISCUSSION

The results of this study reveal that respondents showed preference for interaction with members of their own ethnic groups than other ethnic groups, irrespective of the type of interaction. This should be of great concern because lack of interaction could hinder the unity which is essential for the development. The results also show that more of the Yoruba respondents preferred interactions with members of their own group. This is likely due to the peculiarity of this group; they might not have enough experience with other groups by virtue of the fact that they are schooling in the geographical location of their ethnic group. On the other hand, the Igbo respondents show preference for Yoruba close friends and spouses. This can be attributed to their schooling in south-west where there are more of the Yoruba ethnic group thereby having opportunity to interact with them. Such proximity has been known to encourage interpersonal attraction. This result is consistent with that of Argyle (1983) which reported that the more two people interact, the more *polarised* their attitudes towards each other become – usually in the direction of greater liking. This, in turn, increases the likelihood of further interaction, but only if the interaction is on an equal footing. The result also amplifies Fujino (1997) findings that people form friendships with those they encounter frequently (as the mere exposure effect would predict). Kubitschek and Hallinan (1998) findings that person's of different cultural background are more likely to date themselves when they are in close proximity and high-school students form friendships within their own academic subjects is not consistent with the present findings in Nigeria. Moreover, the finding is consistent with that of Jeffrey (2011) in a similar study investigated sex differences in friendship expectations. The study contends that friendship expectations are prescriptive normative behaviours and highly valued qualities in ideal same-sex friends. Dugan and Kivett (1998) findings that older adults that relocated make friends among their nearest neighbours is also refuted.

The findings of this study also include male preference for inter-ethnic marriages and female preference for intra-ethnic marriages. This is largely due to the fact that marriage in Nigeria involves the man assimilating the woman into his extended family. This result is consistent with the assumptions envisaged in the Kerckhoff and Davis (1962) assumption that individual' psychological characteristics (*agreement on basic values)* predicted probability of relationship becoming more stable and permanent. Moreover, the result also supported Kerckhoff and Davis (1962) that *complementarity of emotional needs* predicted long term commitment. Complementary behaviours take account of each other's needs, helping to make a perfect whole and the relationship feel less superficial (Duck, 1999). These findings underscores the continue relevance of provision of all policy initiatives for youths to interact and appreciate the various ethnic groups to foster unity. It has therefore become a matter of outmost concern that

all hands must be on deck for reducing the boundaries and social distances between the peoples of various ethnic groups. It is worth noting that there was no Hausa respondent among the sample. This shows that this group may be few in the university despite the fact that it is a federal institution. This may be due to the far distance between the northern and the southern part of the country.

CONCLUSIONS

One of the salient findings was that sampled young adults showed preference for interaction with members of their own ethnic groups than other ethnic groups, irrespective of the type of interaction. Other findings revealed a very weak inter-ethnic affiliation among young adults, particularly among the Yoruba's, Igbo's and others with grave implications for the quest for inter-ethnic unity among Nigerian young adults. For example, young adults were more tolerant of other ethnic groups than their old adult's counterparts, males reported more tolerance to ethnic differences compared to their female counterparts. Also, Yoruba participants reported are more tolerant to other ethnic groups compared to both Igbo's and the other ethnic groups. Yoruba's, Igbo's and other ethnic groups preferred somebody of their ethnic group as spouse, close friend, ordinary friend, room-mates, employees, neighbours and visitors, Yoruba's reported a much better openness and ethnic tolerance, followed closely by Igbo's and other ethnic enough groups. These findings should be of great concern to local, state and federal government of Nigeria, because lack of interaction could hinder the unity which is essential for the development. This result and similar others reported above seemingly explain the reason why Nigeria ethnographic polarity is effectual. There is no doubt about the fact ethnic intolerance is a major factor in failed national integration efforts of the Federal Government of Nigeria. More than before, the findings have tremendous implication for appropriate policy initiative to forester harmonious inter-ethnic relationship in the country. It has become a matter utmost concern to note that inter-ethnic friendship and the attitudes that Nigerian citizens towards themselves is rather narrowing down. This further underscores the significance of the National Youth Service Corp whereby graduates serve outside their states of origin. It is hereby presumed that this information will be beneficial to the government in terms of raising awareness, building corporate consensus that will effectively contribute to the success of appropriate policy formulation for national integration and youth development.

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"He Imparted to Me a Sense of Belonging. This is The Greatest Gift a Person Can Receive" The Academic Learning Experience of a Sight Impaired Student

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ABSTRACT

In recent years, a growing number of students with special needs have been enrolled in higher education institutions. This increase has uncovered the need to introduce changes in the system in order to provide suitable support for these students. Understanding the academic, emotional and social difficulties they encounter and understanding their perception can help ease their inclusion and progress. This chapter presents the voice of a visually impaired special education teacher. The autobiography describing her experiences as an academic student, has been holistically analyzed according to the four steps listed in the "Listening Guide" (Brown & Gilligan 1992). The findings show the voice of disability versus capabilities, with the clear message being the importance of including students with special needs in the academic world and offering them assistance and support both in the application process and throughout their studies.

Keywords: Students with disabilities in the academy; Inclusion; narrative research, the "Listening Guide" method.

INTRODUCTION

In February 2009, In Israel, the Law of Students with Learning disabilities in higher education came into effect. The law seeks to help applicants and students in higher education to exhaust their rights optimally. With the years, a significant need emerged for the integration of students with special needs into higher education institutions so that they can gain an occupation and expand their education. At the same time, public awareness of learning disabilities has increased considerably. A combination of these factors led to a significant rise in the number of students with special needs enrolled in higher education institutions.

The increase in the number of students with special needs in higher education institutions brought about the need for systemic changes so as to give these students the proper support in the course of their academic studies. Understanding the academic, emotional and social difficulties experienced by learning disabled students, and understanding their perceptions might help in the construction of proper, significant support. As the first step in this support, it is important to understand the learning experience of students with special needs. This research will expose the learning experience of a sight impaired student seeking to sound her voice and learn about her needs and her coping in the academic world.

As an academician in the field of special education, I see great significance in encouraging students with special needs so that they can realize their potential and achieving their personal vision.

In the course of my studies for a teaching certificate in special education, about 30 years ago, there was a hearing impaired student in my class. At the end of the second year of studies, she was informed she could not continue her studies because of her hearing impairment. She did not give in, but continued her studies elsewhere and has been working as a teacher and educator to this day. This episode remained etched in my memory some twenty years later in my capacity of Head of the Special Education Department. This position has afforded me the opportunity to meet students with special needs, among them Avigail, and to accompany them along their far-from-simple path towards receiving their teaching certificate.

This chapter presents the voice of a visually impaired special education teacher. Research has found that the desire to work in special education is closely related to a positive affair with personal or family misfortune (Hillel-Lavain. 2003, 2009; Tangala & Margaret, 2007). Avigail was accepted and studied during the years I served as Head of the Special Education Department.

Research question:
The research question that this study examined was: What is the learning experience of a visually impaired student studying in an academic setting?

LITERATURE REVIEW

In recent years, the number of students with special needs studying in academic institutions has increased, for a number of reasons. Firstly, the Students' Rights Law requires every academic institution to have a support center. Secondly, more students diagnosed, thanks to a growing awareness, demand their rights to accommodations and special provisions in their learning environment and exams (Dahan & Ziv, 2012).

One of the most prominent difficulties accompanying disability is an impediment in social functioning, which stems, inter alia from low self-image (Dahan & Ziv, 2012). The difficulty is not simply a matter of being accepted to an academic institution, but also continues after enrollment. These students constantly face complex challenges and experience more tension and anxiety than their fellow students.

These students report high levels of anxiety, low self-image and large gaps between their capabilities and academic achievements (Barton & Fushrman, 1994). Furthermore, these students reported experiencing more difficulty performing tasks, adjusting to change and coping with criticism (Mellard & Hazel, 1992).

It was found that beyond the difficulties in academic studies due to the disability, these students had to cope with problems such as: coping with academic demands, adjusting to changes, coping with outside criticism and adjusting to university life.

They experienced frustration while studying and are characterized as being disorganized, which hampers the learning process (Harrison, Areepattamannil & Freeman, 2012).

Society's lack of knowledge and basic understanding of people with special needs in general, and some types of disability in particular, often places those who are considered "normal" and "others" in challenging situations, which are difficult and painful for both sides. A glass wall has been formed, fed to a great extent, by the stereotype of disability as a disease (Reiter, 2004).

Interviewees in research that examined the factors behind the success of integrating people with special needs remarked that an important and consequential component in successfully coping with the world at large is receiving support and assistance from various people throughout their lives, who opened up windows of opportunity for them (Mandler & Naon, 2002).

Motivation in Choosing to Become a Special Education Teacher
A large body of educational research has discussed the issue of motivation in choosing to become a teacher in mainstream education (Katzin & Shkedi, 2011; Perry & Friedman, 2011), whereas this motivation for special education has only been researched in the last decade. A study I conducted (Hillel-Lavian, 2008) was intended to examine this question anew by observing students enrolling in the special education teacher training route. The goal of the study was to examine what motivated the students to become interested in teaching, particularly in choosing special education, via means of personal life narratives. The research population included 20 students.

The narratives yielded a picture of teachers, imbued with motivation, the majority holding a rather personal approach to special education, due to personal and family differences; some were with learning disability, some were new immigrants, some sisters to siblings with special needs, which gave them early in life, successful experience with care, whether in volunteer work, school or in the army. Some of the participants commented on the influence of certain special teachers who were role models for them.

By means of narrative research, teachers' personal stories have acquired a respectable place in research of teaching and teacher training, in recent years. The narrative approach raises two main claims for its use as a tool in teaching research and in teacher education. The first claim is that teachers find expression for many important facets of their work by telling their personal stories, which helps clarify the knowledge they have accrued through their activity and practical understanding. The second claim is that the story serves as a conceptual tool by means of which they can better explain their work (Elbaz-Lubisch, 2002).

Choice of profession is closely associated with the students' life stories, which connect their past, present and future and give meaning their life's continuity beyond the facts, and constitute a significant and central stage in building their identity (Rosenberg, Munk and Keinan, 2008). The use of life stories is a reflection of teachers' practices and serves teacher educators by mirroring the process of teaching, which is actually a journey of reflection and change across the years (Forrest, Keener and Harkins, 2010).

It seems that teachers' and students' life stories can serve as a tool for examining their perceptions and beliefs as well as revealing the motives which led them to choose the teaching profession. Career choice is one of the most important decisions that affect the person's functioning both psychologically and socially (Court, Merav, & Ornan, 2009). The human desire to work at a personally meaningful job is an existential need. A strong self-identity is necessary to attain self-actualization through a career. A person chooses a profession or career with the aim of fulfilling his/her self-image and forming his/her professional identity (Yaffe-Yanai, 2000).

The choice of a teaching profession has been found to connect to previous life experiences that influenced the students, such as significant role models who influenced them, or significant experiences relating to the field, or processes of internalization and identification with teachers who had taught them in the past (Katzin & Shkedi, 2011).

The sense of a social mission as a social motivator on the one hand and the fulfillment of needs as a personal motivator, on the other hand, are the main factors in choosing the teaching profession. In the sense of mission one can see the attitude towards the pupil, the attitudes towards society in order to establish continuity of cultural values and meaning as well as the pupil's attitude towards self (Brenner, Zelkovich & Talker, 2002). The principle motivation for choosing teaching stems from internal factors. Commitment of teachers who emphasize these intrinsic motivating factors is higher than those who relate to extrinsic motivating factors (Katzain & Shkedi, 2011).

Research reveals that choosing teaching in special education almost totally stems from intrinsic motivating factors (Tangala & Margaret, 2007). The attributes characteristic of the special education teacher as described in research literature are: great commitment, creativity, flexibility, steadfastness in face of the unexpected, patience, tolerance, sensitivity and empathy towards others and desire to give, readiness to see work as a challenge and goal, ability and readiness to invest physical, intellectual and emotional effort in hard and complex work (Aboudi-Dangur, 1992; Ronen, 1988).

Teachers in special education come to the profession with a conscious decision, formed over the years of their lives, to devote themselves to this emotionally demanding work, which requires daily assistance to weak and vulnerable members of society (Gavish & Friedman, 2001).

METHODOLOGY

Narrative research based on life stories was chosen for this study from a wide range of alternative methods of interpretive research. Narrative research has achieved impressive results in recent years. No longer concerned with only past developments it also serves as a generative as well as expressive tool. Not only do narratives reflect identity, society, and culture, but the way they structure these factors establishes a connection between the researcher and the participant. The words used in narrative research are the basis for the data and the research focus moves from the universal, which can be classified and generalized, to the local and private, the personal and subjective (Clandinin, 2007; Freeman, 2007).

Numerous researchers posit that the human experience is a narrative experience, which can be best understood via stories. In the domain of education, the following researchers made significant contributions: Carter (1993); Clandinin and Connelly (1995, 1999); Craig (2001); Witherell and Noddings (1991) and others. A narrative is a story which an individual tells about the events of his life and it includes the perceptions, beliefs, and feelings via which his identity is revealed. A narrative is a live snapshot of the teller's identity or personality (De Fina, Schifrin & Bamberg, 2007).

Data Collection
Avigail wrote her life story as an autobiography at the end of her last year of her college studies. For the purpose of this study, I asked her permission to use this autobiography. In addition, use was made of the researcher's reflective diary

Method of Analysis
The narrative was analyzed using the "Listening Guide" method (Brown & Gilligan 1992, Gilligan et al 2003), which consists of a series of consequential listenings, each designed to promote the researcher's relationship with a person's unique voice by listening and referring

to the different aspects of expression of his or her experience in a specific context. Each step in the Listening Guide requires the researcher's active presence and a desire to experience the unique subjectivity of each of the research participants. The researcher's voice is also an explicit part of the process.

Step 1: Listening for the plot consists of two parts: listening for the plot and the listener's response to the interview.

First, reading the text and listening for the plot by paying attention to what is going on or what stories are being told. Attention is also given to the background, or the multiple contexts within which the stories are embedded, as in narrative research the researcher can never be a "neutral" or "objective" observer. We focus on and actively and consciously record our responses. Following basic principles of reflexivity, we note our social location in relation to the participant, the nature of our relationship with him or her and our emotional responses.

Step 2: I poems - This listening focuses on the voice of the "I" who is speaking by use of this first-person pronoun and constructing "I poems". This step has a dual goal: first it is intended to press the researcher to listen to the participant's first-person voice, to absorb its rhythm and unique changes, and second, to hear how this person speaks about himself/herself. This step is a crucial component of the method as it allows for tuning in to another person's voice, and listening to what that person knows about himself or herself before talking about him or her. This is a way of starting a relationship that works against distancing ourselves from that person in an objectifying manner.

Construction of the "I poem" is governed by two guidelines: (1) underlining or selecting each first-person "I" within the chosen paragraph along with the verb and any seemingly important accompanying words; (2) maintaining the sequence in which these phrases appear in the text.

Then the underlined "I" phrases are extracted while keeping them in the order of their appearance in the text and placing each such phrase on a separate line, like the lines in a poem. The "I" poem captures an associative stream of consciousness conveyed by the first- person voice running through a narrative rather than being contained by the structure of full sentences. Cutting the text and focusing just on the "I" pronoun provides the aspect of subjectivity.

Step 3: Listening for Contrapuntal Voices brings the analysis back into relationship with the research question. It offers a way of hearing and developing an understanding of several different levels of a person's specific experience as it influences the questions which have been asked. This process entails reading the interview two or more times, so that each time we tune into one aspect of the story, or one of the voices used to express the person's experience.

Step 4: Composing an Analysis – after reading the text at least four times, in the final step, we can pull together everything we have learned about the person with regard to the research question. An interpretation of the interview or text is developed and synthesizes what has been learned through this entire process and an essay or analysis is composed. If we return to the research question, we can consider several questions such as, "What have you learned about this question through this process and how have you come to know this?" "What is the evidence on which you based your interpretations?"

Ethics
The contents are published after a number of years during which the participant works in the field as a teacher with a license from the Ministry of Education. The participant's name has been changed to protect her anonymity.

FINDINGS

Avigail's story begins in childhood with background about her brother and the discovery of her disease.

I was born in southern Tel Aviv and at the age of 10 months, I moved with my parents to a Kibbutz. When I was a year and a half old, my brother was born. My brother was diagnosed with a rare problem with his vision when he was about 3 years old. Shortly afterwards, they also checked me and discovered that I also suffered from the same condition. Today I am considered visually impaired. My brother became totally blind at the age of 22.

We both attended the regular Kibbutz school and graduated after 12 years of study with a full matriculation certificate. Following high school, I volunteered to do my 2 year National Service in a day clinic for people with slight mental deficiencies and cerebral palsy. Afterwards, I worked at various jobs and learned medical massage with the intention of working with people with special needs. The desire to help and be involved in work with populations outside the norm and my love for this population, led me to my studies towards a degree in special education.

My visual disability appeared when I was approximately 5 years old, following its discovery in my younger (18 months younger) brother's eyesight. My parents would take him for checkups at the hospital at least once a week. They recount that every time they were about to take him, I would say, "It's not fair, why are you only taking him? I want to go too!" And it was not long after the doctors decided that since the disease is rather rare in medical literature, the entire immediate family should be examined. Since then, we would spend time at the hospital at least once a week. The medical staff was comprised of a young beautiful gentle female professor, a few nurses and a doctor (who photographed the eye following the injection of fluid that colored eye cells). The hospital staff always received us with a smile.

I remember that each time after the examination, my parents would buy us a surprise.

After the first examination, the doctors determined the cause of the problem to be a genetic disease called Choroidal Osteoma, which damages the retina.

Since this disease is considered to be very rare, the doctors did not know exactly what to do, and therefore most of the time, they just examined us. Once, they decided to give us a laser treatment. The laser treatment did not help, but quite the opposite. It caused deterioration in my brother's eyesight, and in one of my eyes. Luckily for me, my father refused to continue the treatment as it was not helping at all. My parents then understood that there was no way to treat our degenerative disease and made the decision to leave it alone. We would go in for our not too frequent routine checkups and whenever we sensed any deterioration in our vision, we would initiate a visit to the doctor despite the fact we were aware there was nothing they could do about it.

My vision remained for the most part stable and sometimes at far infrequent intervals, it would deteriorate. My left eye hardly functions at all, it has only a narrow line of vision and even that is blurred and not continuous. My right eye has a relatively larger field of vision; however, the range of vision is to a distance of 1 meter and only when the lighting is strong enough, and the objects large enough. My vision is called

"peripheral vision", in which the center of the picture is blurred and the sides are sharp and clear. This situation limits me in my everyday life, mainly when I find myself in new places, on public transportation, and in the myriad of small matters of daily life, which are too numerous to list. My vision can be reduced to total blindness, as happened in the case of my brother. Yes, I am scared to death.

Though some of the solutions seem clear to me today, blindness remains unknown to me – darkness. Insofar as my other senses fill a significant place of pleasure in my life, yet the point of light I have is most significant for me. However, I try not to think about it and when these thoughts do cross my mind, I dwell on this a bit, try to give myself encouragement and then quickly cast away the thoughts from my mind.

The first "I" poem in which Avigail gives voice to her disability:

My visual disability appeared when I was approximately 5 years old
Treatment caused deterioration in my eyesight,
My field of vision is narrow
My left eye hardly functions at all
My vision can be reduced to total blindness
I am scared to death.
Blindness remains unknown to me – darkness

Avigail's tremendous fears concerning total blindness can be seen in this poem. She speaks of dying of fear. She then speaks about her parents' choice to make her cope and be independent at all costs:

I don't know how my parents felt when they found out both their children were afflicted with this visual disability. I also don't know how my parents felt about the fact this disease is very rare and is the outcome of their genetic combination. What I do know is they always related to us children as being capable of whatever we wanted.

I remember when I was about 9 years old, my father was determined that I take an active part in the household chores. Washing dishes was the first chore he insisted I master. In response I said, "But I always drop and break everything" Father answered, "As far as I am concerned, everything can break! Worst scenario, I'll have to replace everything" Finally, despite many broken dishes, I did learn how to wash dishes and help my mother in the house. This memory illustrates the determination with which my parents gave me independence.

Avigail feels that her parents' insisting on raising her to be an independent person is the greatest gift they could give her.

My parents let society know that we were children just like all children and they were not ashamed of our disability. These messages enabled us to feel we were an integral part of the Kibbutz. It wasn't that they ignored the disease or disability, but rather they related to it in the technical, physical sense, that is to say, they found technical solutions for whatever they could, without drawing undue attention to us.

Also my grandmother, may she be blessed with a continued healthy life, showed us that where there is a will there is a way!

My grandmother did all her housework by herself. She raised five daughters in her home of one and a half rooms, did the laundry, cooked, baked and all with her own ten fingers and two keen ears. She knew everything through her sharp sense of hearing. We were always amazed how she did it. Her message was – live! She never despaired or gave up because of her limitation.

This was the atmosphere in which we grew up and which formed my personality. Thus I never felt different, an outsider or unusual on account of my disability. People who surrounded me in my childhood let me feel fully part of everyone.

As Avigail spoke, I thought about my own grandmother who became blind as a result of her glaucoma. My grandmother, just like Avigail's grandmother, never considered herself to be disabled, and showed she could do everything even without seeing. The influence of the environment on Avigail's blind grandmother and her own self-image, due to the way was brought up, ensure that she did not feel different.

An additional obstacle I had to overcome as a result of my external disability was my fear of new places and sleeping in strange places. Therefore I was never eager to sleepover at my friends' houses or join them on trips or hikes with our youth movement, "HaShomer HaTzair". Another thing that created a sense of being different, loneliness and my feeling of not belonging, in contrast to my friends, was our twelfth grade school field trip.

We were supposed to go on our annual school trip, the most significant in a teenager's life in Israel - the last trip and most worthwhile, the trip to Eilat. But I was more scared and anxious than excited and therefore I decided not to go on the trip. To the credit of my homeroom teacher, who in spite of my protests, shouts, and obstinacy, did not give up on me "You are part of this class and you will participate with everyone else in the class." This sentence is etched in my memory and in every step I take. He showed me that I belonged.

This is the greatest gift a person can receive. Naturally, he was not oblivious to my disability or my hesitation, and promised to find a solution for each one of my fears. I did finally go on the school trip and I enjoyed it thoroughly. I have many memories from that trip, and would not give up any of them. On a mountain hike, I had a security guard who stayed by my side, every teenage girl's dream come true, and at night, I was accompanied by girls who were aware and accepting of my fears. During that week I discovered the extent to which my classmates were aware of and accepting of me and how much they valued me. In our yearbook, near my picture they added the quotation "She was stronger than the winter storm" from Gali Atari's song "Stronger than the Wind"

This statement, black on white, echoes in my head every time I feel I'm at a breaking point. I tell myself - if people see me as being strong, then I must be that way. They helped me discover my inner strengths.

Acceptance by the environment towards a person with special needs, the high school teacher who knew how to offer   a sense of belonging without giving in and friends who were helpful to Avigail and enabled her to see her worth and strength.

Lack of knowledge and society's basic ignorance about people with special needs in general and specific types of disability in particular, often place the other and the "normal" person in situations that are challenging, difficult and painful for both sides.

As far as I am concerned, to look a stranger straight in the eye, to turn to a total stranger in the street who does not know me, is an unpleasant and uncomfortable situation because when I look someone in the eye, I do so by turning the pupils in my eyes upwards. Simple routine actions like taking a bus or any public transportation, crossing streets, shopping, etc, things that a seeing person does without giving it a second thought, is for me a task accompanied by anxiety, and constant tension, a never ending embarrassing struggle.

One of the things that helps me to remain strong and continue are my friends, whom I meet with or talk to after my daily battles. The fact that they treat me as an equal, don't relate to me with pity, but rather in the same way they relate to each other, saves my sanity. This feeling of normalcy and belonging that I get from my friends, is my main ammunition in combating the eternal war of my life.

In the hardships of daily situations as well, Avigail is sustained by her friends who maintain her sense of belonging and normalcy. Avigail began her studies in another college for special education where she was required to study regular education. This did not meet her expectations, aspiration or abilities.

The first and last time, I hope, in which I gave up and quit was at the end of the third semester of studies in special education. I remember having no deliberations or doubts about what I wanted to study but only on how I would do that. My impairment bothered me and made me paralyzed by fear

During my first week of studies, I felt overwhelmed, I felt "out of it", lost and very "abnormal". I would finish a day of classes in tears, after having sat in a class for an hour and a half with tears streaming down my face, wondering "What am I doing here?" When I got home, I decided to quit my studies and find a job in the field of special education, without having a degree.

Two days later, I received a phone call from the Head of the Special Education Department After a short conversation, in which I shared my fears, difficulties and feelings, she asked me to give it one more chance for a month and to make a decision then. That week I did not resume my studies. I felt the need to gather strength anew, to believe in myself once again. And indeed, I did return to classes the following week.

The next three semesters were for me enjoyable but difficult. I met new friends who gave me strength day to day, boosted my self-confidence and helped me forge a more mature professional identity. Towards the end of the third semester, I was informed that it was mandatory for each student to teach in both mainstream and special education in order to graduate with a teaching degree. I looked at the Head of the Department and reminded her that was my first question when I came to register at the college. I also reminded her that she had promised me all the adjustments I might need. She replied that the Ministry of Education would not accredit a teaching degree unless the student did an internship in the mainstream educational system. I looked at her and stated seriously and with pain, "I cannot teach a class of 40 students in a mainstream class, when I can barely see the pupils sitting in the first row. I don't need

that certificate. I will never teach in a mainstream school." She replied, "That's the way it is." I left the room and decided I had no urge to continue fighting. No strength left! I decided to quit. The last day of the semester I came to pedagogy class, quieter than usual, I decided to tell the class of my decision and share my deliberations until my voice cracked and a flood of tears poured out of my eyes down my cheeks. I will never forget that day. It was so painful but nonetheless, I discovered how important I was to my friends, and how concerned they were about my welfare and how much they valued me. They all surrounded me with questions and embraces, as they protested and tried to convince me not to quit. But I had already given up. My walls crumbled and my heart shattered into pieces.

In the following poem, the voice of limitation and the shattering of a dream is expressed.

I gave up and quit
My vision impairment made me paralyzed by fear
I felt "out of it", lost and very "abnormal".
I would finish a day of classes in tears
"What am I doing here?" I decided to quit my studies
I had no urge to continue fighting. No strength left!
My voice cracked and a flood of tears poured out of my eyes down my cheeks.
My walls crumbled and my heart shattered into pieces.

The poem reveals Avigail's disappointment about broken promises and her inability to continue towards the realization of her dream.

A few months later after trying to heal the wounds, I decided I would reach a place "that would make me feel good", working with a special population, in a different way, through touch. I decided to learn medical massage at the Wingate Institute. I worked in an institution for people with slight mental deficiencies and cerebral palsy for a year. I combined these two fields and had no intention whatsoever to return to my studies for a degree. Nor did I consider attending a different academic institution. The thought of continuing my academic studies reminded me of my pain; the pain of feeling disappointed in myself for failing to fight for my rights.

This was the situation on the day I happened to meet, either purely by accident or by fate, a woman who introduced herself as the Head of the Special Education Department in an academic institution, other than the one I had attended. She presented herself after I had led a tour called "Dialogue in Darkness."[1] I remember this moment as if it happened yesterday. She claimed that she could see that I would be an excellent teacher and insisted that I study in her department. I resisted, of course, and told her I had already been burnt once and did not plan to repeat the experience. When she left, I slowly felt in every passing thought how I felt more alive. I felt as if I had been shut down till that moment. The thought of my being able to officially teach in special education, while expanding my knowledge in that area, filled me with life and pushed aside all the fears that had paralyzed me and the pain of my previous experience. A month later, I found myself in her office for an interview to be accepted

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[1] An hour-long tour in total darkness to demonstrate the feeling of being totally blind

to her department, at the end of which I understood I was about to complete my studies for a BA in Special Education, in another two months.

Today, when I have almost completed my studies, I am grateful for the opportunity that was given to me to prove to society that I am capable. And it is important to prove to myself, to remind myself that I have only to desire and to believe in myself since apparently I do have the strength.

This is how I met Avigail, in total darkness, during a guided tour with second year students at a program called "Dialogue in Darkness" While walking in total darkness, I carried on a conversation with her, and she told me how she had left her studies at a different college because of their requirement that she teach in a mainstream classroom. I heard the confidence in her voice and I understood that she could be an outstanding teacher. I tried to convince her to return to her studies in my department and so it was.

The following "I" poem emphasizes the voice of capability. Sometimes enabling is all that it takes:

I slowly felt in every passing thought how I felt more alive.
The thought of my being able to officially teach in special education
filled me with life and pushed aside all the fears that had paralyzed me and the pain of my previous experience,
I understood I was about to complete my studies for a BA in special education
I am grateful for the opportunity that was given to me to prove to society that I am capable.
And it is important to prove to myself, to remind myself
I have only to desire and to believe in myself since apparently I do have the strength.

In this poem Avigail is encouraged only by the thought of this opportunity to return to her studies, to fulfill her dream, to prove to society and to herself that she has the strength. Avigail concluded her studies successfully and became a teacher, beloved by her pupils.

Sometimes action and giving to others if part of self-therapy:

"Weren't you disgusted?" "Hats off to you - this is really holy work" - These were the words I heard all the time from the moment I began my National Service in a day clinic for people with slight mental deficiencies and cerebral palsy. The truth is my sentiments were the same for the first week I worked there. But from the second week and onwards I could only see the strength and satisfaction I derived from this special population. Every day I spent with them forced me to look at my life and to thank God for my life and smile!

After my national service, I worked at a similar place once a week. I would eagerly await the day I was to work there – it was like food for my soul. Their smiles, the small changes that took place after much work and the way they perceive you. Adults with special needs see the whole person, who he or she truly is. Today as I stand at the threshold of my professional life as an educator, I draw strength from my students. Their reactions and approach give me more than double what I give them. The feeling that somebody needs you and you can help is a most gratifying feeling, how much more so for a person like me whom society usually perceives as limited or disabled! The very act of doing for others and the ability to help them, even a bit, is the source of a sense feeling of inner happiness.

The following "I" poem is also about capability:

I could only see the strength and satisfaction I derived from this special population.
Look at my life and to thank God for my life and smile!
Food for my soul. Their smiles,
I draw strength from my students.
The feeling that somebody needs you and you can help is a most gratifying feeling

Abigail reiterates the satisfaction that she got from her students' success and how their smiles fill her with strength.

DISCUSSION

Throughout life, each person is exposed to inclusion of different sorts: inclusion that the person himself experiences with a friend, student, teacher, or a family member. Inclusion occurs as a result of this passing encounter with a challenge or difficulty. Inclusion is two directional. On the one side, there is the person who includes, accompanies, assists, and copes with difficulty of the other. On the other side, there is the person being included, who believes in us, in the hope we inspire by our company and effort we invest in him or her. The experience is generally empowering and powerful for both sides.

In this study, we have seen the participant who, on the one hand, is in need of inclusion, sometimes included and sometimes not, and on the other hand, his/her ability to provide inclusion. Actually her only request was "Include me as a visually disabled person in academia, so that I may in turn include children with special needs in my role as a teacher."

Avigail grew up with a visual disability. In the process of her narrative, she notes the disability and the difficulties involved in managing in her surroundings, but she also emphasizes the inclusion on the part of her immediate surroundings, her parents, friends and high school teacher, all of whom gave her the strength to become independent and succeed.

At the same time, Avigail describes her life dream of working with people with special needs, to include others. This dream had developed at an early age, and was realized in her voluntary national service, where she worked for two years in a day clinic for people with slight mental deficiencies and cerebral palsy. Afterwards she worked in various jobs with people with special needs. Her desire to help others and be involved in working with this population led her to special education studies.

In the last decade, the motivation of those turning to teaching in special education has been the subject of much research. As found in this research the desire to work in special education is connected with some positive experience with a different other, either personally or in the family (Hillel-Lavian, 2003, 2009; Tangala & Margaret, 2007). The human wish to do work that has personal meaning is an existential need. A strong sense of self-identity is a necessary condition for achieving self-actualization in a career (Court, Merav, & Ornan, 2009). A person chooses a profession or career with the aim of fulfilling his or her self-image and forming his or her professional identity (Yaffe-Yanai, 2000). Avigail's life as a visually impaired person, in addition to her personality and attributes, led her to her to wish to be at a place where she could include others.

She then decided to study special education, she was accepted and from the start, discussed her limitation openly, among them her inability to teach a mainstream class. Avigail almost broke down at the beginning of her studies because of the demands of the academic workload and the accompanying emotional difficulties. One of the major difficulties accompanying disability is problems in social functioning, which stems from, inter alia, behavioral problems and low self image (Dahan & Ziv, 2012). The problem lies not only in overcoming the hurdle of being accepted into an academic setting, but rather continues after enrollment. These students continue to face challenges that are far from being simple. They students cope with tension and anxiety, in comparison with students who do not have disabilities.

Specifically, students report a high level of anxiety, low self-image and a wide gap between their capabilities and academic achievements (Barton & Fushrman, 1994). They experience frustration while studying, and are hindered by organizational problems which make the learning process more difficult (Harrison, Areepattamannil & Freeman, 2012). These emotional problems are accompanied by difficulties in the area of learning, with which they must cope. Luckily for Avigail, her department head included her and encouraged her to continue her studies; however, at the end of her second year, she again experienced lack of inclusion when she realized she was expected to do her student teaching in front of a mainstream class. Her reservations were not respected and she quit her studies with a feeling of disappointment and of having missed an opportunity.

Meanwhile Avigail worked in the Children's Museum in Holon in an exhibition called "Dialogue in Darkness", where tours are given to the public in total darkness so that theycould experience the disability. There I met her and invited her to continue towards her diploma and teacher's degree at Levinsky college.

In research conducted by Mander &Naon (2002), the interviewees stated that a significant component in their success in coping with the world at large was the support and help they received from various people throughout their lives; people who opened windows of opportunity for them. And indeed, sometimes, no more is needed than a small window of opportunity. Avigail continued her studies and completed them with success and immediately got a job in a school for children with emotional problems. The window of opportunity at the beginning – her acceptance into academic studies, her inclusion further on, Avigail became a large container.

Society's lack of knowledge and basic understanding of people with special needs in general and of various types of disability in particular, often place the person and the "normal" other in challenging and trying situations, painful to both sides. A glass wall has been erected, fed to a certain degree by stereotype of disability as a disease (Reiter, 2004).

As academics, we are obligated to break the glass ceiling and allow each person self-actualization in higher education by adjusting the criteria for acceptance into institutions of higher education, and after enrollment, by ensuring each person's inclusion through accessibility, compatibility and primarily, by listening to his or her voice.

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Development of Road Safety Performance Indicators for the European Countries

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ABSTRACT

Safety performance indicators (SPIs) are measures reflecting the operational conditions of the road traffic system that influence the system's safety performance. Within the European project SafetyNet, SPIs were developed for seven road safety-related areas: alcohol and drugs; speed; the use of protective systems; daytime running lights; vehicles (passive safety); roads and trauma management. A common procedure for the development of SPIs in each area was applied, starting with a definition of unsafe operational conditions of the traffic system and continuing with a conversion of this information into measurable variables. Based on a literature survey, a relationship between the problem area and road safety was ascertained. Characteristics of the system's performance were analyzed aiming to select those which can be quantified. The data were collected in cooperation with national experts from 29 European countries enabling to verify the applicability of the SPIs developed and to conduct country comparisons. It was demonstrated that, in some areas, e.g. the use of protective systems, sufficiently good data are available in Europe, while in other areas, e.g. speed and alcohol, data quantity and quality vary strongly. For passive vehicle safety, trauma management and roads, completely new approaches were developed for the SPIs' estimation. Given the data are collected on a common basis, SPIs can become valuable tools in future knowledge- and data-driven policy-making in Europe.

Keywords: road safety, safety performance indicators, monitoring, European country, comparison

INTRODUCTION

Similar to the previous decade, the European Union (EU) has renewed its commitment to improving road safety by setting a target of halving the number of road fatalities by 2020 [6-7]. Today, both European and world-wide organizations encourage countries to adopt national road safety programs as a background condition for systematic work on promoting road safety [12,25,27]. Many countries have developed and are currently enacting their national safety plans [28]. It is generally accepted that safety plans and targets need to be monitored periodically, to verify the progress made and to adopt necessary changes based on recent trends observed [12,25,27,28].

When monitoring the progress, road safety is usually assessed in terms of accidents, injuries or their social costs. However, simply counting accidents or injuries mostly does not offer enough insight into the underlying processes. Typically, accidents or injuries are only the tip of the iceberg, because they occur as the 'worst case' of unsafe operational conditions of the road traffic system. At the same time, those managing road safety need to take into account as many factors that affect safety as possible or, at least, those factors that they are able to adjust or control and that have a major influence. Hence, safety performance indicators other than accident/injury numbers are required to provide a means for monitoring the effectiveness of safety actions applied.

A report written by a group of European road safety experts in 2001 [11], detailed the reasons behind the need for safety performance indicators. Among others, they stated that, in order to develop effective measures to reduce the number of accidents/ injuries it is necessary to understand the processes that lead to accidents, where safety performance indicators can serve this purpose.

The same report [11] strengthened the need for the development of a set of road safety performance indicators (SPIs) in the EU, which was further supported by the European road safety action programme [6]. Both sources defined seven road safety related areas, for which the development of SPIs is required. These areas were: alcohol and drugs; speed; protective systems; daytime running lights; vehicles; roads and trauma management. These areas were stated as core issues for road safety activities in Europe, based on the potential of different road safety domains for promoting road safety as well as on the experiences and data available in the countries.

Next, in the period 2004-2008, within the European Commission (EC) funded SafetyNet project, a study was undertaken aimed at developing SPIs for the seven predefined areas. The study's purpose was to develop meaningful SPIs that, on the one hand, would have a solid theoretical basis and, on the other hand, could in the short term realistically be applied in the EU, given the availability of relevant data now and in the future. The SafetyNet team worked closely with representatives from each of the 27 member states, complemented with representatives from Norway and Switzerland. The representatives provided the data for their respective countries as well as feedback on the study's results.

This paper gives an overview of the SPIs developed for the evaluation and comparison of the European countries, explaining the approach applied for selecting meaningful and applicable indicators in general (Section 2), and in particular in each safety area (Section 3), and showing, as examples, some results of applying the indicators to the European countries (Section 3). Furthermore, Section 4 summarizes the experiences of developing common SPIs for use by the European countries, in various safety areas, and discusses recent developments on the issue that occurred in the post-SafetyNet period.

AN APPROACH APPLIED FOR SPI DEVELOPMENT

A basic model

The place of SPIs in a safety management system was originally illustrated by New Zealand's Land Traffic Safety Authority in 2000 [23] and later by ETSC [11]. The original model defined the essential elements of a safety management system: safety measures/programs, safety performance indicators (as intermediate outcomes), the numbers of crash fatalities/injuries (as final outcomes), and the social costs of crashes/injuries. This model allocated SPIs on the level of intermediate outcomes but did not differentiate explicitly between SPIs and the outcomes of programs or countermeasures.

The SPI Theory report prepared by the SafetyNet [19] provided further methodological fundamentals for SPI development. A core issue in the development of SPIs was that they should be able to reflect unsafe operational conditions of the road traffic system and should therefore be of a more general nature than direct outputs of specific safety interventions. In order to demonstrate a more general character of SPIs and their independence from interventions, the layer of 'intermediate outcomes' was further divided into 'operational conditions of the road traffic system' and 'outputs' (from measures/ interventions).

The SafetyNet concept of the place of SPIs in a safety management system is shown in Fig 1. Ideally, SPIs should reflect the unsafe operational conditions of the road traffic system and should be sensitive to their changes. These changes in operational conditions can be caused by outputs of a road safety program or road safety measures. For example, in the case of speeding, the unsafe operational conditions of the road traffic system (i.e. speeding) are affected by outputs from specific safety measures (e.g. speed enforcement). The outputs are the physical deliverables of the intervention (e.g. speed cameras), whereas the outcomes should be seen in improving the operational conditions (e.g. lower level of speeding), which can be measured by SPIs. The improved operational conditions will result in crash or injury reductions, whereas the whole process should reduce the social costs.

Consequently, the definition of SPIs suggested by SafetyNet was as follows [19]: safety performance indicators are the measures (indicators), reflecting those operational conditions of the road traffic system, which influence the system's safety performance. The SPIs' purpose is:

o   to reflect the current safety conditions of a road traffic system (i.e. they are considered not necessarily in the context of a specific safety measure, but in the context of specific safety problems or safety gaps);
o   to measure the influence of various safety interventions, but not the stage or level of application of particular measures;
o   to compare between different road traffic systems (e.g. countries, regions, etc).

Development procedure for SPIs in certain safety areas

A common procedure for the development of SPIs was used to make the process more consistent across different road safety areas [19]. When SPIs are developed for a certain safety area, they should reflect the factors contributing to road crashes and injuries and characterize the scope of the problem identified. Developing SPIs should begin with a definition of the problem, i.e. the operational conditions of the road traffic system which are unsafe and lead to crashes and injuries as the 'worst case', and continue with a conversion of this information into a measurable variable. Under normal circumstances the optimal indicator for an issue is a direct indicator. However, often this cannot be realized, for example due to a lack of

appropriate data. In that case indirect variables which describe the problem can be used as indirect indicators. If this is not possible either, the problem can be divided into several sub-problems and the indicator can be established for each of those. When the measurement is possible only for outputs of certain road safety measures, the limitations of this consideration should be clearly stated. This way, the difference between the ideal and the realizable SPIs is recognized.

According to [11], a large number of potential safety performance indicators is possible. However, not all of them are equally important. In general, the importance of a safety performance indicator can be assessed in terms of the strength of its relationship with accident or injury occurrence, whether it makes a major contribution to accidents and whether it can be influenced by road safety measures. A natural starting point would be the main behavioural indicators: speeding, drink-driving and seat-belt use. Thereafter, quality indicators concerning other components of the road traffic system such as road networks and vehicle fleets should be added as well as the post-crash treatment of road accident victims. Thus, seven problem areas were selected for the development of SPIs which are:

o   Alcohol and drugs;
o   Speed;
o   (use of) Protective systems;
o   (use of) Daytime running lights (DRL);
o   Vehicles (passive safety);
o   Roads;
o   Trauma management.

To note, the seven areas are related to different levels of the road safety system. While *Alcohol and drugs* and *Speed* address road safety problems (or unsafe system conditions), the areas *DRL* and *Protective systems* reflect countermeasures which are intended to prevent accidents or to reduce accident consequences, respectively. The areas *Roads* and *Vehicles* are related to a wide area of road safety interventions, whereas *Alcohol* or *Speeds* are related to human behaviour as the cause of accidents. The area *Trauma management* presents an additional category of road safety issues focusing on tertiary injury prevention.

For each of these areas, SPIs were developed according to the above described common development procedure [19]. A detailed development of the SPIs for each problem area used a common structure as follows. First, based on a literature survey, a relationship between the problem area and road safety is defined, and the scope of accident/ injury reduction potential associated with better system's operational conditions (e.g. lower speeding, better passive vehicle safety) is stated. Second, characteristics of the system's performance, user behaviour, etc are analyzed in order to select those of them which can be measured and quantified. Using a literature survey, examples of SPIs in use by different bodies (countries, authorities) and/ or research studies, are considered. Third, the SPI concept in a specific problem area is developed, which stems from the structure of the area considered, the available experiences with measurements of similar characteristics, etc.

Finally, a questionnaire was distributed to the 27 member states (plus Norway and Switzerland) to collect the data available and to reflect the current measurement practices, in each one of the predefined safety areas. The originally developed SPIs were verified for their applicability based on the responses to these questionnaires [30].

Applying the developed SPIs in Europe
Once the SPIs were defined, the data for estimating SPIs were collected by means of a series of

questionnaires distributed to the countries, via national experts. The process was iterative and included multiple data verifications. The data problems and intermediate results were discussed with the national experts, both at the general meetings (twice a year) and through direct correspondence. Depending on the area, the data were collected and the SPIs estimated for the years 2003-2007, which enabled to perform country comparisons. The whole set of comparisons can be found in [35-36].

Furthermore, for the areas of alcohol, speed and roads, additional pilot studies were executed to further investigate the applicability of the SPIs suggested [29,31,38].

Recognizing that a prerequisite for using SPIs for monitoring and comparisons lies in sufficient data quality where the data should also be collected in a harmonised fashion, an SPI Manual [18] was developed. This Manual demonstrates existing practices for the underlying data measurements, provides good practice examples (when available), and details the procedures which are necessary to collect and process the required data for the estimation of the SPIs' set on a national level. It was assumed that the SPI Manual would assist countries in setting up or upgrading their SPI data collection systems.

RESULTS

Table 1 gives an overview of the SPIs developed for each one of the predefined areas. Following are the major considerations which led to the SPIs selected, in each area, accompanied by examples of country comparisons that were carried out using the data received from the 29 European countries.

Alcohol and drugs

The use of alcohol and drugs by road users, especially drivers of motor vehicles, increases the risk of a road crash considerably [9]. Consequently, most countries ban the use of these psycho-active substances among drivers, or set low legal limits for blood alcohol and drug concentrations. The SPIs for alcohol and drugs should show the state of alcohol and drug use as a risk factor in a country at a certain time. They can be used by road safety authorities and politicians in assessing the needs for and the effects of countermeasures such as legislation, enforcement, education and publicity.

Theoretically, the 'ideal' SPI of the alcohol and drug related road toll would be the prevalence and concentration of impairing substances among the general road user population. In practice, however, major methodological problems are associated with this SPI, even when used within one country and when including only alcohol as a psychoactive substance. One judicial impediment is the fact that in some major European countries (i.e., Great Britain and Germany) mandatory random testing of road users by the police is prevented by law. In other countries, random breath testing for alcohol is allowed, but random testing for drugs other than alcohol is not allowed. Problems will only increase when all EU countries will have to agree on a common sampling and testing protocol and when psychoactive substances other than alcohol will have to be included. Moreover, rather large samples are required to obtain reliable results, because in most countries the prevalence of psychoactive substances in the general driver population is likely to be low in statistical terms.

When the 'ideal' SPI cannot be realized, a more feasible SPI is needed. Such an SPI could be: the number and percentage of severe and fatal injuries resulting from road accidents involving at least one active road user impaired by psychoactive substance (concentration above a

predetermined impairment threshold). This SPI can be implemented step by step, starting with the blood alcohol concentration (BAC) of fatally injured drivers and gradually extending to a larger set of psychoactive substances used by all active road users involved in severe injury crashes. The successive requirements for each step would be:

o   Mandatory blood testing of all fatally injured drivers, for a fixed set of psychoactive substances.
o   Mandatory blood testing of all drivers involved in fatal accidents, for a fixed set of psychoactive substances (whether or not the drivers are killed or injured).
o   Mandatory blood testing of all active road users involved in fatal accidents, for a fixed set of psychoactive substances.
o   Extension of procedures mentioned under 1-3 to severe injury accidents, starting with testing severely injured drivers and resulting in testing all active road users involved in severe injury accidents.

Presently some countries have reached step 1 or 2 above, whereas others have no relevant data [19]. Therefore, for current evaluations, two supplementing SPIs were proposed (see Table 1), which reflect the percentage of fatalities resulting from accidents involving at least one driver impaired by alcohol or by drug, respectively. It must be noted that crash data lie at the basis of these indicators that should in general be avoided when developing SPIs. However, as explained above, an ideal indicator that would be based on random breath testing meanwhile seems unrealizable for most countries.

Country comparisons - example
The SPI for alcohol was estimated for 26 countries of a total of 29 (Fig.2), where only Ireland, Malta and Luxembourg could not provide data. Since most countries provide data for drivers above the national legal BAC limit, where the limit may vary among the countries, it was reasonable to group countries according to the legal limit and rank them within these groups. As seen from Fig. 2 the BAC limit varies from 0.0 to 0.8 g/l BAC, where the values for the alcohol SPI vary from 3.4% in the Czech Republic to 72.2% in Italy.

A basic question here is whether the variation between the countries' scores is real or due to methodological reasons. Sørensen et al [31] studied the quality of the above data in five selected countries (Czech Republic, Austria, France, Sweden, and Norway) and concluded that there was reason to believe that the data used as basis for the calculation of the alcohol SPI might be incomplete in some countries. Strict harmonization of definitions, data collection and data analysis methods is required to make the SPI results comparable.

Only seven countries could provide data for the calculation of the SPI for drugs [36]. The percentage of fatalities resulting from crashes of at least one impaired driver varied from 0.9% in Belgium to 11.8% in Spain, although the latter was likely to be overestimated. In general, the figures were not really comparable between the countries, since only Spain and Switzerland listed the drugs tested for, i.e. both medical and illegal drugs.

Speed
Speed is one of the main causes of crashes and has a direct influence on crash severity [26]. According to different estimates [26,33], speed was found to be a major contributory factor in around 10% of all crashes and in about 30% of fatal crashes. Due to the massive character of speeding and inappropriate speeds, managing drivers' speed has a high safety potential. The relation between speed and crashes is abundantly studied in the literature. In their review of speed-crash related studies, Aarts & Van Schagen [1] concluded that the safety effect of a particular change in speed depends on the type and, thus, characteristics of the road. They

estimated from the studies reviewed that an average speed change of 1 km/h leads, depending on road type, to 2%-4% change in injury accidents and to 3%-8% change in fatal accidents. Different countermeasures have to be combined to reach the objective of speed reduction, including actions on speed limits, road design, drivers' education, enforcement, and in-car technologies [26].

Since traffic populations and traffic circumstances differ between road type, time of day (day vs. night), day of week (weekdays vs. weekend days), it is necessary to have different speed SPIs for different road types and different reference time periods. International comparisons of speeding performances should be carried out for roads of similar category and for which similar methods of speed data collection are used.

The speeds that were found as most relevant for comparison purposes were spot speeds measured at various locations on the road network during periods when traffic can be considered free-flowing [19]. Therefore, the speed SPIs suggested for application were the free-flow mean speed, the standard deviation, the 85th percentile speed and the percentage of drivers exceeding the speed limit (by 0 and 10 km/h), which were segregated by road type, vehicle type, period of day and period of the week (week-days and weekends).

The speed data is collected by a speed survey. Setting up the survey, the issues to be considered are: which locations are suitable for speed measurement; which road types should be considered; how to sample the set of measuring locations; which time periods are valid for speed measurements; and how to determine speeds for different types of vehicles on the basis of identified requirements for speed measurements [18]. These recommendations were tested in two pilot studies carried out in Belgium and Spain and found to be applicable when a new speed data collection system is established [29].

Country comparisons - example

Speed has systematically been monitored in many EU countries. However, the possibility of international comparison is limited, mostly due to the variability in the ways the countries conduct their surveys [36]. In addition, road classifications and speed limits vary between countries, making the comparisons more difficult. Despite the restrictions, a comparison of speeds on motorways is feasible, accounting for relative similarity of road and traffic conditions on these road types across Europe.

Fig. 3 shows the average speeds of light vehicles on motorways for the year 2007, compared with the average speeds five years earlier in 2002. The different speed limits are indicated by different colours. For Denmark and the Netherlands, only monthly indicators were available, thus the annual figures reported on Fig. 3 are simple averages of relevant monthly figures but not official indicators reported by Danish or Dutch authorities.

Unsurprisingly, the motorways with the highest speed limits show the highest average speeds. The average speed on these motorways is lower than the speed limit. On the other hand, in countries with the lowest speed limits, the average speed is (slightly) higher than the speed limit. The worst result in terms of differential between average speed and the speed limit is encountered on Denmark's 110 km/h motorways, where the average speed exceeds the speed limit by more than 5 km/h. In contrast, the average speed in the Czech Republic is impressively low in comparison with the speed limit but this indicator, similarly to the Swiss one, includes all types of vehicles and not only light vehicles.

The SPI "percentage of speed limit offenders" presented in [36] confirmed that a high proportion of drivers do not comply with the legal speed limit. The SPI values were highest in the UK and in Finland, with more than half of the light vehicles exceeding the speed limit in the UK. The lowest percentages of offenders were observed in Ireland and Switzerland despite the fact that the speed limit is lower in these countries than in France and Austria. A lower speed limit is thus not always synonymous to a higher proportion of offenders.

Protective systems

The protective systems play a vital role in protecting the most vulnerable parts of human body, i.e. belly and head, against injury and considerably increasing the likelihood of surviving in serious crashes. The protective systems considered concern two groups of road users: motor vehicle occupants and two-wheelers, and include: seat belts, child restraint systems and helmets. Nowadays, the use of seat belts is mandatory in all European countries, but the law continues to be violated by a certain proportion of traffic participants. In contrast, the legislation related to the use of safety helmets by pedal cyclists and moped riders varies considerably among countries and the rate of their presence in traffic comes mostly from users' awareness and country culture [19].

The use of seat belts is the single most effective means of reducing fatal and non-fatal injuries in motor vehicle crashes. It reduces the death rate of car occupants by at least 40% [11]. According to [34], child restraint seats are 71% effective in reducing fatalities among children under the age of 5, but misuse and improper use is a critical problem both in the US and EU [19]. Studies on the effect of motorcycle and moped helmets were carried out mostly in the 1980s and concluded that the risk of death is more than halved if a helmet is worn [19]. The effectiveness of helmets for cyclists has been studied for decades, and they are known to reduce the risk of severe head injury by about one-third. The use of seatbelts has regularly been assessed in several European countries since 1970 (e.g. Switzerland, France, Germany) parallel to the introduction of seatbelt-related regulations.

In this domain, a direct SPI was defined as the day-time wearing rate of protective systems in traffic, according to the system's types (see Table 1). The SPIs directly measure the use of protective systems which mitigate crash consequences for the road users' health.

The SPIs are estimated by means of a national observation survey, in which the measurements should preferably be classified according to main road types, such as motorways, other rural roads and urban roads. The values for major road types should then be aggregated into one indicator (of each type) for the country. International or regional comparisons of protective systems' use rates are important tools for recognizing deficiencies, setting priorities and stimulating efforts at the political level [18].

Country comparisons – example

Fig.4 shows the daytime seat-belt wearing rates in front seats of cars and small vans, in different countries. In the case when disaggregated values for driver and front-seat passenger were available, weighting coefficients of 0.35 for front-seat passenger and 0.65 for the driver are applied, to produce a combined estimate. One can see that for Germany, France and Malta the wearing rates are highest (over 95%), while for Belgium, Czech Republic, Estonia, Spain, Hungary and Poland, the rates are lowest (below 75%). Similar figures for the other SPIs on the use of protective systems can be found in [36].

Daytime running lights

Many crashes occur because road users do not notice each other in time or do not notice each

other at all. Use of daytime running lights (DRL) for cars in all light conditions is intended to reduce the number of multi-party crashes by increasing the cars' visibility and making them easier to notice [9]. The problem of visibility is especially pertinent to mopeds and motorcycles. Moreover, the use of DRL could increase the reliability of the estimation of other motorized road users' moving direction, distance and speed [19].

A study commissioned by the EC involved a meta-analysis of 41 studies of the DRL effect for cars and 16 studies of the effect for motorcycles [8]. This study showed that for cars DRL reduced the number of daytime injury crashes by 3-12% and for motorcycles by 5-10%. An EC consultation paper [5] stated that the life-saving potential of DRL to be in the order of 3 to 5% of the annual number of road fatalities in the EU. In 2006, 14 Member States had mandatory rules on the use of DRL in force, with different requirements [5]. However, the use of DRL indicators was not common in the road safety decision-making practice [19].

The DRL SPI is defined as the percentage of vehicles using daytime running lights. (It is considered as an example of indirect and measure-oriented SPI because a direct measurement of vehicle visibility is impossible). An estimate of this percentage should be based on a national observation survey of the DRL use. The total SPI value is estimated for the whole sample of vehicles that were observed in the country. Additional values are calculated for different road categories and for different vehicle types. The road categories to be considered are: motorways, rural roads, urban roads, and DRL-roads, where the term 'DRL-roads' denotes the road categories where the usage of DRL is obligatory. For example, in Hungary, DRL-roads are certain roads outside built-up areas. The vehicle types to be considered are: cars, heavy goods vehicles (including vans), motorcycles and mopeds [19].

The suggested set of DRL SPIs enables to estimate the DRL usage rates at the national level. It may serve as a background for both the purposes of countries' comparisons and along-time considerations of DRL-related issues. The background information on the DRL legislation is essential for a correct interpretation and comparison of the results. For example, comparing the countries' DRL usage rates it is reasonable to take into account whether the countries have a law/ regulation on obligatory use of DRL and if they do, for how long. Moreover, DRL usage rates cannot be interpreted practically in countries where the lights are switched on automatically. It was assumed that in the future, once the option of automatic DRL is introduced Europe-wide, the DRL SPIs would lose their importance.

Country comparisons - example
The DRL usage rates were considered for 11 countries, as presented in Table 2. In the countries where automatic DRL was already introduced a long time ago (e.g. Sweden, Norway), the DRL usage rate is close to 100%, according to expert estimates. In such countries monitoring the DRL usage rate as a behavioural SPI does not have practical implications any more. In Austria, Czech Republic, Estonia and Finland, the use of DRL is obligatory for all vehicle types, on all road types, and all year long. In Hungary, this is also the case, but only for roads outside urban areas. DRL is recommended in France, the Netherlands and Switzerland.

Table 2 shows that the DRL usage rates are highest in those countries and for those road types where the use of DRL is obligatory. Switzerland has the highest usage rate among those countries where DRL is not compulsory.

Passive vehicle safety

The passive vehicle safety SPIs relate to the level of protection offered by the vehicles which constitute the fleet in a country. Improvements in passive safety do not affect the occurrence of crashes, but help to minimise the consequences when they happen. Hakkert et al [19] distinguished two aspects of the unsafe operational conditions concerning vehicle fleet: (a) the presence of vehicles that will not protect the occupant well in a collision (lacking crashworthiness); (b) the presence of vehicles with an increased capacity to inflict injury (lacking compatibility).

With regard to the first aspect, EuroNCAP is widely used as an indicator of the crashworthiness of individual vehicles. Lie and Tingvall [22] reported that cars with a three- or four-star rating are approximately 30% safer, compared to cars with a two-star rating, and that there was a strong and consistent overall correlation between EuroNCAP scoring and risk of serious and fatal injury. Since only a share of vehicles is EuroNCAP-tested, it is also important to take vehicle age into account when assessing the crashworthiness of an entire fleet. There is ample evidence that newer cars are safer than older cars. For example, Frampton et al [15] used national casualty figures from the UK that showed an 18% decrease in fatalities in newer cars. Thus, the SPI proposed within SafetyNet to characterize the vehicle fleet crashworthiness was a combination of the average EuroNCAP score and the median age of passenger cars in the fleet.

The second aspect relates to the proportions of vehicles of different types and weights that make up the total fleet. The composition of the vehicle fleet gives an indication of the likely compatibility problems, which result from collisions between vehicles of different mass and/or geometry. These problems lead to well-recognised effects on occupant outcomes in crashes, with, typically, the occupants of smaller or lighter vehicles being more at risk from severe injuries [19]. The second vehicle SPI proposed within SafetyNet considers the composition of the vehicle fleet in each country in terms of percentages of motorised two-wheelers and heavy goods vehicles, assuming that higher shares of both types are associated with more severe accident outcomes.

Country comparisons - example

Developing the passive vehicle safety SPIs, the countries were asked to provide data containing the entire vehicle fleet database according to vehicle type, make, model and year of first registration, as it stood in 2003. For each country, a EuroNCAP score was attributed to eligible vehicles. An average figure was then calculated for each year and weighted by the number of vehicles present in the 2003 fleet from that year. An overall average EuroNCAP score was then awarded for each country and considered together with the median age of passenger cars in the fleet.

In Fig.5, the average EuroNCAP score is plotted against the median age of passenger cars in the fleet of different countries. Better safety performance would be a vehicle fleet which contains higher EuroNCAP scores and newer cars (upper right area). From the countries considered, Sweden, the UK and Belgium are the best performing countries with regards to the crashworthiness of passenger cars. Example of another vehicle SPI reflecting vehicle fleet compositions in the European countries can be found in [36].

Roads

The safety performance of the road transport system depends on the functionality of the network, homogeneity, and predictability of the road environment and the traffic involved. Besides, the road environment also has to be forgiving when an accident occurs. In order to

develop suitable SPIs, quantitative relations between the road network, road design elements and road safety have to be known sufficiently well. Knowledge about these relations, however, is still lacking, although it is known that conflicts and related crashes can be prevented by choosing the right elements or facilities in the road network or individual roads. Based on these considerations, two SPIs were developed within SafetyNet: the road network SPI and the road design SPI.

The road network SPI assesses whether the 'right road' is in the 'right place'. The concept is based on the German guidelines for road categories [14]. The 'right road' is in the 'right place' in case the actual road category of a road is appropriate (from a safety point of view) given the urban centres that are connected by that road. The idea behind this concept is that the function and traffic volume of a road determine the minimal requirements that have to be met by that road in order to guarantee an acceptable level of safety, where the requirements are related to (preventing) different types of conflicts. Practically, in a country or region, the connections between selected urban centers are assessed by comparing the theoretically needed road category with the actual road category. The road network SPI is the percentage of appropriate actual road category length per theoretical road category, summarized by connections in the network considered. For more information on the calculation of this SPI see Weijermars et al [38].

The road design SPI determines the level of safety of the existing roads. This SPI is based on the EuroRAP Road Protection Score (RPS). The RPS is a measure for the protection that is provided in relation to three main accident types: run-off road, head-on impacts and severe impacts at intersections. EuroRAP designed a method to calculate the RPS for each road segment or route, expressed in one to four stars, depending on a number of road characteristics. For more information on EuroRAP RPS see Lynam et al [24]. The road design SPI proposed within SafetyNet is the distribution of the RPS scores for each road category [19].

Both road SPIs are quite complicated to estimate. Moreover, in general, data for calculating these SPIs are not readily available in most countries. To evaluate the SPI values and examine the applicability of the method, the road network SPI was estimated in a number of pilot countries, i.e. the Netherlands, Israel, Greece and Portugal [38,40]. The results showed that the road network SPI could be efficiently calculated in all countries, despite some differences in the data sources. In general, the estimated SPI scores were realistic and ranged from 81 to 94%, with the exception of Greece where the SPI was relatively lower (67%). However, there are some issues that need further research in order to further improve the SPI [40].

The road design SPI was applied to a Dutch case study [18]. From that case study it appeared to be possible to calculate the SPI if the EuroRAP RPS scores are available for each road section.

Trauma management
Trauma management refers to the system which is responsible for the medical treatment of injuries resulting from road crashes. It covers the initial medical treatment provided by Emergency Medical Services (EMS) at the scene of the crash and during the transportation to a permanent medical facility, and further medical treatment provided by permanent medical facilities (hospitals, trauma centres). There is a consensus in the professional literature that the appropriate management of road casualties following the crash is a critical determinant of both the chance of survival and, on survival, the quality of life [6,9,10]. Conversely, improper

functioning of the post-crash care leads to more fatalities and severe injuries, which could be avoided.

In general, the international comparisons of the trauma management systems should be performed with caution due to a variety of definitions, legislations and systems, which are available for both the emergency and in-hospital trauma care, in different European countries. However, based on the best practice recommendations in the field of post-crash care [10], a number of features can be named which are definitely associated with better performance of the trauma management system. They are: shorter response time by EMS; higher competence level of the EMS staff; standardisation of the EMS vehicles; adequate hospital trauma care.

Based on the above considerations and accounting for the limited data available in different countries, a set of trauma management SPIs was developed [30,19]. It includes a list of indicators as presented in Table 1. The countries can be compared using selected trauma management SPIs, for instance by availability of the EMS stations, by availability and composition of the EMS medical staff, by availability and composition of the EMS transportation units, by characteristics of the EMS response time or by availability of trauma beds in permanent medical facilities [35-36]. Furthermore, a combined indicator was developed to measure a country's overall trauma management performance relative to other countries [17]. The combined indicator attributes each country to one of five levels of the trauma management system's performance such as: 'high', 'relatively high', 'medium', 'relatively low' or 'low'.

Country comparisons - example

A dataset with trauma management SPIs was created for 21 European countries [36]. Figure 6 shows, as an example, the number of emergency medical facilities per 100 km of road length and per 1000 citizens for different countries. From this figure can be seen that Germany is characterized by the highest density of the EMS stations per road length. The number of the EMS stations per population is high for Austria, Slovakia, Portugal, Finland, Norway and Estonia. Low values of both of these indicators were obtained for Greece, the Netherlands and Malta.

Country comparisons for other trauma management SPIs as well as the combined indicator values can be found in [36].

DISCUSSION

Safety performance indicators are measures that reflect the operational conditions of the road traffic system influencing the system's safety performance. Their purpose is to estimate the current safety conditions of different aspects of the road traffic system, to monitor the effect of safety interventions, and to compare the safety performance of different countries or regions.
Within the SafetyNet project, SPIs were developed for seven road safety-related areas: alcohol and drugs; speed; protective systems; daytime running lights; vehicles (passive safety); roads, and trauma management. The intention was to develop meaningful SPIs that, given the available data, could be widely applied within the EU, now and in the future. This turned out to be a complicated task, yet, was achieved with various degrees and nature of difficulty in different safety fields.

For the areas of protective systems and DRL use, reasonably good data are available in Europe and the SPIs suggested are straightforward. Concerning the usefulness of the protective systems' SPIs, a clear consensus exists among the European countries. However, as to the value of measurement of the DRL SPIs, some countries support it where others doubt that, indicating

that in the future, where the majority of vehicle fleet will be equipped with automatic lights' switch-on, the issue will become irrelevant.

For the areas of speed behaviour and the use of alcohol and drugs, the development of SPIs suffered heavily from lack of data and other limitations. In the case of alcohol and drug use, legislative restrictions in some of the European countries, i.e. a lack of possibility to carry out roadside surveys, made it necessary to use crash-related data for the estimation of SPIs, that should normally be avoided when developing SPIs (as those are supposed to reflect the operational conditions of the system, prior to crash occurrences). But even then, for the SPIs based on crash data, data of sufficient quality are not readily available for some countries. As indicated by an in-depth study of Assum and Sorensen [2], there is a clear need to improve quality of the data used for the alcohol SPI. To enable meaningful across-country comparisons, the total number of drivers involved in fatal accidents, the number tested for alcohol and the number not tested, should be reported, in addition to the number of alcohol positive and negative drivers among those tested. For speed behaviour, the possibility of direct international comparisons is limited, due to variability in the ways the countries conduct their surveys as well as differences in road classifications and speed limits [19].

For passive vehicle safety, trauma management, but even more so for roads, completely new approaches had to be developed for the SPIs' estimation. For trauma management and passive vehicle safety it was possible to develop SPIs, as data were available for the majority of countries, for at least some of the SPIs. The data collection for estimating trauma management SPIs was not easy as in most European countries such data are not in use in road safety decision-making and thus, special efforts were required for the data collection, frequently including applications to medical authorities. Nevertheless, the SafetyNet project's practice demonstrated that data collection for estimating such SPIs is possible for the majority of countries.

For the area of roads, more efforts are required in the future for the estimation of comparable SPIs, where the results of the pilot studies [40] demonstrated that such a task is realizable. Moreover, recent progress with the distribution of the EuroRAP approach throughout the world (www.irap.org) strengthens the belief in the possibility of producing comparable road design SPIs in the future.

A number of European countries such as Finland, France, Sweden, Hungary, Switzerland, the Netherlands, the UK, have been carrying out systematic national behaviour surveys on selected road safety behaviours since the 1990s or even earlier. These countries have realised the importance and potential benefits of systematically monitoring road user behaviour and of creating SPIs. Repeated measurements are performed on a regular basis, which enables the assessment of traffic behaviour trends and of the impacts of countermeasures applied/ the advance of safety programmes. The most frequently covered areas in such surveys are speeds, drinking and driving, use of vehicle restraint systems. However, the available surveys were not necessarily influenced by the common rules suggested by the SafetyNet study. The authorities are usually reluctant to change and prefer to leave the comparability problems for those who attempt to carry out international comparisons. Thus, some adjustments of the surveys' frameworks and results were suggested in the SafetyNet reports [18-19].

Since the SafetyNet project was finished, further developments occurred as to SPIs' applicability. Promoting better road safety management and the Safe System approach, leading

countries agreed that using safety performance indicators would reflect stronger commitment to ongoing monitoring and evaluation of safety interventions [27]. Meanwhile, the analysis of intermediate indicators for estimating the progress towards road safety targets is not a common practice yet where a consistent use of SPIs can be found in a few countries only, e.g. in Sweden [3].

In general, the European countries and international bodies came to a consensus as to the usefulness of safety performance indicators for country comparisons [4, 27, 28]. Recent publications of the Organisation for Economic Co-operation and Development, European Transport Safety Council (ETSC), and the EC include fugures with country comparisons as to the use of seat-belts in cars, helmets' use by motorcyclists, travel speeds, etc, together with legislative and safety management issues. Moreover, over the last years, ETSC led the Road Safety Performance Index (PIN) project promoting the European country comparisons in terms of safe road user behavious, road infrastructure and vehicles, beside various analyses of crash injury data [e.g. 13,21].

SPIs have been increasingly researched during the last years, with particular emphasis on methodological issues [2,20,32,37]. Further theoretical developments are required for better understanding of the relationship between SPIs as intermediate outcomes, and crashes and injuries as final outcomes of the system. Such questions were raised concerning SPIs in alcohol [2], trauma management [17] and other road safety fields. Moreover, due to the multidisciplinary character of road safety there is a rapid development of composite road safety indices [16,37,39], where SPIs are supposed to be taken into consideration in creating such a composite index.

The major bottleneck in the development and application of SPIs in Europe is the general lack of data of sufficient quality. To help the countries in setting up new data collection systems or in improving existing ones, the SPI Manual was developed [18]. This SPI Manual aims to assist countries in establishing the systems of data collection that are necessary for producing national SPIs in each of the predefined safety fields, and to make them comparable on a European level. It is recommended that the countries use this Manual as a basis for starting or improving the use of SPIs in their country. Following the project, some countries initiated establishing national observational surveys that rely on the SafetyNet rules [e.g.29]. High quality SPIs can serve as valuable tools in future knowledge- and data-driven policy-making in Europe. The SPIs concept developed in the SafetyNet can form a basis for future developments in this area.

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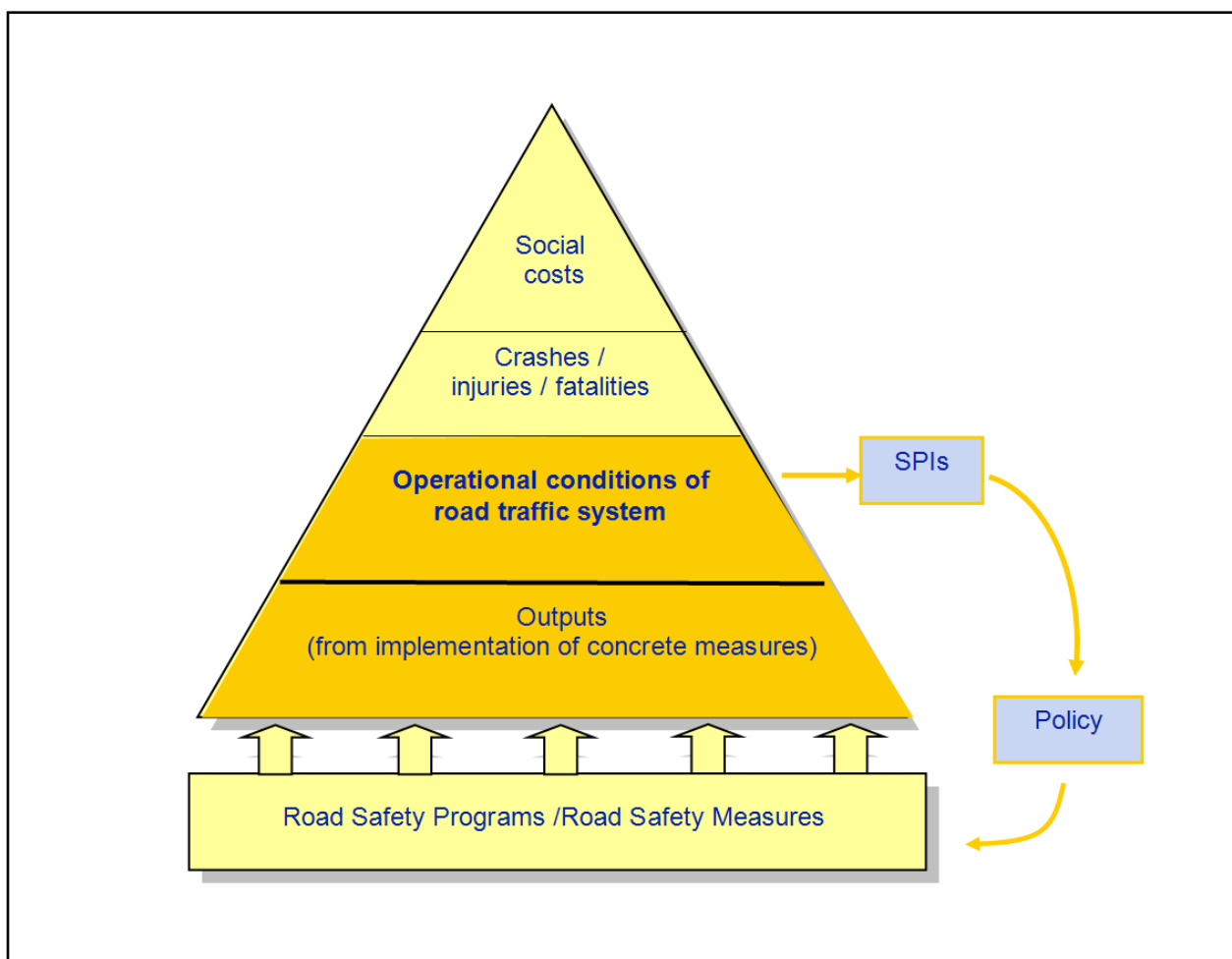
Fig. 1 Place of SPIs in safety management system. Adapted from [23] and [11]
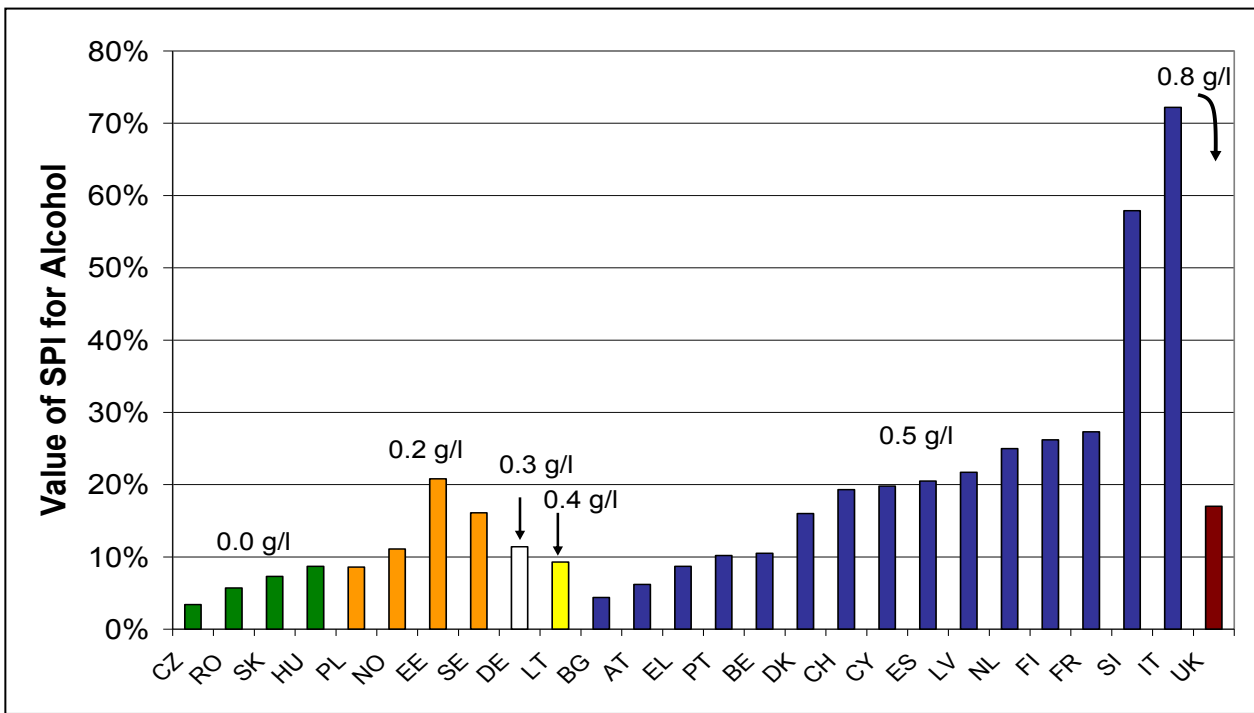
Colours indicate the same BAC legal limits.
For CZ, RO, PL, SE, LT, BG, PT and LV the figure is based on 2007 data, for BE, DE, EL, ES, FR, CY, AT, SI, SK, FI, UK and NO on 2006 data, for DK, EE, HU, NL and CH on 2005 data and for IT on 2004 data. Source: [36].

Fig. 2 Country comparison by the SPI for alcohol.
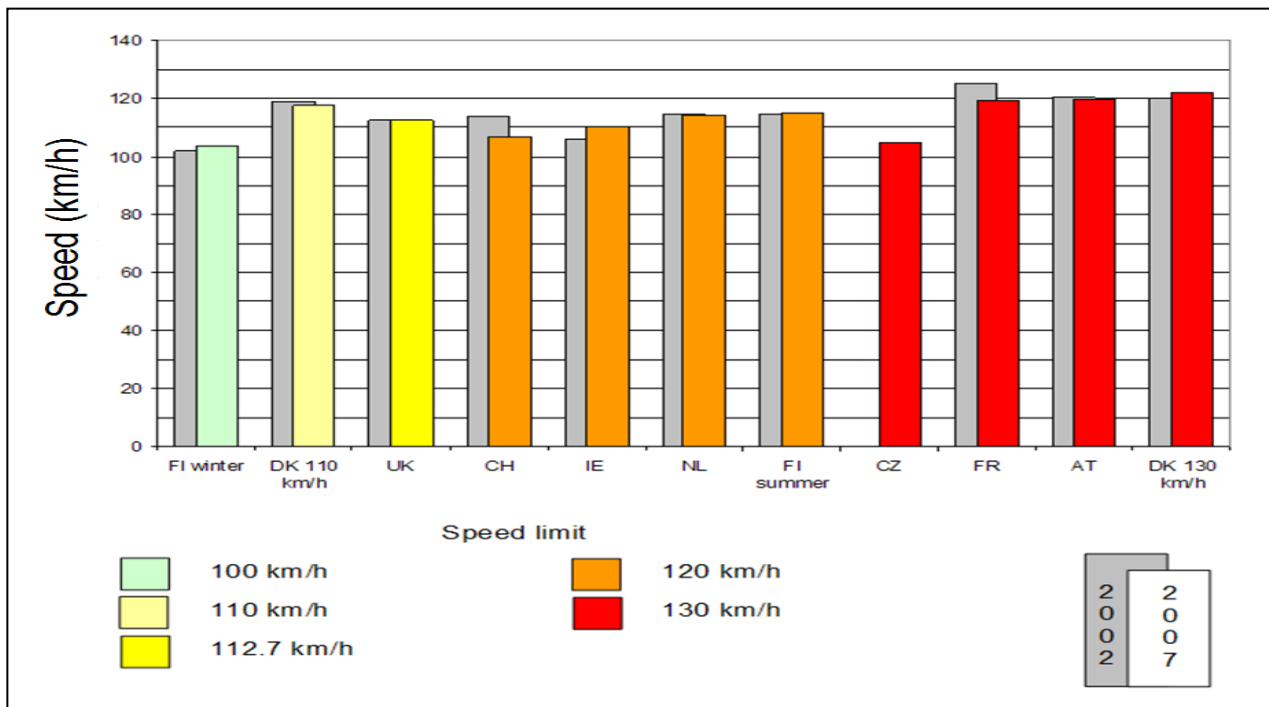
For CH, CZ, DK: all types of vehicles are considered. CZ, IE, AT, NL: figures from 2006. IE: speed limit in 2002 was 112.6 km/h (70 mph). DK: in 2002, the speed limit for all motorways was 110; since 2004 about 50% of the motorways have a new speed limit of 130 km/h. Source: [36].

Fig. 3 Average speed of light vehicles on motorways in 2007 (coloured) and 2002 (gray).
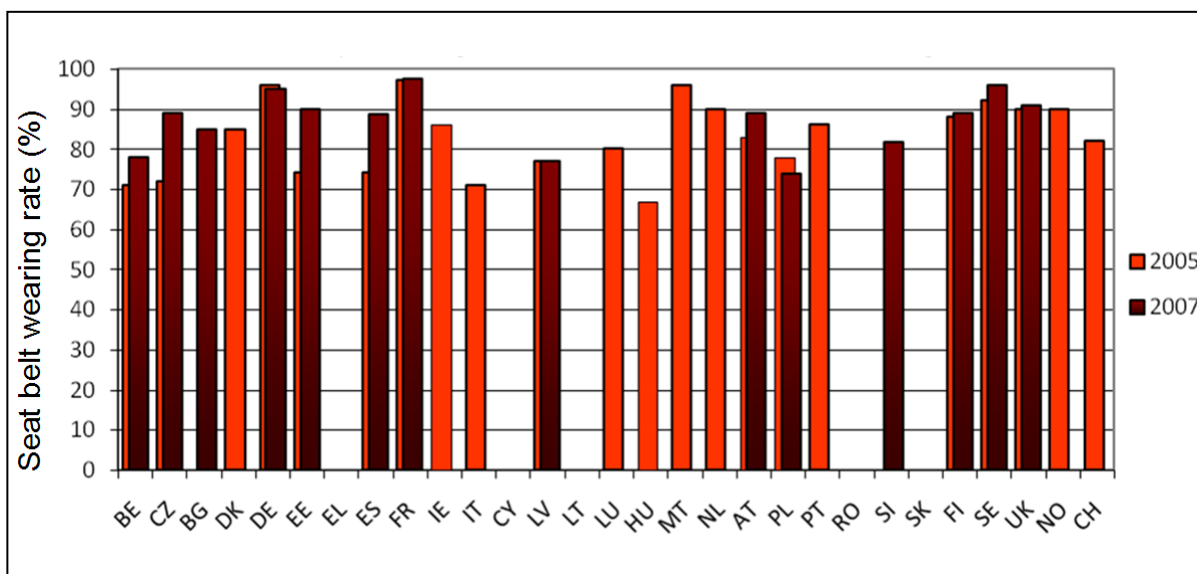
For LU: 2003; LV, MT: 2006; DK, DE, EE, IT, FR, PT, LU, CH: only driver wearing rates considered; FR: vans not included; IT, LV, MT, PL, PT does not fit fully to defined requirements. Source: [36].

Fig. 4 Daytime seat-belt wearing rate on front-seats of passenger cars and vans under 3.5 tons, in 2007 and 2005.
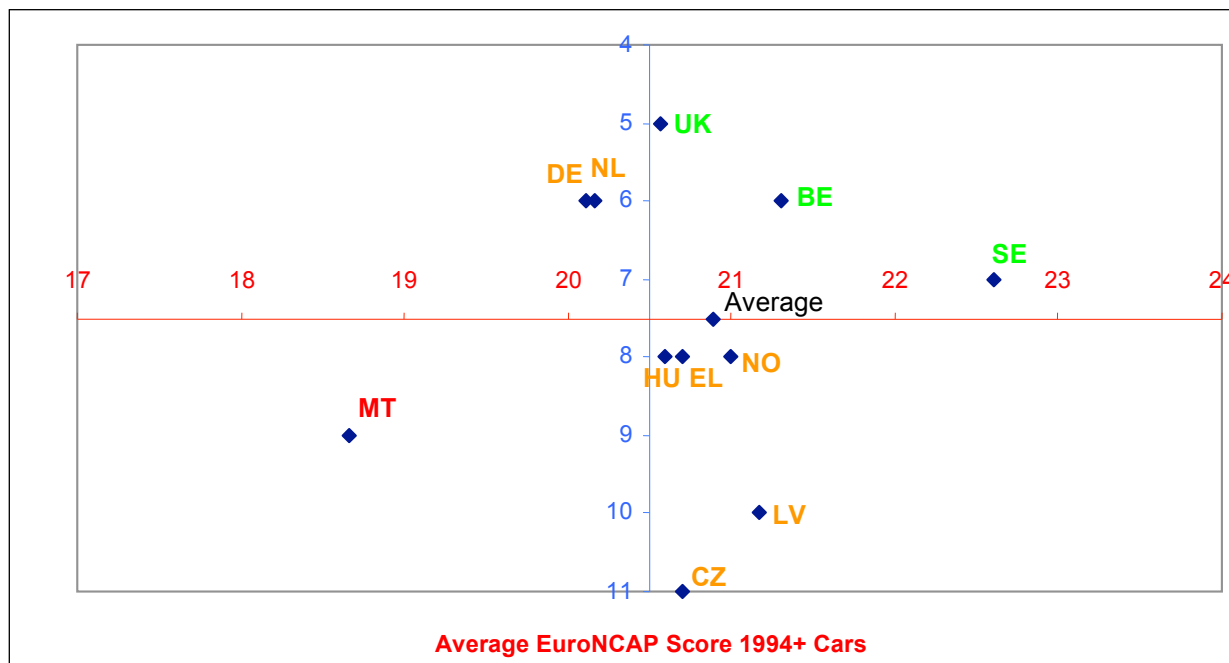
Median Age of Passenger Cars

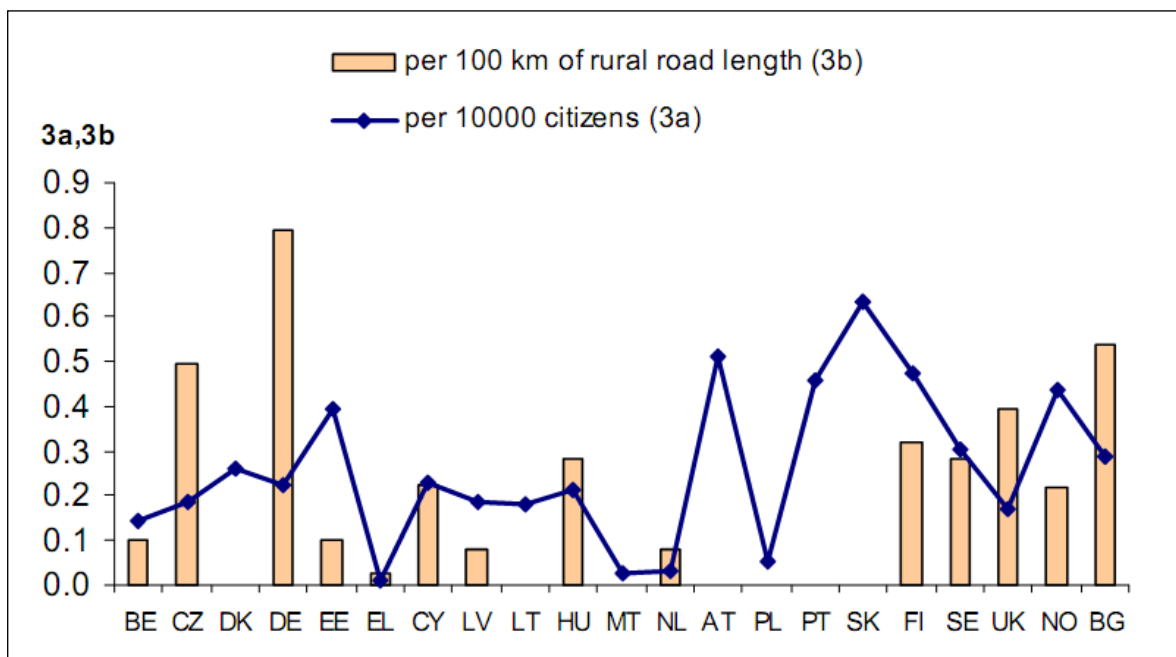**Fig. 5 Average EuroNCAP score (x-axis) and median age of passenger cars (y-axis) for different countries**.
Source: [35]

Fig. 6 Number of EMS stations per 10,000 citizens and per 100 km of rural road length.
Source: [36]

Table 1: SPIs developed for each safety area

Safety area	Developed indicators

Alcohol and drugs	Alcohol
	    percentage of fatalities resulting from crashes involving at least one driver impaired by alcohol
	Drugs
	    percentage of fatalities resulting from crashes involving at least one driver impaired by drugs other than alcohol

Speed	The mean speed, the 85th percentile speed, the percentage of speed limit offenders by road type, vehicle type, period of day (daytime, night)

Protective systems	Daytime wearing rates of seatbelts
	    in front seats (passenger cars + vans /under 3.5 tons)
	    in rear seats (passenger cars + vans /under 3.5 tons)
	    by children under 12 years old (restraint systems use in passenger cars)
	    in front seats (heavy goods vehicles + coaches /above 3.5 tons)
	Daytime wearing rates of safety helmets
	    by cyclists, moped riders and motorcyclists

DRL	DRL usage rate in total, per road type, per vehicle type
Vehicles (passive safety)	The crashworthiness and median age of the passenger car fleet The vehicle fleet's composition: percentage of heavy goods vehicles and percentage of powered two-wheelers

Roads	Road network SPI
	    percentage of appropriate actual road category length per theoretical road category
	Road design SPI
	    EuroRAP Road Protection Scores per road category

Trauma management	Availability of Emergency Medical Services (EMS) stations
	number of EMS stations per 10,000 citizens and per 100 km length of rural public roads
	Availability and composition of EMS medical staff
	percentage of physicians and paramedics out of the total number of EMS staff
	number of EMS staff per 10,000 citizens
	Availability and composition of EMS transportation units
	percentage of Basic Life Support Units, Mobile Intensive Care Units and helicopters/planes out of the total number of EMS transportation units
	number of EMS transportation units per 10,000 citizens
	number of EMS transportation units per 100 km of total road length
	Characteristics of the EMS response time
	demand for EMS response time (min)
	percentage of EMS responses meeting the demand
	average response time of EMS (min)
	Availability of trauma beds in permanent medical facilities
	percentage of beds in trauma centres and trauma departments of hospitals out of the total trauma care beds
	total number of trauma care beds per 10,000 citizens

Table 2: DRL usage rates on different road types. Source: [36]

Country	Year	Motorways	Rural roads	Urban roads	DRL roads
Austria	2006	95%	97%	88%	93%
Czech Republic	2007	99%	99%	99%	99%
Estonia	2004	99%	100%	99%	99%
Latvia	2007	-	98%	98%	98%
France	2004	35%	24%	-	30%
Hungary	2005	95%	84%	5%	-
Switzerland	2004	51%	48%	46%	48%
Bulgaria	2007	95%	90%	90%	-
Poland	2007	100%	100%	100%	100%
Sweden	2007	100%	100%	100%	100%
Finland	2007	100%	100%	100%	100%

Quantification of Fairness Perception by Including Other-Regarding Concerns Using a Relativistic Fairness-Equity Model

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ABSTRACT

Using a relativistic fairness-equity model, this study quantifies the fairness perception by a stimulus-response function. Fairness often requires the comparison between two parties. The relativistic model takes into the account of the relativity in the comparison, depending on whether the comparison is based on a self-centered or an other-centered frame of reference. Using the Ultimatum Game (UG) experimental paradigm, fairness perception is quantified by the fairness stimulus-response function in human subjects, where the y-intercept represents the baseline fairness and the slope represents the fairness sensitivity. The results show that fairness perception is proportional to the offer-ratio between the proposer and the responder using the self-centered frame of reference, with one exception. The exception is that, at absolute equity (equal share between the two parties), the subjects reported the offer as the most fair, even more fair than the most hyper-equitable offers. This suggests that the subjects switch the frame of reference from a self-centered frame of reference to an other-centered frame of reference. That is, by switching from a local (subjective) frame of reference to a global (objective) frame of reference, the optimization for fairness for both parties can be achieved, resolving the relativistic dilemma that fairness for one person is unfairness for another person. This shows that the relativistic model can describe how fairness perception can be biased relative to the two parties, using a self-centered and an other-centered frame of reference.

Keywords: Fairness bias; equity; egalitarianism, monetary gain; ultimatum game; decision.

INTRODUCTION

Fairness is one of the high-level cognitive concepts used to compare and contrast the difference in how we treat others, and how we want to be treated by others. It can affect the behaviors in social interactions depending on how one perceives the treatment as fair or not. It is not only used by human, but also by primates [1] to compare and contrast the unequal treatments. Thus, it is important to determine how fairness is computed quantitatively, so that the biases in fairness perception can be assessed.

Fairness has been studied extensively in relation to social interactions [2-4], especially in relation to the neurobiology of brain functions using brain-imaging technologies [5-10]. It has also been studied in relation to economic transactions [11-15], and distributive justice [16-18].

Literature Review of the Computational Models of Fairness Assessment

There are many different computational models of fairness [19-26] [27], which are mostly based on economic game theories [13, 14, 16, 17, 28]. Most of these economic fairness models are based on the inequity aversion model [14], in which equity is used as a measure for the assessment of fairness. Although most societies often consider social equality as a measure of fairness, this assessment is often not sufficient to account for the biases in fairness perception. That is, if equity is used as a measure in the comparison, then equality is usually considered as fair; otherwise, inequality is considered as unfair. Yet, fairness and equality are not necessarily equivalent. That is, what is fair may not be equal; what is equal may not be fair. For instance, a big person may eat more food than a small person may, so it is not equal but fair. So there exists a paradox that equity does not necessarily imply fairness; nor does fairness imply equity. Thus, an inequity aversion model does not account for the perception of fairness adequately, because social interactions are not always driven by maximizing gains using mutual-max optimization [13] to achieve equity, but by the relativity of the comparison between oneself and the other person, as proposed in our relativistic fairness-equity model [29, 30].

The Relativistic Fairness-Equity Model

In order to account for the relative perception of fairness, a relativistic fairness-equity model [29, 30] was introduced to compare the relative difference between oneself and the other person in the assessment of fairness. It differs from the other fairness models, in which it takes into the account of relativity between self and others. The relativity is determined by whether the frame of reference used in the comparison is based on self or others. For instance, if the quantity is a desirable quantity (such as any valuables), then the perception of fairness is dependent on who has more in the comparison. That is, if others have more than self, then it is often considered as unfair to self — using the self-centered frame of reference (assuming everything else used in the comparison are equal for both parties). At the same time, it is also hyper-fair to others, if the other-centered frame of reference is used. Thus, the result of the comparison is often opposite to each other, if the reference is switched from a self-centered to an other-centered frame of reference. More importantly, if the comparison is inclusive of both self and others, using a global frame of reference, instead of a local frame of reference, then the perception of fairness can change significantly. Therefore, fairness is highly dependent on which frame of reference is used in computing the difference or the disparity between the parties.

Hypothesis

Based on the relativistic fairness-equity model, the hypothesis is that fairness perception is proportional to the disparity between self and others in the comparison, depending on the frame of reference. If the frame of reference is switched from a self-centered frame of reference to an other-centered frame of reference, then humans can evaluate fairness objectively. The decision is often based on optimizing the gain for oneself, using the self-centered frame of reference to include self-regarding concerns. However, in most social interactions, such decision could also include other-regarding concerns. This can be done by taking into account the other-centered frame of reference to optimize the gain for other individuals, if such inclusiveness does not conflict with the self-regarding concerns. That is, if optimizing the gain for oneself does not produce a conflict with the optimization for the gain for others, then humans often opt for optimizing the gain for both parties.

Since optimizing the gain for oneself often leads to fairness for oneself, but unfairness for others, according to our relativistic fairness-equity model, it creates a conflict so that

optimizing fairness for both is often not possible. This is because conflict arises when a person has to choose between two options, but it is only possible to choose one but not the other. In a conflict, choosing one of the options automatically nullifies the option for the other. Thus, if a person wants to optimize fairness for both parties, then maximizing gain for oneself would automatically minimize gain (or maximize loss) for the other person, due to the relativity of fairness assessment for oneself vs. others. However, at absolute equity, it is possible to optimize the gain for both, which results in fairness for both parties without diminishing the gain for oneself or the other.

Thus, our hypothesis will predict that fairness perception is assessed by using a self-centered frame of reference while considering an other-centered frame of reference; and the fairness consideration will include the other-centered frame of reference, only if it does not conflict with the self-regarding concerns (i.e., being fair to oneself). The condition to achieve fairness for both is possible at absolute equity. Thus, humans will include the other-regarding considerations at equity, and perceive this even-share equity condition as the fairest of all.

Quantification of Fairness
In order to assess how fairness perception can be biased, the stimulus-response function is used to quantify fairness. Using the quantifiable stimulus-response function, the relativistic fairness-equity model can determine how fairness is biased by the shifting of the stimulus-response curve graphically relative to the selected frame of reference [30]. By quantifying how fairness is biased in the computation, we can determine what factors could have contributed to these biases, and how they can affect the social interactions.

Ultimatum Game Experimental Paradigm
In assessing the relationship between fairness and decision, Ultimatum Game (UG) is one of the most widely used experimental paradigms in behavioral economics, social science, psychology, neuropsychology, and mathematical psychology [11, 20, 24, 31-33]. It is a simple split-the-money game to ask human subjects to accept or reject the monetary offer, which can be dependent on how the subjects consider the offer as fair or not. The rule of the game is that a sum of money (such as $10) is split between two persons — a proposer and a responder. The proposer offers a share of the money (such as $3) to the responder, while keeping another share for himself/herself (such as $7). The responder is asked to accept or reject the offer. If the responder accepts the offer, both keep their share of money. If the responder rejects, both lose the money.

Objectives
The objective of this study is to determine whether fairness perception can be quantified by the stimulus-response function, according to the relativistic fairness-equity model, using the UG experimental paradigm. That is, we will address the hypothesis that the fairness perception is proportional to the disparity between two persons, if it uses a self-centered frame of reference. However, when the frame of reference is switched to an other-centered frame of reference, then the fairness perception would be altered, deviating from the original self-centered perception. If such scenario occurs, then the stimulus-response function can be used to quantify whether the other-regarding consideration would alter the fairness perception from the proportionality relationship relative to the self-centered frame of reference. That is, if fairness bias exists, then the stimulus-response function would be shifted/skewed relative to the equity (disparity) measure graphically. Thus, the fairness bias can be quantified by the amount of fairness deviated from the predicted fairness in stimulus-response function. We want to determine whether the fairness perception at equity will deviate significantly from the self-centered frame of reference in accessing fairness. If so, then fairness is assessed by taking

into account of considerations other than the self-regarding considerations, according to the relativistic fairness-equity model.

METHODS

Experimental Methodology

We recruited healthy human subjects to participate in this study voluntarily. The subjects were asked to play the ultimatum game as a responder. An amount of money is proposed to the human subject to accept or reject on the computer screen by the proposer. The computer is used as the proposer, because we did not want to bias the subject's fairness perception, if human intervention were used as the proposer; especially since it has been shown that knowledge of human vs. computer proposer could bias the fairness perception in UG [8, 34]. No confederates or any forms of deception were used to alter the subject's perception, so that the experimental conditions were presented as neutral as possible, without experimentally manipulating the subject's fairness perception. The experiments were self-paced by the subjects without having any time pressure, external constraints or manipulations.

Each experiment was performed with nine randomized offers proposed to the responder, which ranged from $1 to $9. All experiments were one-shot trial experiments, i.e., the offers were presented once, without repeating any offer twice. The offer-ratios were presented in random order to the responder, which ranged from a stingy $1 : $9 offer to a generous $9 : $1 offer. When the responder accepted (or rejected) the offer, the subject was asked to rate how fair the offer was in a scale of +5 to –5 Likert scale [35]. We also asked the subject to rate other attributes (such as, how important fairness is; how important money is; how important winning is; whether they won the trial; in addition to other emotions: happy, angry, sad and jealous using the same rating scale). The extra questions served, in part, as distracters to reduce the likelihood that the subject may skew the responses if the objectives of the experiment were known. The relationships between emotions and the monetary gain with respect to fairness had been reported elsewhere [36-38].

By design, we used the same pseudo-random sequence of monetary offers to ensure consistency in the experimental conditions across all subjects. To identify whether the subject's perception had changed in the course of the experiment, we also recorded their emotional state at the beginning and end of experiment. By design, we specifically measured the subject's self-reported ratings, because the self-reported measures encapsulate the subjective perception, which are filtered through their own subjective biases. Thus, if bias existed in their fairness perception, that bias would also be reported as a skewed response in the self-reported rating of fairness. Thus, the bias will be revealed in the subsequent analysis. This study was approved by the University Institutional Review Board. Informed consent was provided to the subjects prior to the beginning of the experiment.

RESULTS

This study included a total of 425 human subjects (age ranging from 18 to 80, median = 21; mean = 22.3; SD = 4.7; 275 female, 150 male). Fig. 1 shows the fairness stimulus-response graph of the entire sampled population with respect to the offer-ratios. The self-reported fairness ratings are plotted in the y-axis, while the offer-ratios (which is sorted from the randomized offer-ratios) are plotted in the x-axis.
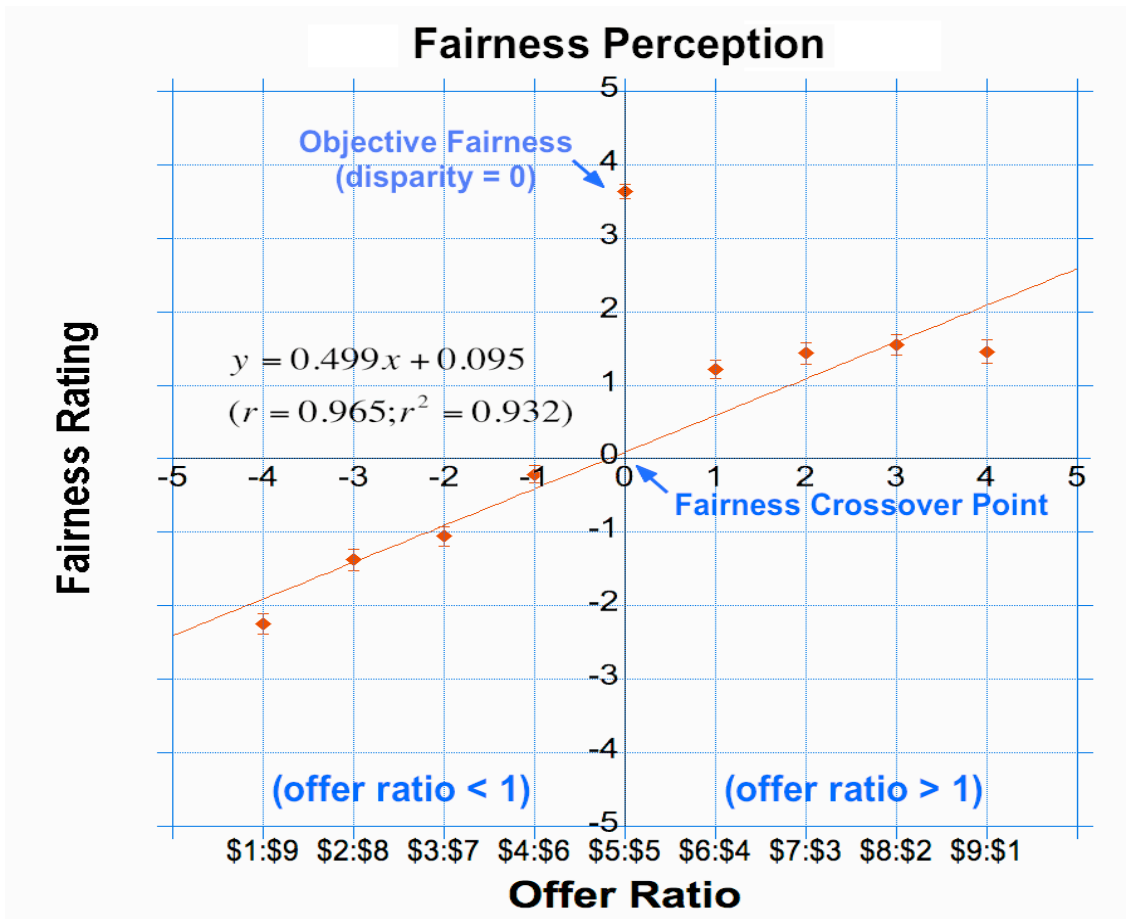
Figure 1:. Stimulus-response graph of fairness vs. offer-ratios for all trials (i.e., including both acceptance and rejection trials). Curve-fitting is done by regression for all data points (excluding singularity-point at offer-ratio = 0). It shows a linear proportionality relationship between fairness rating and offer-ratio. Note that the fairness rating at absolute equity (offer-ratio = 1) is the highest, even higher than the hyper-equitable offers (offer-ratio > 1). The error bar represents standard error of mean (SEM).

Proportionality in Fairness Perception to Equity-Ratio

Fig. 1 displays the regression line (r = 0.963; r2 = 0.932) fitted through the data. It shows a direct proportionality relationship between the fairness rating and the offer-ratios, indicating that the more equitable the offer is, the more fair the subject perceives the offer. This shows fairness is proportional to the equity-ratio between the proposer and the responder (y = 0.499x + 0.095), as predicted by the relativistic fairness-equity model.

Self-Centered Frame of Reference in Evaluating Fairness

Note that the fairness crossover point (based on the regression line) is precisely located at absolute equity (offer-ratio = $5 : $5) with a fairness rating = 0 (neutral fairness). That is, at even-split, there is no disparity between the two parties, so fairness perception should be neutral — i.e., neither fair nor unfair. This is consistent with the self-centered frame of reference in determining fairness according to the disparity between self and others. That is, if the offer-ratio is less than one (stingy offers with offer-ratio < 1), it is inequitable, so it would be perceived as unfair. Indeed, the subjects rated it as unfair, which is consistent with the self-centered fairness-equity hypothesis. On the other hand, if the offer-ratio is greater than one (generous offers with offer-ratio > 1), it is hyper-equitable, so it would be perceived as hyper-fair. Indeed, the subjects rated it as hyper-fair, which is also consistent with the self-centered fairness-equity hypothesis.

Other-Centered Frame of Reference in Evaluating Fairness at Absolute Equity

Most interesting, by interpolating the fairness stimulus-response function using the regression line (y = 0.499x + 0.095), the predicted fairness rating is zero (y-intercept = 0.095 ≈ 0) at absolute equity (offer-ratio = $5 : $5), passing through the origins of both x-axis and y-axis exactly. This means that the fairness rating would have been "neutral" in the self-reported rating — i.e. neither fair nor unfair — had the subjects used the self-centered frame of reference in assessing fairness. Indeed, the regression line does precisely pass through the axes-origin.

Contrary to this self-centered assumption, the data show that the self-reported rating of fairness at absolute equity is 3.7 point (instead of 0) in the 10-point scale of +5 to –5. In fact, it is two times more fair than the most hyper-equitable/hyper-fair (generous) offer (which is rated at 1.6 for offer-ratio of $9 : $1). Thus, it suggests that there is a switch from the subjective self-centered frame of reference to an objective other-centered frame of reference at absolute equity (offer-ratio of $5 : $5). That is, instead of perceiving the fairness as neutral when there is no disparity between the two parties at absolute equity, the subjects perceived the offer as extremely fair, even more fair than the most generous offers.

Switching from a Subjective Frame of Reference to an Objective Frame of Reference at Absolute Equity

This singularity point in the proportional fairness-equity curve is a significant deviation from the self-centered frame of reference in assessing fairness. To account for this deviation, the subjects were most likely to have included the other-centered frame of reference in the evaluating of fairness, such that it is simultaneously fair to oneself and fair to the other party, regardless of which frame of reference is used. That is, the subjects were likely to optimize the fairness for both parties, but it is not possible to be both fair to self and fair to others if the offers are inequitable. That is, for inequitable offers, it is unfair to oneself, but hyper-fair to the other person. For hyper-equitable offers, it is hyper-fair to oneself, but unfair to the other person. This creates a dilemma in optimizing fairness for both.

However, this dilemma is resolved at absolute equity (offer-ratio = 1). It can be fair to both parties. Thus, the fairness perception is doubly fair when it is fair to oneself and fair to the other person simultaneously. This also suggests that the perception of fairness for equality is a result of an internal optimization process for resolving fairness for both parties, using a global frame of reference instead of a local frame of reference.

Relativistic Fairness Comparison by Optimizing Fairness for Both Parties

The deviation of the singularity point at absolute equity can be accounted for by the relativistic fairness-equity model, which captured this phenomenon by switching from the self-centered frame of reference to the other-centered frame of reference in evaluating fairness. If a self-centered frame of reference was used, the interpolation of the regression line clearly predicts that the human subjects could have perceived the fairness level as neutral (fairness rating = 0) for the offer-ratio of $5 : $5. Instead, the subjects rated it as 3.7, more than twice as high as the fairest rating for hyper-equitable/hyper-fair generous offers. Thus, the subjects most likely switched from the self-regarding concerns to the other-regarding concerns in assessing fairness. At equality (absolute equity), it would be fair for both persons at the same time. Thus, it is no longer hyper-fair for one person, while unfair for another person at the same time. Equal sharing resolves the optimization dilemma by being inclusive of both self and

others, rather than being self-centered. Thus, egalitarianism is a phenomenon that is more likely to be a consequence of the internal optimization process to optimize fairness for both parties than a behavior that is imposed externally by social norms.

DISCUSSIONS

The analysis shows that the fairness rating level is consistent with the hypothesis that the fairness perception is proportional to the disparity in the offer-ratio, which is consistent with other fairness studies [2, 5, 6, 9, 14, 16]. The more equitable the offers were, the fairer the self-reported ratings were, but with one exception. The exception that deviated from this proportionality relationship is at absolute equity (equal share). At equality, the fairness perception is rated the highest, indicating that the fairness perception is considered as the most fair.

The analysis validates the relativistic fairness-equity model by its ability to account for the singularity point at the absolute equity point as the most fair, even more fair than any of the other hyper-equitable/hyper-generous offers. This shows that the inequity aversion model does not completely account for this anomaly, if a single self-centered frame of reference is used in evaluating fairness. This suggests that humans most likely consider both frames of reference to evaluate fairness. By including both self-centered and other-centered frames of reference, it can resolve the dilemma that exists when maximizing one's gain would imply minimizing another person's gain. At absolute equity (equality), the dilemma is resolved by optimizing fairness for both parties without any conflicts, which is reflected in the highest rating of fairness. This objective fairness perception is more fair than the subjective self-centered perspective of fairness.

The analysis suggests that human preference for absolute equity is not necessarily driven by the external social norm in egalitarianism, but by considering both self-centered and other-centered frames of reference in evaluating fairness. That is, at absolute equity (offer-ratio = 1), the fairness perception deviates from the self-centered frame of reference (that only considers self-regarding concerns, but also considers other-regarding concerns as well). Thus, fairness is not determined by the monetary gain (or disparity), but by the consideration of others.

Other UG studies of emotions also showed a similar singularity point that deviates from the proportionality relationship to offer-ratios (or monetary gain). Specifically, human subjects reported happier at absolute equity than other offer-ratios [36], regardless of whether they accepted or rejected the offers [37]. Similarly, human subjects also reported less angry at absolute equity than other offer-ratios [38]. Thus, these results are consistent with the interpretation that humans switch the frame of reference from a self-centered one to an other-centered one at absolute equity. They are happier and less angry when the offer is equal to both parties than any other offers. This suggests that humans include other-regarding concerns not only in their relativistic perception of fairness, but also in their perception of emotions.

This shows that egalitarianism is more likely to be an internally generated optimization process in which the human subjects included both self-regarding and other-regarding concerns in the evaluation of fairness, without necessarily using an external-imposed social norm to guide egalitarian behaviors. The companion paper [39] will address whether the same proportionality stimulus-response relationship is preserved depending on the decision to accept or reject the offers. The companion paper will also provide evidence that not only is the proportionality relationship preserved, but also the egalitarian perception of fairness is preserved as the highest, even when the subjects decided to reject the offers.

CONCLUSION

This study shows that fairness perception can be quantified by the relativistic fairness-equity model to account for the switching from a self-centered frame of reference to an other-centered frame of reference at absolute equity. Using the UG paradigm, it shows fairness perception is proportional to the disparity between oneself and the other person, except at absolute equity. This subjective fairness perception is based on a self-centered frame of reference, except at absolute equity (equal share). At equality, the frame of reference is switched to include both the self-centered and the other-centered frame of reference. The singularity point at absolute equity is the fairest of all, which deviates from the proportionality relationship that is based on the self-centered frame of reference. Thus, it suggests that humans use a self-centered frame of reference in assessing fairness, while including the other-centered frames of reference if optimizing the fairness for both is feasible (which occurs at absolute equity). Thus, egalitarian behaviors can be generated internally by optimizing fairness for both parties, without relying on the external social norms for guidance. The experimental data validated the theoretical prediction that uses relativity in fairness assessment as proposed by the relativistic fairness-equity model.

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Quantification of Fairness Bias in Relation to Decisions Using a Relativistic Fairness-Equity Model

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ABSTRACT

This study quantifies the fairness bias in relation to decision by a stimulus-response function using a relativistic fairness-equity model. The interrelationship between fairness and decision is quantified by using an Ultimatum Game (UG) experimental paradigm in human subjects. The results showed that the fairness perception is shifted upward (toward a higher positive fairness baseline in the y-intercept of the stimulus-response function) for acceptance trials, without changing the slope (which corresponds to the fairness sensitivity). On the other hand, the fairness perception is shifted downward (toward a negative fairness baseline in the y-intercept) for the rejection trials. The analysis also showed that the fairness crossover point is shifted to the left for the acceptance trials, while the fairness crossover point is shifted to the right for the rejection trials. The analysis also showed that there is a singularity point, in which the most equitable offer (even-split) is always considered as the fairest, even when they rejected the offers. This absolute equity is rated as the fairest (even fairer than any of the hyper-equitable offers) independent of whether the subjects decided to accept or reject the offers. The changes in fairness perception are quantified by the shifting of the stimulus-response curve up/down (changing the fairness baseline) or left/right (changing the fairness leniency), without changing the slope (the fairness sensitivity), when the decision is made to accept or reject the offers.

Keywords: Fairness bias; equity; egalitarianism, monetary gain; ultimatum game; decision.

INTRODUCTION

Fairness is one of the many social interactions that has been studied extensively to understand how it affects behavior [1-12]. It is also affects behavior in economic transaction [13-16], and distributive justice [17-19]. Fairness is one of the high-level cognitive concepts used not only in humans, but also in primates [20] to compare and contrast the differences in how we treat others, and how we want to be treated by others. Thus, it is important to determine how fairness is computed, so that the biases in fairness perception can be quantified, especially in relation to decision, i.e., how fairness bias can affect decision in social interactions.

LITERATURE REVIEW

Fairness-Equity Models

Most of the computational models of fairness [21-29] are based on the measure of equity. Most of these models are derived based on the economic game theories in monetary gain [15-18, 30], especially the inequity aversion model [16] to avoid unfairness or using mutual-max optimization [15] to achieve equity. These models may account for economic transaction, but

they may not adequately account for the behaviors in social interactions. It is because social interactions are not always driven by maximizing personal gains, but the comparison between self and others with self-regarding and other-regarding concerns (when humans do not live in isolation by themselves, but live with the interactions with others). The inclusion of other-regarding concerns can change the dynamics of interactions and can affect the perception of fairness when the frame of reference in the comparison is switched, as proposed in our relativistic fairness-equity model [31-33].

Relativistic Fairness-Equity Model
The companion paper [33] has introduced the relativistic fairness-equity model to compare the difference based on a self-centered or other-centered frame of reference. By taking into the account the relative difference between self and others, it can account for the relativistic difference between what is fair for one person is unfair for another, when the frame of reference is switched from self to others. For instance, what is unfair to me is hyper-fair to you, if fairness is assessed by switching the frame of reference — from a self-centered frame of reference to an other-centered frame of reference. If the comparison is inclusive of both parties, then a global frame of reference is used instead of a local frame of reference, which also alters the assessment of fairness. Thus, fairness can be biased by a frame of reference used in computing the disparity between the parties. Such change in frame of reference can affect the perception of fairness, which can also affect the decision to accept or reject the social interactions.

Quantification of Fairness relative to Decision
As described in the companion paper [33], fairness perception can be quantified by a stimulus-response function. The relativistic fairness-equity model can now be used to address the relationship between fairness and decision quantitatively, by describing how fairness perception is biased by the shifting of the stimulus-response curve relative to the selected frame of reference [32]. More specifically, if the perception of fairness is changed from unfair to fair by switching the frame of reference, then the decision to accept or reject an offer could be changed also. The ability to quantify fairness based on the stimulus-response function allows us to determine exactly how fairness is biased in making these decisions. In order to validate this hypothesis, we use the classic Ultimatum Game [13, 22, 26, 34-36] to determine the factors that may contribute to these biases, and how they can affect the social dynamics.

Ultimatum Game Experimental Paradigm
Ultimatum Game (UG) is one of the most widely used experimental paradigms to assessing the relationship between fairness and decision in behavioral sciences [13, 22, 26, 34-36]. It is a cognitive task used to determine the factors affecting the decision-making process, which can be dependent on how the human subject perceives whether the offer is fair or not. The task is a game in which a sum of money (such as $10) is divided between two parties. The proposer offers a part of the money (such as $2) to the responder, while keeping the remaining for himself/herself (such as $8). The responder is given the choice to accept or reject the offer. The rule is that if the responder accepts the offer, both parties keep the money. If the responder rejects, both parties lose the money.

Numerous studies had shown that the decision to accept or reject an offer in UG is often dependent on the fairness perception [5, 8-12, 37-39]. The neurobiological substrates involved in fairness that affects decision are also well documented [2-4, 6, 7, 40]. Not only do humans reject unfair offers, monkeys also reject unfair offers [20]. This shows that the

observable behavioral outcomes of unfair treatments are conserved across different species of higher animals.

Objectives

The objective of this study is to quantify the relationship between fairness and decision using the UG experimental paradigm, so that we can assess the interrelationship between fairness and decision in social interactions. Specifically, we will address the hypothesis that the decision to accept or reject a fair/unfair offer is logically consistent with how fairness is biased based on the relative frame of reference rather than some predefined social norms. To test the above hypotheses of fairness bias, we use stimulus-response function to determine how fairness bias (if exists) is shifted/skewed relative to the equity measure graphically.

METHODS

Experimental Paradigm

Healthy human volunteers were recruited to participate in this UG study. The human subjects were asked to play as the responders in UG to decide whether to accept or reject, while the computer played as the proposer to present the monetary offer to the responders on the computer screen. The computer offer was used as the proposer, since it is known that the perception of a human proposer vs. a computer proposer could bias the fairness perception of the subjects in UG [8, 37]. We did not use any deception or confederates to alter the subject's fairness perception, so there were no experimental manipulations of the subject's fairness perception. The experiments were done by the subjects without any time pressure.

Nine randomized offers were proposed in the experiment — ranging from $1 to $9, without repeating the same offer (i.e., one-shot trial). The offer-ratios ranged from $1 : $9 (stingy offer) to $9 : $1 (generous offer), which were presented in random orders. After the responder accepted or rejected the offer, the subject was asked to rate how fair the offer was to them (in a scale of +5 to –5 Likert scale [41]). The subject was also asked to rate other attributes (including how important fairness is; how important money is; how important winning is; whether they won the trial; in addition to other emotions: happy, angry, sad and jealous using the same rating scale). The list of attributes served, in part, as distracters to reduce the likelihood of skewing their responses to what they assume the experimenter expects from them.

The same pseudo-random sequence of monetary offers was used for all subjects by design, so that the experimental conditions were uniform across all subjects to ensure consistency. In order to quantify the fairness biases, we specifically measured the subject's self-reported ratings by design, because they represented the subject's own perception, filtered through their own subjective biases. By using the self-reported rating of fairness, if bias existed in their fairness perception, that bias would be reported as a skewed response, so the bias could be revealed and uncovered in the analysis. The study was approved by the University Institutional Review Board (IRB), and informed consent was provided prior to the beginning of the experiment.

RESULTS

Data were collected from 425 human subjects (age ranging from 18 to 80, median = 21; mean = 22.3; SD = 4.7; 275 female, 150 male). Figs. 1 and 2 show the self-reported fairness ratings of all the subjects with respect to the offer-ratios (sorted from the original randomized offer-ratios). Fig. 1 shows the stimulus-response function of the acceptance trials, while Fig. 2 shows the stimulus-response function of the rejection trials.

Note that the same subject could accept one offer (such as $8 : $2), while rejecting another offer (such as $3 : $7). Thus, Fig. 1 includes all the acceptance responses for a specific offer-ratio; and Fig. 2 includes all the rejection responses that a subject rejected. This means that the responses of the same subject can be represented in both Figs. 1 and 2, depending on whether the decision is to accept or reject a particular offer. Therefore, the stimulus-response functions in Figs. 1 and 2 are representative of the overall generalized population, rather than the individual response of any specific person.

Fairness Perception in Acceptance Decision

Fig. 1 shows the fairness stimulus-response graph of the acceptance trials. The regression line (r = 0.967; r2 = 0.935) shows a proportionality relationship between the fairness rating and the offer-ratios. This suggests that the perception of fairness is proportional to the equity-ratio between the two parties. The fairness crossover threshold is at offer-ratio = $2.5 : $7.5. That is, it takes a minimum of a $2.5 offer for the subject to consider the offer as neutrally fair. An offer below $2.5 is considered unfair, and a proposal above $2.5 is considered fair, as long as the subject accepts the offer.

Note that, interestingly, even though we never offered specifically the offer-ratio of $2.5 : $7.5 in the experiment, the stimulus-response function revealed the exact crossover point for fairness. (We either offered $2 : $8 or $3 : $7 only.) This shows that quantifying the fairness perception by the stimulus-response graph allows us to determine the exact fairness crossover point for the human subjects to consider the offer as fair.

Most importantly, the stimulus-response graph shows a singularity point at offer-ratio = 1. The fairness rating at offer-ratio = $5 : $5 is the highest. In fact, it is twice as fair (fairness rating = 3.7) as the extreme hyper-fair/hyper-equitable $9 : $1 offer (fairness rating = 1.7). The fairness rating for the absolute equity offer could have been rated at a fairness rating of 0.8, if the regression line is used to interpolate the data. Thus, it reveals two interesting phenomena:
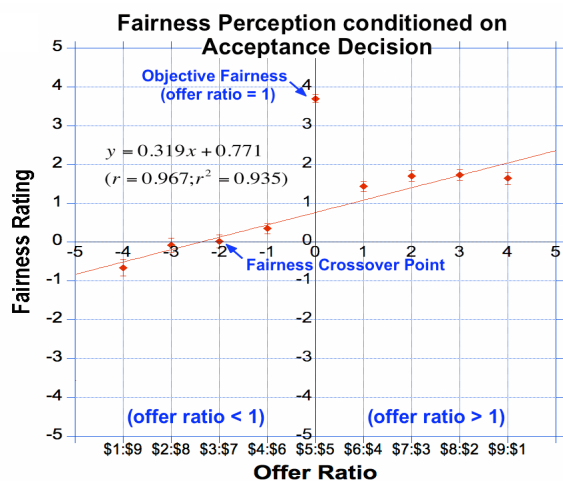

Figure 1:. *Stimulus-Response Graph of Fairness vs. Offer-Ratios for Acceptance Trials. Curve-fitting is done by regression for all data points (excluding singularity-point at offer-ratio = 0). It shows a linear proportionality relationship between fairness rating and offer-ratio. Note that the fairness rating at absolute equity (offer-ratio = 1) is the highest, even higher than the hyper-fair offers (offer-ratio > 1). The error bar represents standard error of mean (SEM).*
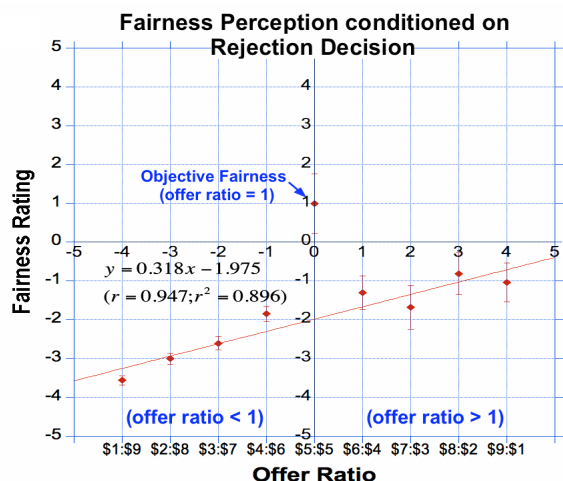
Figure 2: *Stimulus-Response Graph of Fairness vs. Offer-Ratios for Rejection Trials. Curve-fitting is done by regression for all data points (excluding singularity-point at offer-ratio = 0). It also shows a linear proportionality relationship between fairness rating and offer-ratio. Note that the fairness rating at absolute equity (offer-ratio = 1) is still the highest, even when the human subject rejected the offer. It is even higher than the hyper-fair offers (offer-ratio > 1).*

First, the subject reported that the fairest offer is at absolute equity ($5 : $5). They consider this equitable offer to be more fair than any other hyper-equitable/hyper-generous offers. That is, equality between two parties is considered more fair than any hyper-generous offers. This is counter-intuitive if the equity is the only measure used to determine fairness, because absolute equity (offer-ratio = 0) is more fair than hyper-equitable/hyper-generous offers (offer-ratios > 1).

To account for this singularity point at absolute equity, the relativistic fairness-equity model captures this phenomenon by switching from the self-centered frame of reference in evaluating fairness to the other-centered frame of reference. If the self-centered frame of reference is used, the interpolation of the data points in the regression line suggests that the human subjects could have rated the fairness rating at 0.8 for the offer-ratio of $5 : $5. Instead, the subjects actually rated it at 3.7, almost four times higher than predicted self-centered fairness rating. This suggests that the subject switched from the self-regarding concerns to the other-regarding concerns in social interactions.

When the self-centered frame of reference is used, what is hyper-equitable (offer-ratios > 1) to one person is inequitable (offer-ratios < 1) to the other person in comparison. Therefore, by switching the frame of reference in evaluating fairness, the dilemma of optimizing fairness for both can be resolved at absolute equity (offer-ratio = 1). That is, when the offer is $5 : $5, it is both equitable and fair for both parties. It is no longer fair for one person, but unfair for another person. This indicates that human subjects switched from a subjective self-centered frame of reference to an objective other-centered frame of reference that is inclusive of both self and others.

Second, the stimulus-response graph shows that the fairness crossover point is not centered at the axes-origin (offer-ratio = $5 : $5), but at offer-ratio = $2.5 : $7.5. This means that the fairness-equity curve is shifted to the left — to a more lenient consideration — to accept stingy offers, by taking into account the other-regarding concerns, when evaluating what is fair, and what is not fair.

The above two exceptions to the self-centered rule in fairness consideration indicate that the human subjects used both self-centered and other-centered frames of reference in assessing what is fair and what is not fair. The data strongly suggests that the human subjects did not simply use the equity measure — whether it is inequitable or hyper-equitable — as the only measure for fairness assessment. Instead, the subjects included the relativistic nature of fairness by considering both self-centered and other-centered frames of reference in the fairness assessment.

Fairness Perception in Rejection Decision

Fig. 2 shows the fairness stimulus-response graph for the rejection trials. The regression line (r = 0.947; r2 = 0.896) also shows a proportionality relationship between the fairness rating and the offer-ratios, similar to the acceptance trials (see Fig. 1). The difference is that the fairness curve is shifted down relative to the acceptance curve. The y-intercept at the axes-origin (at offer-ratio = 1) shifted down from the fairness rating of 0.8 (for acceptance trials in Fig. 1) to –2.0 (for rejection trials in Fig. 2). The fairness perception changed from a positive to a negative value. There is a 28% reduction in fairness perception (a 2.8 point reduction in a 10-point rating scale of fairness) for the decisions accepting the offers vs. the decisions rejecting the offers. The baseline fairness is shifted up to a more fair perception for the acceptance trials, while the baseline fairness is shifted down to an unfair perception for the rejection trails. This indicates the change in the baseline fairness level that is more fair if the

human subjects accepted the offer vs. a change in the baseline fairness level that is more unfair if the subjects rejected the offer.

Note that the fairness crossover point is shifted to the right (Fig. 2) for the rejection trials, instead of being shifted to the left (Fig. 1) for the acceptance trials. The crossover point is shifted to the offer-ratio of beyond $9 : $1 (indicating greediness) for the rejection trials compared to the crossover point at offer-ratio of $2.5 : $7.5 (indicating leniency). This indicates that for acceptance trials, the fairness stimulus-response curve is shifted to the left (to more leniency); while for rejection trials, the stimulus-response curve is shifted to the right (to more greediness). Thus, the stimulus response function revealed the change in fairness perception to become more lenient (crossover point shifts to the left) if the subjects accepted the offer vs. the change in fairness perception to being greedier (crossover point shifts to the right) when the subjects rejected the offer.

Note that the slope of the fairness stimulus-response function (which represents fairness sensitivity) remains rather constant for both decisions. The slope of 0.319 for the acceptance trials (regression line: $y = 0.319x + 0.771$, see Fig. 1) is essentially the same as the slope of 0.318 for the rejection trials (regression line: $y = 0.318x - 1.975$, see Fig. 2). The only difference between the fairness-equity curves in Figs. 1 and 2 is the y-intercept, representing a shifting of the curve down in fairness perception, without changing the fairness sensitivity (represented by the slope of the stimulus-response function).

This suggests that the decision to accept or reject an offer only affects the baseline level of fairness perception without affecting the fairness sensitivity. This shows that the relativistic fairness-equity model can account for the fairness biases quantitatively by the fairness stimulus-response function. It delineates not only the amount of bias, but also whether the bias is due to a change in sensitivity changes or a change in baseline.

DISCUSSIONS

The analysis shows that the fairness perception is related to the decision to accept or reject the offer. Quantification of fairness by the stimulus-response function shows that the perception of fairness changes with respect to the decision. Although the UG experiment does not differentiate whether fairness alters the decision or decision alters the fairness perception, it shows an interrelationship between fairness and decision. That is, the subjects changed their baseline fairness perception (represented by a shift in y-intercept) without changing the fairness sensitivity (represented by keeping the slope constant in the stimulus-response function) when the decision changed from acceptance to rejection. This delineates the specific fairness bias in relation to decision that is due to a change in baseline fairness level, but not fairness sensitivity. That is, the subjects responded with the same sensitivity to fair or unfair offers, but perceived the offers as more fair (higher baseline fairness level) when they decided to accept them than when they rejected them. Thus, the fairness bias related to decision lies in the change in baseline fairness perception rather than a change in the sensitivity.

The quantitative analysis of the stimulus-response function also reveals how the fairness-equity curve is shifted, depending on the decision. Specifically, when the fairness crossover point is shifted to the left, then the fairness bias is quantified as being lenient. When the fairness crossover point is shifted to the right, then the fairness bias is quantified as being greedy. At the same time, if the slope of the fairness-equity curve does not change, it means that there is no bias in the fairness sensitivity, i.e., the human subjects did not become more or

less sensitive to fairness when they accepted or rejected to the offers, respectively. The only difference between the fairness perception related to the acceptance and rejection decisions is the shifting of the fairness-equity curve up or down, and left or right, without changing the slope.

The bias in fairness perception related to decision could possibly be related to the assumption or questioning of whether the responders were entitled to the money to start out with. That is, if the responders assumed that it is free money, then gaining any money would be more than fair, because they are not entitled to the money to start out with. But if the responders assumed that they have the rights to claim money (i.e., the money belongs to them) before the money was offered, then sharing that pot of money with the proposer who is not entitled to it would be unfair. Furthermore, if the responders assumed that neither one is entitled to the money to start out with, when the proposer offered to share the money between them, then it would be generous of the proposer to offer the money to them. As a response to the kindness, they would be lenient to the offer by considering slightly inequitable offer as fair (e.g., offer-ratio = $3 : $7, by shifting the fairness crossover point to the left). This also can explain the shifting of the fairness crossover point to beyond $9 : $1 (indicating greediness by shifting the fairness crossover point to the right), if the responders assumed that they are entitled to the money, but the proposer is not. Thus, this analysis shows that the fairness perception is not necessarily solely determined by the equity measure or by inequity aversion, but by the consideration of self-regarding and other-regarding concerns, whether they are entitled to the share that the proposer is offering.

This also suggests that the subjects did respond to the offer rationally without being irrational in their decision, when the difference in the response is the change in fairness bias. That is, their decisions are logically consistent with the fairness perception, without any logical inconsistency. It is only when equity/inequity is used as the sole measure to maximize self-gain, that it would be irrational if they throw away the money by rejecting the offers. This is in contrast to the assumptions that the rejection decisions are irrational in other UG studies [8, 42, 43].

The rejection decision may not necessarily be related to altruistic punishment, as other studies had shown that when the UG paradigm is modified slightly to use the rule in the Impunity Game (IG) [39, 44] that if the responder rejects the offer, only the responder loses the money while the proposer still keeps the money. In this case, the responders cannot possibly punish the proposer when they reject the offer; they can only punish themselves. Even under these conditions in the IG experiments, the responders still rejected the inequitable offers in IG, although the rejection rate is about half of that in UG [39]. The 50%-chance rejection threshold for inequitable offers is similar to other reported rejection thresholds at below offer-ratio = 2 : 8 for UG and IG; [36, 39, 45]. This suggests that their decision is more related to fairness than punishing the proposer. Altruistic punishment may happen to be an idiosyncratic side effect of the UG paradigm, when the responder rejects the unfair offer, because it is a forced-choice to punish the proposer when rejecting the offer. The UG game-rule does not allow for non-punishing behavior on rejection. This results in a forced mutual-min (mutually destructive) outcome, if the responder rejects, and mutual-max (cooperative) outcome if the responder accepts, but nothing in between [15].

The neurobiological basis of fairness assessment and decision-making were identified [8, 43], which also support the neurological computation of fairness rather than an acquired behavior. The neural circuitries associated with fairness preference when accepting an equitable offer in UG are identified to be involved in the ventral striatum, amygdala, vmPFC (ventromedial

prefrontal cortex), and orbitofrontal cortex (OFC) [3]. But the acceptance of inequitable offers is not associated with increased activity in these reward-related brain areas, but an increase in right VLPFC (ventral lateral prefrontal cortex) activation, and a decrease in insular cortex activity [3]. The rejection decision in UG is related to the vmPFC [43]. This suggests fairness is processed relatively automatically, and is innately driven by the reward circuitry, whereas unfairness aversion is driven more by a more cognitive-process via different neural circuitries. The fronto-striatal-thalamic network (consisting of the medial frontal gyrus, anterior insula, ventral striatum, and dorsomedial thalamus) is modulated by complex categorization uncertainty [46]. This neural circuitry may play a role in disambiguating the difference between equity and fairness and summaries the interrelationship between fairness and decision.

CONCLUSION

This study showed that fairness perception and fairness biases can be quantified by the stimulus-response function in relation to the decisions using the relativistic fairness-equity model. Using the UG paradigm, the interrelationship between fairness and decision is quantified by the fairness stimulus-response function. Specifically, fairness perception is biased toward a higher positive fairness baseline value when the subjects accept the offer compared to the rejection decision (by shifting the baseline of the fairness-equity curve, without changing the slope of the curve). Furthermore, the analysis also quantified that the fairness crossover point is shifted to the left or right according to the acceptance and rejection decision, respectively. This suggested that the decision to accept the offer is associated with leniency by considering inequitable offers as fair; while the decision to reject the offer is associated with greediness by considering hyper-equitable offers as unfair. The relativistic fairness-equity model can account for the singularity point that absolute equity is more fair than any hyper-equitable offers by including both self-centered and other-centered frames of reference in fairness assessment [33]. It also accounts for the shifting of the fairness-equity curves up/down and left/right according to the decision to accept or reject, relative to the self-centered and other-centered frames of reference in the fairness considerations that include self-regarding and other-regarding concerns.

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Success Of An Organization is a Result Of Employees Performance

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ABSTRACT
The aim of this study is to determine that success of a company is because of its employees' performance. Organizations must also ensure that there employees' are highly satisfied with their jobs. Although, there are various factors that effects satisfaction, one of them is training. Training is basically improvement in knowledge, skills and abilities of an employee on continual basis. This increases the competency level of employee as well as ensures that they are highly employable. Flexible working shifts can lift organization's productivity higher. Appreciation on every accomplishment, produce new opportunities to practice creativity and competency. This will lead to higher satisfaction. The researcher has chosen quantitative research methodology. Quantitative research methodology gives concrete information through data collection and statistical analysis. Performance of employees should be evaluated to keep the productivity increasing. The process of employee development is very essential and should be effectively implemented. The best way to keep employee retained in the organization is to keep him motivated.

Keywords: Organization success, Employee performance, Job satisfaction, Performance and success.

INTRODUCTION
Background of the study:
In today's world of competition, it is believed that teams are essential part of work performance and increased productivity. In this regard, Hackman (1990) believed that, 'practically everybody has been a member of performing group at any time if he has worked in the organization' (p.2). Regardless of near omnipresence of teams according to the organizational structure, there is still absence of accuracy about the attributes of high performing teams, and even lack of the experience of members of those teams.

Almost every organization battles to implement the use of team effectively (Katzenbach and Smith, 1994). Effective implementation of teams is even more challenging when it comes to multicultural organizations. It can be multicultural either by being operated in a country with different cultures or by operating in more than one country (Adler, 1983). Adler further added, being multicultural or operating in different countries increases the complexity for an organization. It requires more mature integrated mechanisms to follow than essential for a domestic organization following one culture. Apud, Johnson, and Lenartowizc (2006) quoted absence of skills to deal with issues regarding multicultural organizations as main reason of failure of global organizations.

More specifically quoted issues with communication and lack of understanding of communication across different cultures as barrier to success. Organizations with more experience operating internationally do not replicate greater effectiveness in handling issues regarding culture. Kim (1999) indicated that regardless of organization's expansion of international business, there are always some cultural barriers that can undermine organizational success.

Kim further added that, regardless of challenges, the management and effective use of cross cultural teams will be essential requirement for every organization in forthcoming time.
Lastly, Sparrow (1998) most of the challenges that organizations have with people and teams return from managing problems and worker expectations from a mono-cultural (almost always Western) perspective. Work related, the subject of culture has been taken from perspective of national (Hofstede, 1980), regional (Javidan, Dorfman, de Lugue, & House, 2006), and organizational (Schein, 1992).

Problem Statement:
Less information about how much impacting effective policies and procedures can be when implemented in multicultural organizations. It was found that the employees were scared of introducing new ways to improve operations and even of suggesting or providing new ideas that's because last leadership introduced fear within the organization.

Previous administration decreased the self esteem of employees to the extent where they were reluctant to propose any productive suggestion due to the fear of revenge. This also led the organization to high turnover and made it extremely difficult for organization to deal with it.

Purpose of Study:
The purpose of the study is to conclude that employee performance can lead to the organization to success in Saudi Arabia.

Aims and Objectives of the Study
The objectives include:

o   Examine how team management is important in an organization in Saudi Arabia.
o   Indicate how diversified management is impacting organizations in Saudi Arabia.
o   Explain the challenges managers face while managing diversified teams.

Research Questions
Research question include:

o   What are the factors that influence more positive interaction among Saudi managers?
o   How continual improvement in performance and organizational commitment cause motivation for managers in Saudi?
o   How motivation plays its role in increased job satisfaction for employees in Saudi?
o   What are the challenges faced by managers while managing diversified teams?
o   What are the challenges faced by managers while they lead a multicultural team?

Rationale of the Study
The world has become a global world. Organizations are moving towards globalization by moving towards exchange of technology, economic, politics and culture, which is result of latest communication, transportation and open border links connecting international trade and finance across countries. Highly interconnected businesses moving towards expansion of

business, more effective communication and joint ventures as well as cultural mergers has caused changes faced by Saudi business community (Shippy, 2008).

Ethical Concerns

The protection of human subject will be on priority. Several strategies will be followed strictly in this regard. No data will be revealed more than the interviewee wished for. The responses given by participants will also be kept confidential. Participants will be explained about how and why the study is being conducted by the researcher. Anonymity and secrecy will be ensured by changing the names of participants. The access to participants' response and their names will be only to researcher.

The participant will have all the rights to withdraw during interview or answering questionnaire. The consent form will be read and signed before collecting the data. High secrecy and confidentiality will be ensured.

Limitations of the Study

Ideally the sample of the research should include employees of different companies operating in Saudi as main focus is on teamwork. To get more accurate responses in this perspective the population of this particular research will include managers who are leading different organizations in Saudi Arabia.

Nevertheless, the access is limited in reaching hotel managers, financial resources, as well as time. This limits the sample size to managers of multinational giant firms in Saudi Arabia only. Whole population may or may not get the responses and outcome of this study. The study also contains literature review from different fields such as human resource management, international business and others related to team work.

Hypothesis:

o H_0: Success of an Organization is not a result of Employees Performance
o H_A: Success of an Organization is a result of Employees Performance

LITERATURE REVIEW

Theoretical Framework of the Study

Bird (2002, 33) quoted the ethical behaviour of leaders, what they may or may not do, their influence and the expectations from leaders vary from country to country due to the cultural forces of that particular country or region.

The theoretical framework is constructed on the basis of cultural characteristics developed by (Bhagat, 1996, 89) transformative learning theory on culture adjustment, and the leadership challenge theory of Kouzes and Posner (2001). The five basic dimensions identified by Greert Hosfstede (Robbins, 2003) are referenced mostly to analyze variations of cultures.

Employee Performance

To maintain and manage performance of each employee, organizations should use certain procedures to follow and continuously monitor the performances. These performance indicators will help the organizations to measure how efficiently and effectively the goals are being met. There should be a well managed comprehensive system that will lead each employee and manager to highest level of performing (Beauchamp, Bowie, 1983, 32).

As many practices have changed, firms now follow merit-based pay and some follow pay-for-performance model. To maintain the employee perform at its higher level firms must keep

them motivated. In this regard firms evaluate and reward their performances accordingly. (Goodin, 2007, 24) highlighted formal management process to evaluate the degree of employee's performance is performance appraisals. The quality of employee's performance is evaluated through discussion with his/her supervisor about his/her performance as well as the strength and weaknesses he posses along with the improvements to develop his/her working skills (Finnegan, Schofield, Swift, 1996, 47). While this discussion the responses are noted on history, career development, job standards and organizational goals to make people more accountable.

Relationship between Team Attributes and Team Performance

It is essential to understand that teamwork is not only related to teams. It can be studied in a variety of attitudes being shown by the person in a committee or group as well (Jackson, 2002, 71). For a person having teamwork skills may or may not be part of a team. A group working towards some common goal is referred as team but it is not necessary that each team has team working skills. There may be resistances among the group and they may not go well with each other. While team work has benefit of sense of responsibility divided on each member equally in a shared task (Higgins, 1994, 74). Another view is about cash based incentives although some researchers argue that this will create some behavioural issues among employees as well. Employees may follow unethical behaviour to get lion's share in the pay-based motivation. Some others argue that reward can not result in motivation. It is just the matter of behaviour and conditioning which lead employees act in certain way.

Diversity Management

Diversification has now become an essential part of organizations in Saudi. Companies now have realised the importance of inclusive motivation management. Different motivational strategies to fit the approved program and the environment meeting the diverse needs of the firm are followed by managers in regard to the diversity of employees in the firm (Likert, 1967, 85). Every employee can not be motivated by providing same reward because of their different levels of motivation. Maslow's hierarchy is therefore the best way to asses and fulfil each employee's needs and improve him/her accordingly (Leone, 2007, 93).

Culture and its Characteristics

Any particular group of people following certain same characteristics makes a culture, quoted by (Baldwin, 1988, 63) in their research. However, another definition of culture is proposed by (Ali, 1995, 85), he said "Culture consists in patterned ways of thinking, feeling and reacting, acquired and transmitted mainly by symbols, constituting the distinctive achievements of human group, including their embodiments in artefacts; the essential core of culture consists of traditional (i.e., historically derived and selected) ideas and especially their attached values." Kopp, (2001, 30) defines culture as "a way of life of a group of people, the configuration of all of the more or less stereotyped patterns of learned behaviour, which is handed down from one generation to the next through the means of language and imitation."

METHODOLOGY

Research Design

The researcher has chosen quantitative research methodology. Quantitative research methodology gives concrete information through data collection and statistical analysis. This approach uses models, theories and hypothesis of mathematics for the measurement of empirical associations present in natural phenomena. Large and random samples are used in this approach to gather data (Saunders, 2007, p.48). Reliable and valid tools are used to collect accurate data and is analysed through application of statistical tools. This approach is based on

numerical data which gives the research appropriate findings. The results and findings are based on application of statistical tools and techniques to get accurate results in this study (Saunders, 2007, p.48).

Sampling

Researcher has used random sampling for this study. The reason to this is to draw inference about the population. The reason to this is if the sample is non random, there are chances that sample can be biased (Saunders, 2007, p.48). Even in non random sampling it is very difficult to draw inference. The sample is drawn from the participants on frame which should exactly replicate the population of interest in Jeddah – Saudi Arabia . Otherwise the difference between individuals on the frame and in population will lead to coverage of error (Creswell, 2009, p. 86).

Sample of Participants

The sample consists of 100 participants. It includes employees working at different positions including supervisors from different organizations operating in Jeddah. The number of male and female participants in this study was 75 and 25 respectively, ranging from 25 to 60 years of years. Employees' perception about their respective firm's support was given appropriate consideration by the researcher to measure motivation and satisfaction among team members (Bennett, 2004, p. 21).

Instrument

Questionnaire is used as a data collecting tool in this study. Questionnaire is easy-to-use tool to collect data. Questionnaire includes two types of questions, open-ended and close-ended. This questionnaire also included demographic related questions. Questionnaires were sent to employees through email and were asked to submit their responses through same medium.

Data Analysis

Data analysis is the most challenging part of any research. All the results and findings are based on data analysis. After getting responses from participants the researcher used statistical tools to analyse data. Descriptive and inferential statistic techniques were used. Furthermore, regression analysis was used to check the relationship between independent and dependent variables.

Validity and Reliability

Bennett (2004, p. 21) defined validity as the degree to which it measures what is supposed to be measured. The two main types of validity are content validity and construct validity. Reliability is defined as when two or more measures can measure the same variable. Mostly used measurement for reliability in statistically analysis is Cronbach Alpha Coefficient.

DISCUSSION AND ANALYSIS

Discussion

Every organization in today's world of competition wants their employees to get to higher level of performance. Through the studies it is concluded that employee performance is function of employee satisfaction. Both of factors are interrelated. The higher level of satisfaction an employee feels, the better he/she will perform. Motivation also plays a very important role in moving employees' satisfaction to higher level. It also increases the productivity of employees in organizations in Saudi Arabia (Spector, 2006, p. 49).

Improving performance and commitment in the workplace

The degree of contentment that an employee has with its job is his/her job satisfaction. The

feeling of achievement related to his/her job is directly linked to their job satisfaction. Job satisfaction can be effected by number of factors including the organizational relationships among employees as well as with the boss, the environment etc (Spector, 2006, p. 49).

According to study conducted by Harvard group of professionals in the year 1998 stated that if the employee is motivated he/she will have feeling of higher recognition and more linked to accomplishment of organizational goals which leads to efficient and effective manner of job performance. Job satisfaction is also effected by the motivation of an employee which leads to the feeling of self actualization along with other factors being fulfilled.

Job design for job satisfaction
Job design includes job rotation, job enrichment as well as job reengineering. It boosts the satisfaction to higher level. Higher job satisfaction can lead to higher performance improvements. The management style a manager or supervisor follows has also a very large impact on how satisfied the employees are. Other than this the empowerment and job allotted to an employee also plays an important role in his/her satisfaction. Job design is shaped by keeping all these factors in mind. Organizations hardly give importance to job satisfaction in success of the firm (Lapierre & Hackett, 2007, p. 539). If organization's competitive advantage is their human resource, it is unbeatable in this competitive world.

Motivation for job satisfaction
Motivation can be defined as a person's intrinsic willingness to achieve any particular goal or task. People with higher motivation tend to have higher desire and energy to achieve goals. That means the more motivated an employee is, the more energized and committed he/she will be with his/her job. Employee can be less motivated if organization fails to communicate how important they are for their organizations. Employees feel extremely motivated if they come to know how their performance is being evaluated by the management. It is keen responsibility of management to keep employee updated with his/her performance evaluation. The better feedback employee gets, the more satisfied he/she will be. In other case it will create ambiguity and will lead employees to dropped performance (Judge & Thoresen, 2001, p. 376).

Survey Analysis

Table 1: Question 1					
		F	%	Valid %	Cumulative %
Valid	Male	75	75.0	75	100.0
	Female	25	25.0	25	100.0
	Total	100	100.0	100.0	

The trial for this research consists of 100 Saudi individuals, employees of famous organizations in Jeddah. The numbers of male and female participants were 75:25 ratio male employees were 75 and female were 25.

Table 2: Question 2					
		F	%	Valid %	Cumulative %
Valid	21-30	26	27.0	27.0	27.0
	31-40	24	23.0	23.0	50.0
	41-50	20	21.0	21.0	71.0
	51-60	30	29.0	29.0	100.0
	Total	100	100.0	100.0	
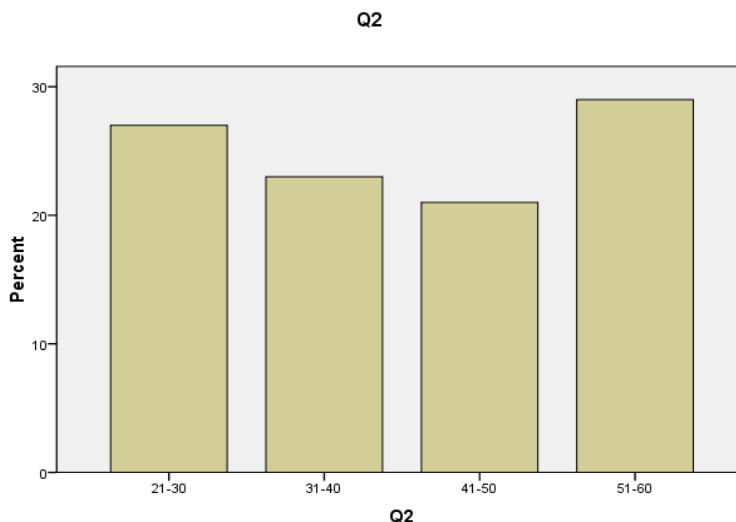
The ages of the employees range from 25 years to 60 years. Employees working in different positions and capacities, including supervisors were eligible to participate in this research. While collecting the data, the researcher gives due consideration to the employee's perception about their organisation's support so that it gives an appropriate measure of motivation and satisfaction between the team members.
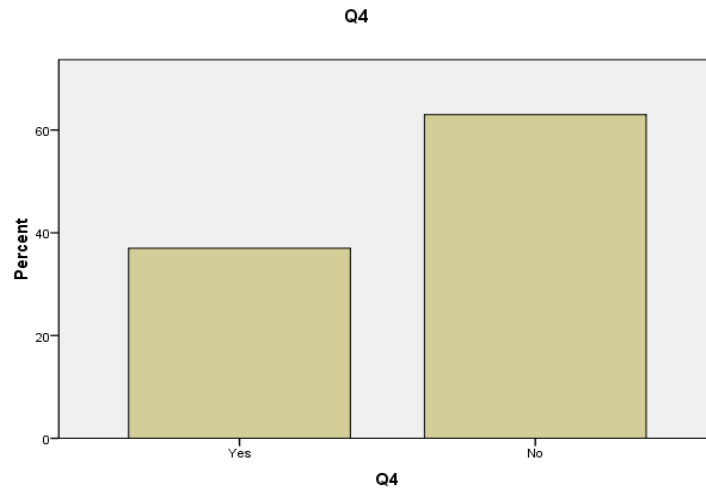
Table 3: Question 3					
		F	%	Valid %	Cumulative %
Valid	Yes	52	52.0	52.0	52.0
	No	48	48.0	48.0	100.0
	Total	100	100.0	100.0	
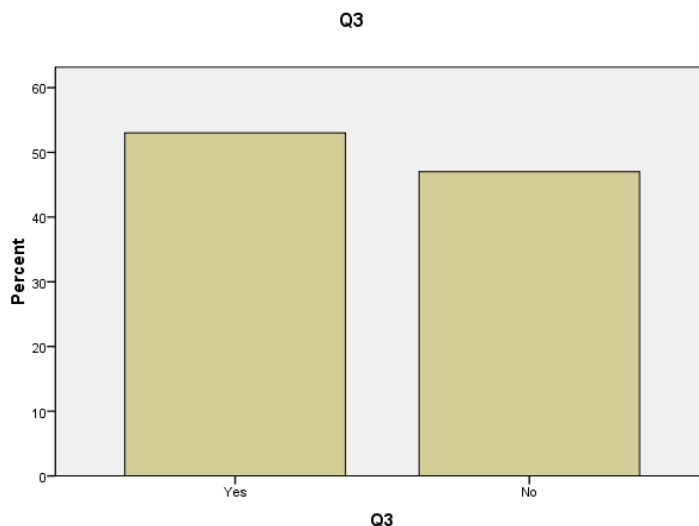
In whole, sample respondents 53 % respondents are employed in retail sector firm and 47 respondents are employed outside the retail sector firm.
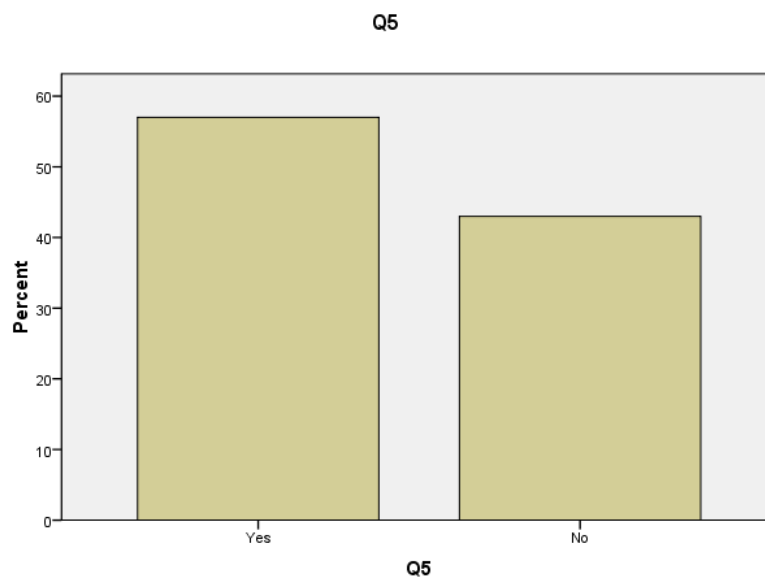
Table 4: Question 4					
		F	%	Valid %	Cumulative %
Valid	Yes	39	39.0	39.0	39.0
	No	61	61.0	61.0	100.0
	Total	100	100.0	100.0	

Q4

In whole, sample respondents 39 % respondents pleased with the working environment and 61% respondents are not pleased with the working environment.

Table 5: Question 5					
		F	%	Valid %	Cumulative %
Valid	Yes	57	57.0	57.0	57.0
	No	43	43.0	43.0	100.0
	Total	100	100.0	100.0	

Q5

In whole, sample respondents 57 % respondents are agreed that their supervisor support them and their endeavours, while 43 respondents said that their supervisor does not support them and their endeavours.

| Table 6: Question 6					
		F	%	Valid %	Cumulative %
Valid	Salary structure	14	14.0	14.0	14.0
	Cash rewards	16	16.0	16.0	30.0
	Non-cash incentives	21	21.0	21.0	51.0
	Growth opportunities	10	10.0	10.0	61.0
	Performance system	21	21.0	21.0	82.0
	Supervisor Support	18	18.0	18.0	100.0
	Total	100	100.0	100.0	
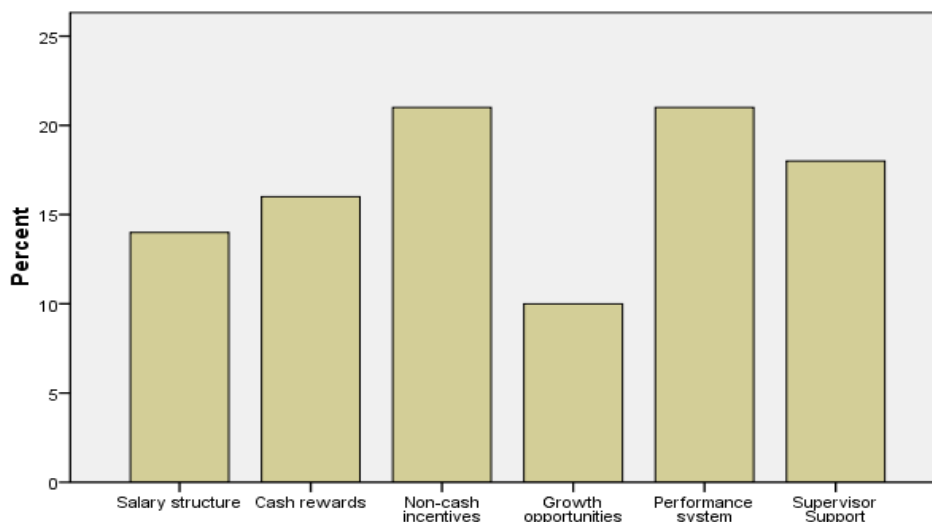
Q6

In response to question, what motivates you about your job? 14% said salary structure, 16% said cash rewards, 21% said non-cash incentives, and 10% said growth opportunities, 21% performance system, and 18% supervisor support.

Table 7: Question 7					
		F	%	Valid %	Cumulative %
Valid	Always	18	18.0	18.0	18.0
	Often	19	19.0	19.0	37.0
	Sometimes	21	21.0	21.0	58.0
	Rarely	23	23.0	23.0	81.0
	Never	19	19.0	19.0	100.0
	Total	100	100.0	100.0	

Q7
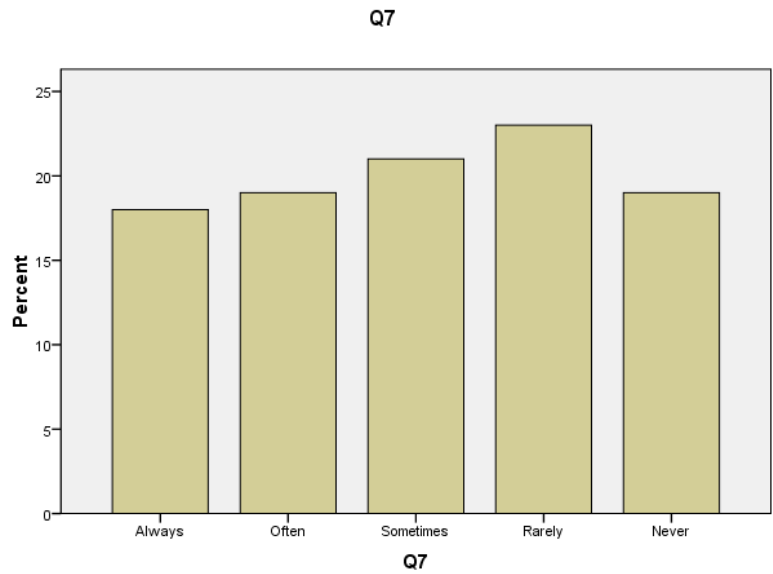
In response to question, your supervisor recognises the efforts of employees, 18% respondents marked always, 19% marked often, 21% marked sometimes, and 23% marked rarely, and 19% marked never.

Table 8: Question 8					
		F	%	Valid %	Cumulative %
Valid	Strongly Agree	34	34.0	34.0	34.0
	Agree	20	20.0	20.0	54.0
	Disagree	21	21.0	21.0	75.0
	Strongly Disagree	25	25.0	25.0	100.0
	Total	100	100.0	100.0	

Q8
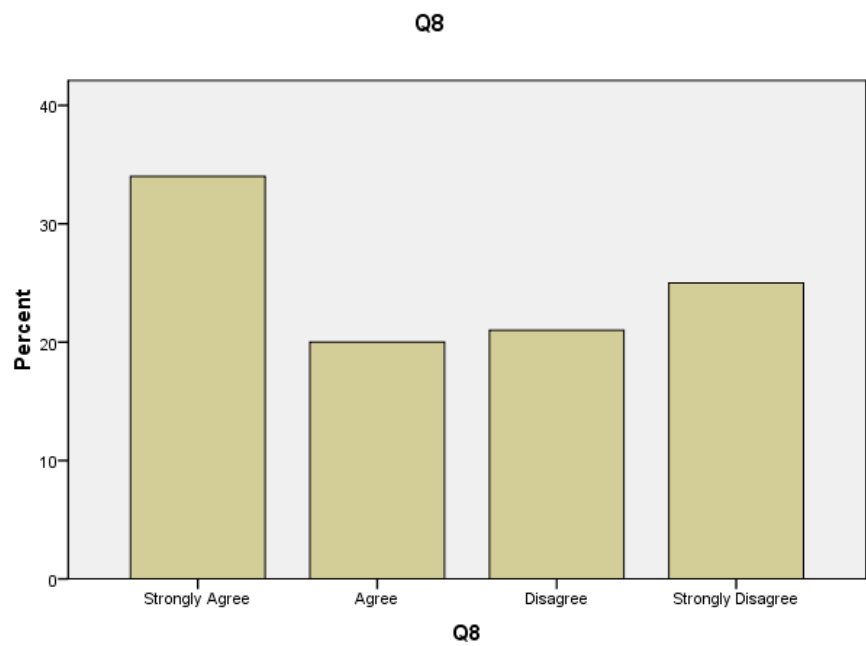
In response to question about working conditions, 34% marked strongly agree 20% marked agree, 21 % marked disagree, and 25% marked strongly disagree.

Table 9: Question 9					
		F	%	Valid %	Cumulative %
Valid	Yes	56	56.0	56.0	56.0
	No	44	44.0	44.0	100.0
	Total	100	100.0	100.0	

Q9
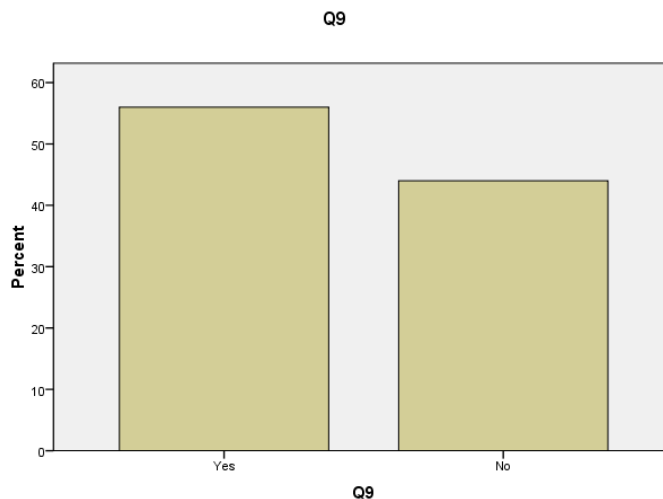
In response to discrimination of supervisor among employees, 56 % respondents said that, their supervisor discriminate among employees, while 44 % said that their supervisor do not discriminate among employees.

Table 10: Question 10					
		F	%	Valid %	Cumulative %
Valid	Strongly Agree	27	27.0	27.0	27.0
	Agree	28	28.0	28.0	55.0
	Disagree	23	23.0	23.0	78.0
	Strongly Disagree	22	22.0	22.0	100.0
	Total	100	100.0	100.0	

Q10
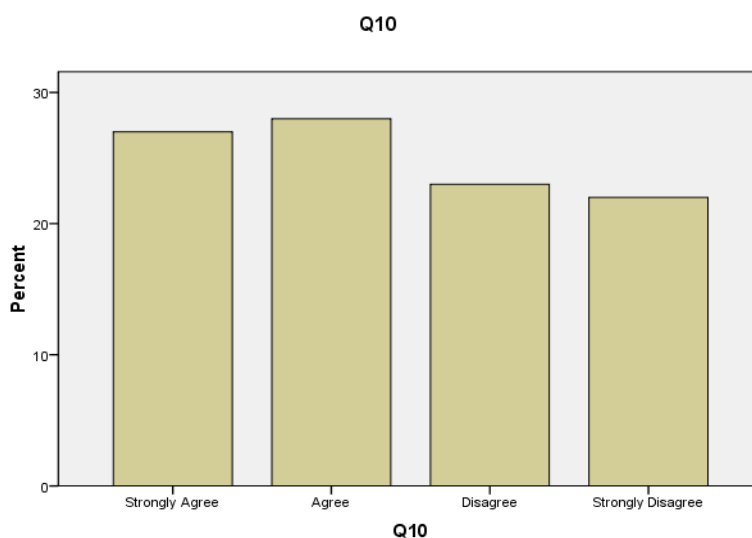
27 % respondent strongly agree with the statement that, the supervisor's support impacts the motivational level, while 28% respondents agree, 23% of the respondents disagree, and 22% respondents strongly disagree with the statement.

Table 11: Question 11					
		F	%	Valid %	Cumulative %
Valid	Strongly Agree	16	16.0	16.0	16.0
	Agree	29	29.0	29.0	45.0
	Disagree	25	25.0	25.0	70.0
	Strongly Disagree	30	30.0	30.0	100.0
	Total	100	100.0	100.0	

Q11
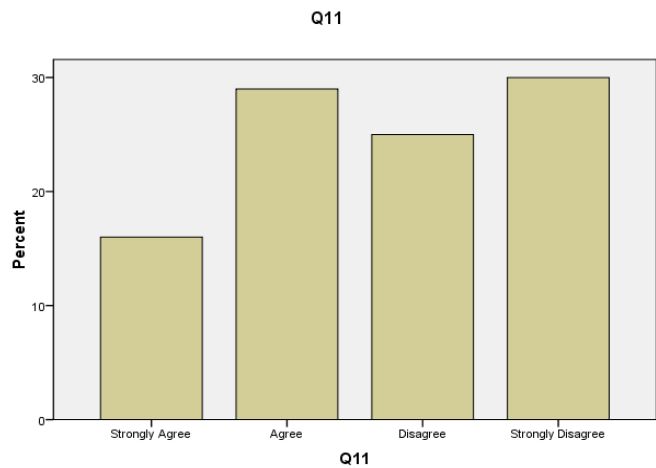
16% respondent strongly agree with the statement that, the supervisor's support impacts the motivational level, while 29% respondents agree, 25% of the respondents disagree, and 30% respondents strongly disagree with the statement.
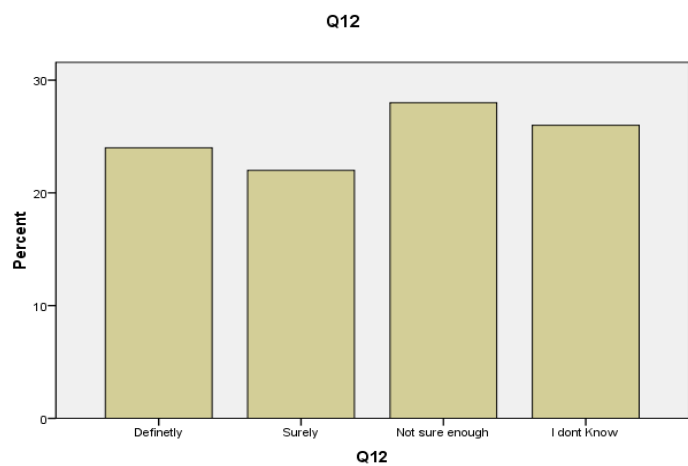
Table 12: Question 12					
		F	%	Valid %	Cumulative %
Valid	Definitely	24	24.0	24.0	24.0
	Surely	22	22.0	22.0	46.0
	Not sure enough	28	28.0	28.0	74.0
	I don't Know	26	26.0	26.0	100.0
	Total	100	100.0	100.0	

Q12

In response to question, when choosing a job, you would go for the one that pays higher salary; 24% respondents said they definitely go for it, while 22% said surely, 28% said not sure enough; and 26% said they don't know.

		F	%	Valid %	Cumulative %
Table 13: Question 13					
Valid	Definitely	27	27.0	27.0	27.0
	Surely	21	21.0	21.0	48.0
	Not sure enough	20	20.0	20.0	68.0
	I dont Know	32	32.0	32.0	100.0
	Total	100	100.0	100.0	

In response to question, when choosing a job, you would go for the one that pays higher salary; 27% respondents said they definitely go for it, while 21% said surely, 20% said not sure enough; and 32% said they don't know.

		F	%	Valid %	Cumulative %
Table 14: Question 14					
Valid	Strongly Agree	31	31.0	31.0	31.0
	Agree	16	16.0	16.0	47.0
	Disagree	26	26.0	26.0	73.0
	Strongly Disagree	27	27.0	27.0	100.0
	Total	100	100.0	100.0	

In response to question, does supervisor support important as motivation, 31% respondent strongly agree with the statement that, the supervisor's support impacts the motivational level, while 16% respondents agree, 26% of the respondents disagree, and 27% respondents strongly disagree with the statement.
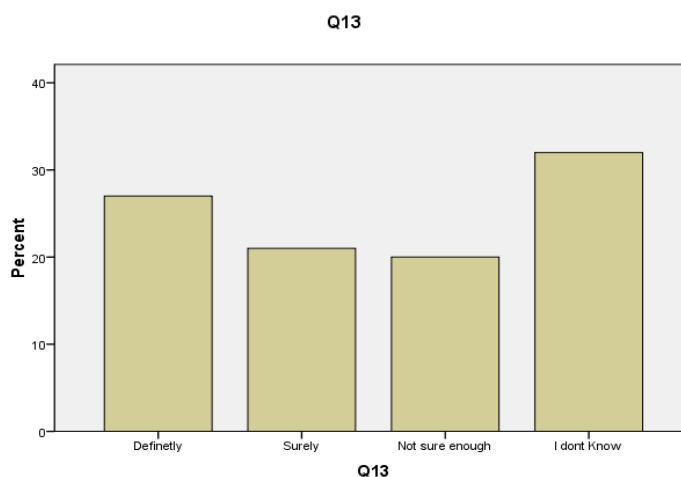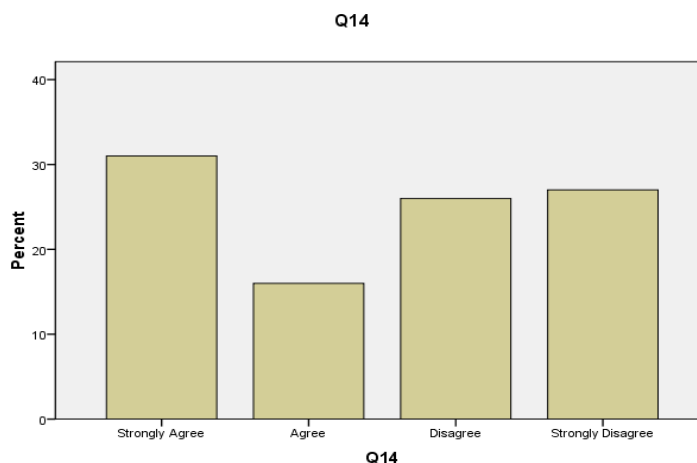
Table 15: Question 15		F	%	Valid %	Cumulative %
Valid	Strongly Agree	29	29.0	29.0	29.0
	Agree	28	28.0	28.0	57.0
	Disagree	23	23.0	23.0	80.0
	Strongly Disagree	20	20.0	20.0	100.0
	Total	100	100.0	100.0	

Q15
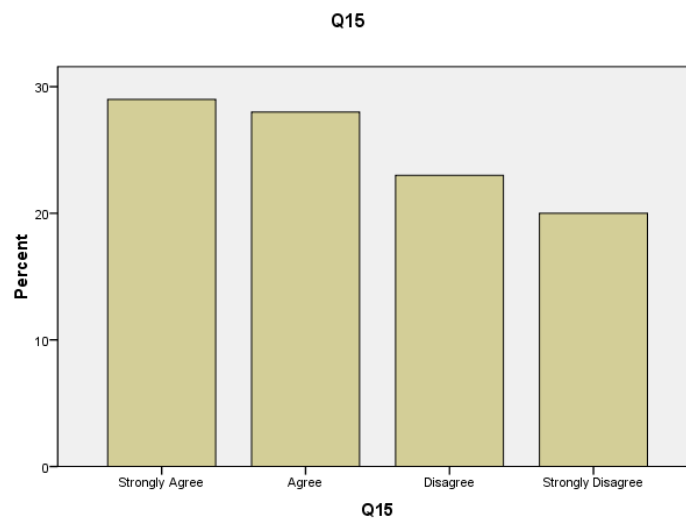
In response to question, does your supervisor think you are highly productive, 29 % respondent strongly agree with the statement that, their supervisor think that they are highly productive, while 28 % respondents agree, 23% of the respondents disagree, and 20% respondents strongly disagree with the statement.

Table 16: Frequencies

		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
N	Valid	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean		1.50	2.52	1.47	1.63	1.43	3.62	3.06	2.37	1.44	2.40	2.69	2.56	2.57	2.49	2.34
Median		1.50	2.50	1.00	2.00	1.00	3.00	3.00	2.00	1.00	2.00	3.00	3.00	3.00	3.00	2.00
Mode		1[a]	4	1	2	1	3[a]	4	1	1	2	4	3	4	1	1
Std. Deviation		.503	1.176	.502	.485	.498	1.710	1.384	1.195	.499	1.110	1.070	1.122	1.200	1.193	1.103
Variance		.253	1.383	.252	.235	.248	2.925	1.916	1.427	.249	1.232	1.145	1.259	1.439	1.424	1.217
Minimum		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Maximum		2	4	2	2	2	6	5	4	2	4	4	4	4	4	4

a. Multiple modes exist. The smallest value is shown

Table 17: *Descriptive Statistics*

	N	Minimum	Maximum	Mean	Std. Deviation
Q1	100	1	2	1.50	.503
Q2	100	1	4	2.52	1.176
Q3	100	1	2	1.47	.502
Q4	100	1	2	1.63	.485
Q5	100	1	2	1.43	.498
Q6	100	1	6	3.62	1.710
Q7	100	1	5	3.06	1.384
Q8	100	1	4	2.37	1.195
Q9	100	1	2	1.44	.499
Q10	100	1	4	2.40	1.110
Q11	100	1	4	2.69	1.070
Q12	100	1	4	2.56	1.122
Q13	100	1	4	2.57	1.200
Q14	100	1	4	2.49	1.193
Q15	100	1	4	2.34	1.103
Valid N (listwise)	100				

Regression Analysis

Table 18: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.79[a]	.76	.74	1.35795
a. Predictors: (Constant), Employees Performance				

The value of r square 0.76 shows that there is positive strong relationship between the variables. Based on which it can be said that there is a significant impact of Employees Performance on Success of an Organization.

Table 19: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.125	1	1.125	.610	.17[b]
	Residual	180.715	98	1.844		
	Total	181.840	99			
a. Dependent Variable: how do you rate the brand on the following attributes						
b. Predictors: (Constant), Employees Performance						

The value of sig closer to zero suggests that the relationship between the variables is significant.

CONCLUSION AND RECOMMENDATIONS

In this era of tough competition it is very important for organization to maintain and improve employees' performance on continual basis to remain at higher productivity. Organizations in Saudi Arabia should also implement strong indicators of increasing employee performance as it has now become a very important factor in success of organizations according to their culture. It keeps employees motivated and connected with the goals of their organization. It also creates trust and responsibility in employees about their management and job they hold. Furthermore, the analysis outcome suggests that success of a company do depend on employee performance. The purpose of selecting frequency distribution was simply to gather the view point of people working in Jeddah- Saudi Arabia regarding the success of organization. This gathering of primary data along with reviewing the existing literature enables the researcher

to prove that success of a company is a result of significant employee performance. This study is performed and proved in Jeddah Saudi Arabia. As per the consent of the respondents their names will not be disclosed.

This study is about the impact of employees' performance on success of the organization. It also examines if employee productivity is affected by their performance management. And to what extent these factors affect each other. According to previous studies about the implementation of different pay models to increase employees' motivation, this study show more exact results about how much impacting can any of the model be. It also discusses the work related efforts of employees, performance appraisals, opportunities for development and their effects. The appraisal should be on the basis of the performance so that it keeps the performance on right path towards the achievement of organizational goals. An employee can never be productive for his/her respective organization if he has not been improved as a person wholly as well as his job related skills. Although motivation keep employees retained in the organization but in today's world only monetary side motivation can not be sufficient to retain an employee. Motivation is the combination of monetary rewards as well as other corporate factors. A manager's role has now become more challenging in terms of identifying what culture organization should adopt and what it should not. If the firm has poor environment, there are likely chances of an employee to switch the organization to get better environment. Even he gets less wages or monetary reward.

It is priority of every organization to keep its employees' performance at highest level. In order to get this desired outcome from employees it should work on employees' job satisfaction. It is certain that job satisfaction is affected by several factors. In fact, those factors may have different impact on different employees. One may get motivated by monetary reward while other may seek for recognition and acknowledgement. If the organization successfully convey the message of how important the employees are for the firm, this will create a win-win situation for both firm and employees.

Employee satisfaction can be a crucial factor to consider. If employee is not satisfied with his/her job he/she is more likely to leave the organization. This will result in higher turnover for the organization. It will also increase cost of hiring new employees as well as leaves a competence gap from the time ex employee leaves till new one is hired. Along with that employee takes his/her expertise and experience with him to other organization. This will affect the bottom line of the organization. Employees can also be a source of bad word of mouth because of their dissatisfactory experience. This can hit the goodwill and reputation of the firm very badly and can be very critical if not treated properly.

RECOMMENDATIONS

Employees are said to be true asset for the organization. If treated properly can be a very strong source of competitive advantage for the organization which can be unbeatable. Employees if not treated effectively and efficiently can also cause huge loss for the organization. To identify the improvement needed areas in employee's training and development as well as to retain those different practices of Human Resource Management can be followed efficiently. Many non-profit and profit earning firms were studied which proved that HRM practices such as recruitment and selection and training and development can cause increase in performance of employees.

HRM is not only source of hiring and attracting employees but also developing them to its maximum level to get higher performance. It can also lead the organization to more stable level

if appropriate practices are followed. HRM identifies suitable skills employee posses and polish them to get maximum outcome. Providing equal opportunities keep employees highly satisfied with their job and keep their performance and organizational goals well aligned.

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APPENDIX

Questionnaire

Name: --------------------

Q1: Your gender
- o Male
- o Female

Q2: You belong to age group
- o 21-30
- o 31-40
- o 41-50
- o 51-60

Q3: Are you employed in retail sector firm
- o Yes
- o No

Q4: Are you satisfied with the working environment?
- o Yes
- o No

Q5: Does your supervisor support you and your endeavours?
- o Yes
- o No

Q6: What motivates you about your job?
- o Salary structure
- o Cash rewards
- o Non-cash incentives
- o Growth opportunities
- o Performance system
- o Supervisor Support

Q7: Do you think that your supervisor recognises the efforts of employees?
- o Always
- o Often
- o Sometimes
- o Rarely
- o Never

Q8: Do you think that working conditions in the firm are good?
- o Strongly agree
- o Agree
- o Disagree
- o Strongly disagree

Q9: Is there any discrimination on part of supervisor among employees?
- o Yes
- o No

Q10: The supervisor's support impacts motivational level
- o   Strongly agree
- o   Agree
- o   Disagree
- o   Strongly disagree

Q11: Individual differences are also important factor in motivation
- o   Strongly agree
- o   Agree
- o   Disagree
- o   Strongly disagree

Q12: When choosing a job, you would go for the one that pays higher salary
- o   Definitely
- o   Surely
- o   Not sure enough
- o   I don't know

Q13: When choosing a job, you would go for the one that recognises your efforts
- o   Definitely
- o   Surely
- o   Not sure enough
- o   I don't know

Q14: Supervisor's support is as important as motivation
- o   Strongly agree
- o   Agree
- o   Disagree
- o   Strongly disagree

Q15: Does your supervisor think you are highly productive?
- o   Strongly agree
- o   Agree
- o   Disagree
- o   Strongly disagree

Prologue to the coup of February 1921, Reza Shah's dictatorship

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ABSTRACT

The period in which political activity in Iran flourished in comparatively free conditions and with considerable vigor was a remarkably brief one when viewed from the perspective of the long history that belongs to Iran. Most historians of Iran regard the emergence of the first political parties as coming with the Constitutional Revolution in 1905-11, and this preliminary stage of political activity lasted until 1921, after Reza Shah coming to power and ruling the country absolutism for twenty years in when the political parties and the trade unions went underground. Reza shah's tyrannical rule and his inclination to Germany in the Second World War , ignored the Anglo-Russian ultimatum. The great powers, mainly Britain and Russia, forced him to resign in favor of his son (Mohammad Reza Shah) in 1941.I shall discuss, the pre period of Reza Shah which gave him opportunity to access to the throne and, I tried to show his dictatorial rule and emphasize on his tyrannical rule.

Keywords: Reza Shah, dictatorship, political party, Trades unions, Britain, Russia

RESEARCH METHODOLOGY

This research was conducted thoroughly on the question of Prologue to the coup of February 1921 and the consequence of Reza Shah's dictatorial rule. This is an analytical study that was accomplished by using libraries and other resources.

The nature of the material resources used in this research has a crucial bearing on the value and reliability of academic work in this particular field. The critiques offered here of preceding my contribution I hope to have made in this area depends upon a fuller and deeper exploration of all available literature and of previously unutilised oral information.

I have tried, to analyze all appropriate materials to fine the critical facts, in this field.

INTRODUCTION

Although, Reza Shah's reign which lasted from " 1925-1941" brought stability to Iran, yet the cost was a great deal of suffering for the people. His policies and the resulting increasing modernization made Iran in fact more dependent upon western consumer imports and aid a heavier burden upon the remaining peasants, as basic articles of food increased considerably in price. (1). Iran played as a buffer state between Britain and Soviet Union to great powers at the time. Iran always had been influenced by Soviet Union, the cause of many problems for Iran, particularly in First and Second World War.

Before Reza Shah; cope (Kudeta) of 1921, Iran was in very bad order, facing economic disaster. The country was plagued by foreign intervention, for example the Anglo- Iranian agreement of 1919, which faced much internal opposition, and the situation within the country worsened to

the state that numerous revolutionary movement appeared but were negative and purely anti-Imperialist and were too physically disparate to claim any robustness; however, the way was prepared for the defeat of the QAJAR dynasty and the restraint of British interference. (2)

These disorders communicated to Britain a manifest concern as a result of the Bolshevik revolution of 1917, which Iranian revolutionaries were hoping in part to emulate. The 1921 coup due was the hope for prevention and Reza Khan, on his assumption of power, did bring some political stability to Iran. However, the freedom given to parties and unions was crushed, along with the independence and integrity of the tribes and religious leaders (ULAMA), when the Shah realized the threat which these same bodies could pose to his position. (3)

Although Reza Shah's policies modernized Iran to a modest extent, his tactics were inspired primary by a need to set against each other Great Britain and Russia. Initially he turned to the USA with restricted success and he then resorted to Germany.

The stability brought by Reza Shah is undeniable, but was of a transient and baseless nature and in the long-term damaged Iran's international position, to the extent that his dictatorial rule culminated in the tragedy that was Iran's experience during the Second World War.(4-5)

The strength of Reza Shah's dictatorial proclivities meant that he insisted upon the continued presence of German nationals in Iran, against the demands of the Allied Powers; this effectively justified Anglo-Russian invasion and he was forced to resign in favor of his son Mohammad Reza Shah. (6-7)

Political Awareness And Approval Of Constitutional Law

The nineteenth century in Iran saw a deepening complexity of society which both reflected and effected a general growth of political awareness amongst the population. The QAJAR dynasty, while still claiming to be all-powerful kings of kings, was in the process of losing its absolute power among different section of Iranian society. Provincial magnates had immense power, since the Shahs controlled neither bureaucracy nor armies in their provinces (8). Two new classes also emerged in society: a united middle-class developed gradually out of the lesser clergy and petit bourgeoisie, and a new intelligentsia which welcomed and encouraged westernization grew out of the modernization of the Iranian education system (9). The power of the monarchy was thus being disintegrated, and assumed by groups within society anxious not to further their own careers but the democratic, and thereby stable and confident, state of Iran.

The first manifestation of this political mobilization came in the "Tobacco Protests", in 1892, (10) where a popular ban on smoking forced the cancellation of the tobacco concession given by the government to Britain. Successive proposed concessions were thereafter blocked through the deployment of this newly found popular voice and will, all of which incidents served to strengthen the people's political resolve.

Therefore, with the co-operation of the middle class and intelligentsia, the constitutional law was eventually won from MUZAFFAR AL-DIN Shah through the revolution fought in 1905 (11-12). The revolution was supported by the guilds, and by wealthy merchants, religious authorities and intellectual Western-educated people (13).

Many demonstrations took place, the British Consulate in Tehran was also occupied as a place of refuge (14). MUZAFFAR AL-DIN Shah was subsequently compelled to grant a Constitutional Law in face of these and other financial disturbance, so weak was his power (15).

Despite this triumph, the Constitutionalists had only just begun to encounter problems. MUZAFFAR AL-DIN Shah successor, his son Muhammad Ali Shah, objected strongly to the limits imposed upon the power of the monarch by the Constitutional Law, especially as regards the provinces. He therefore embarked upon a campaign towards its annulment, further antagonizing the situation by sacrificing Iranian interests to those of Czarist Russia in his attempt to favor landowners (16).

In response, an attempt to assassinate Muhammad ALI Shah was made in 1908 by AZADIKHWAHAN (liberals) under orders from HAYDAR KHAN AMUGHLI (17). In June, the Shah with his Iranian Cossacks, under Russian officers, bombarded and dissolved the MAJLES (parliament) (18). Strong resistance ensued, with the conflict between Royalists and Constitutionalists lasting until the autumn of 1909. The victory went to the Constitutionalists, who deposed Muhammad Ali Shah and put his son Ahmad on the throne under a regent. Muhammad Ali Shah was exiled to Odessa, apart from one brief and unsuccessful attempt to regain his throne ('19).

Political Development
Political diversity and development steadily increased during the whole period. The MAJLES itself divided into 3 factions: the MU TADILIN (Moderates). He AZADIKHWAHAN and the BITARAFAN (neutrals). The first of these was generally conservative, and the second variously called Nationalist, liberal, extremist and revolutionary; this extremism was active, and manifested itself, for example, in the assassination of ATABAK .The division between the deputies was not a class difference but rather a difference of interest.

Out with the MAJLES- political awareness was being mobilized into organized structures. Three main parties developed out of the ANJUMANS (society) system, ANJUMANS were societies or associations which existed to discuss social freedom and liberation from politically oppressive regimes,: the Democratic Party (Firqa-yi Dimukrat), the MU TADELIN, and the smaller Alliance and Progress Party. The minority Democrat were more influential than the larger MU TADELIN, so the balance of power remained precarious.

Support for the Democrat was basically proletarian in character, coming particularly from the ANJUMANS in Tabriz, from Iranian Turks, and from anti-Royalist Mujahidin, mainly in Baku (20-21). The MU TADILIN comprised pro-Constitutionalist BAKHTIARI Khan and tribesmen, conservative clergy, and landed gentry and was of an upper class nature (22). Iran thus seemed to be moving towards a constitutional and electoral monarchy- the first committee to supervise elections was in fact favored by the Tabriz ANJUMANS, immediately after the Constitution was granted (23). Despite this apparent success, the parties foundered because of the collaboration, necessitated by Germany's rising power.

Foreign Influence And The Reconciliation Of Moderates
 As a result of Conventional Treaty of August 31 . 1907 (24), between Britain and Soviet Union, Iran was split into three zones: the North, under the influence of Russia, the South dominated by Britain, while the centre of the country was under the influence of both (25). The Czarist government sought to return Muhammad Ali Shah to power, by provoking counter-revolutionary activity in Iran, and in December 1911, they finally suppressed the remaining Constitutionalist strongholds in Tabriz, Rasht, Port of ANZALI and finally Mashhad in 1912 (26), however, it was also supported, although somewhat ambiguously, by Britain (27-28).

Earlier in 1911, AZADIKHWAHAN decided to employ American financial advisers, partly because of failure of Belgian officials, partly because of the geographical isolation of the United States, which precluded the temptation of territorial expansion, and partly to counter-balance Russian and British influence. Thus a request was made through the Iranian embassy for trusted financial advisers (29). Morgan Shuster led the group of five financiers appointed in 1911, to whom the MAJLIS gave wide powers covering revenue and expenditure. A Russian ultimatum at this time demanded Shuster's dismissal, compensation for the Russian army, and a guarantee that appointments of foreign advisers would be notified to Russia and Britain.

These demands incited the fury of masses, whose slogan, "Death or Independence", challenged this threat to the very existence of Iranian sovereignty. Upon the MAJLIS rejection of this ultimatum, both Russia and Britain moved forces into the area. As revolutionary forces were engaging the Czarists in Tabriz, Rasht and Mashhad, the Iranian reactionaries, capitalizing on the Russian and British concern, a coup in December of that year. Aided by detachments under the control of YEFREM KHAN the DASHNAK and the BAKHTIARY, they seized the MAJLES building and dissolved Parliament, so that the QAJAR reactionary aristocracy re-assumed power.

The government then accepted, the Russo-British ultimatum, Shuster was dismissed on December 25, 1911, and left Iran on January 11, 1912. (30). This reconciliation between the Moderates and foreign powers was a setback both for the Democrats and for representative government. A number of liberal leaders fled the country, and the MAJLIS was suspended for 3 years, only recovering in November 1914, after the coronation of Ahmad Shah, when it regained its leading role (31). It was further dissolved again in November 1915, after an attempt to set up a pro-German government in Qum (32-33). Between this event and the sitting of the fourth MAJLIS in June 1921, neither the Liberals nor Nationalists, reputedly honest, participated in Cabinets, since the latter were said to be under either British or Russian influence. The British regarded the Democrats as extremists, who fought intermittently against Russia, Britain and the Iranian government, aided occasional by Germany and Turkey.

Importantly, the end of the Third MAJLIS saw the final collapse of co-operation between the Moderates and Democrats, due to the collaboration of the former group with foreign powers. The Moderates were accused of treachery and betrayal of the nationalists in order to gain power over central government.

Reza Shah's Dictatorship (1921-41)
"The war ended with Soviet Union in revolution, Turkey powerless and Iran largely destroyed (34)." The success of the October 1917 revolution in the Soviet Union was coupled with revolutionary and anti-imperialist movements within Iran and among some of he neighbor, such as Turkey and Afghanistan. These movements, together with a popular discontent over the 1919 Treaty, persuaded the British to bring about a much more radical (35.) administration; a move which had a probable intentions – to safeguard British interests in Iran, to suppress the revolutionary atmosphere and to keep communism at bay (36). This was initially effected by the formation of a top secret "committee of steel" (37), chaired by SAYYED ZIA (38) and NUSRAT ALLAH-I FIROUZ .This coup, according to MAKKI (39), was masterminded in London. At this stage it was decided to include Reza Khan in the scheme; he was then a colonel in the Cossack Brigade and was forthwith promoted by IRONSIDE to the rank of Commander-in-chief of that brigade. Armed with this new power, Reza Khan marched his force (which was secretly considerably supported by British influences) (40) from Qazvin to Tehran on 21st February, 1921, and carried out a virtually bloodless coup (41). Immediately after the coup, SAYYAD ZIA arrested about 200 officers and other influential people (42).

Reza Khan, who was born into a military class and had enjoyed a military education, was trusted by the British and even seen by many as a British agent- partly on account of his opposition to Russian Communist infiltration (43-44). At his rise to power in 1921, he was faced with an Iran in social, political and economic chaos, and in which the previous constitutional government had totally failed to achieve any domestic stability; in the towns the population was disgusted by the instability in the country and the consequent and frequent uprisings throughout Iran. These factors, added to a lack of reform and the continuation of foreign intervention, facilitated Reza Khan's coup (45).

The country was governed by SAYYAD ZIA, a supporter of the British (46), and his administration was popularly known as the "black cabinet" (47). A treaty was concluded with the Soviet Union on February 26th, 1921, a major consequence of which was the optimistic and grateful Iranian attitude towards the Russian- even Reza Khan, in a newspaper article (48), praised the new relationship reached between the two nations. Despite all the optimism, SAYYAD ZIA was bent on subverting the treaty and to that end he failed to publish all the articles of the agreement. Partly due to this, and also because of the political hostility of Ahmad Shah and his court, and to Reza Khan whose lack of support stemmed from fierce rivalry, SAYYED ZIA lacked popular support, a fact noted by the British; and he was replaced as prime minister by QAVAM on 25th May, 1921. According to BANANI (49.), QAVAM was a friend of the British, whose spying against the Soviet Union he had facilitated during his governorship of KHURASAN. He was also backed by the clerics led by MUDARRIS. As in SAYYED ZIYA's black cabinet, the administration of QAVAM had two latent functions- to suppress internal revolutionary movements, and to undermine the Russo-Iranian relationship (50) Again, because of the general unpopularity of these intentions and conflict with Reza Khan, this cabinet fell- to be replaced by those of MUSTAWFI al-MAMALIK and of MUSHIR al-DAWLA. The actions of the government of MUSHIR al-DAWLA betrayed its very poor pretence of anti-British, pro-Soviet sympathies, and QAVAM was given the opportunity to return to power. This time, not only did he lack popular support, but at the same time as alienating British friendship, he encouraged good relations with the United States. At this juncture popular support was with Reza Khan who , was showing himself patriotic to Iran and eager to establish good relations with the Soviet Union. ,at least on surface the least. However, at the same time he was presenting to the British an image of support for feudal capitalism, he had, a desire to suppress internal revolutionary movements such as those in Azerbaijan and GILAN and the ability to bring himself to power. (51)

Platform To The Throne
In 1923, Reza Khan arrested QAVAM and gained the premiership from Ahmad Shah and from these sought to consolidate and improve his general appeal by including within his cabinet nationalists such as MUSADDEQ and left wingers from the social democrats including SULEMAN MIRZA ISKANDARY (52) and pressurize Ahmad Shah to travel to Europe. Meanwhile Reza Khan was supporting agitators who were demonstrating for the declaration of a republic in Iran,(53-54). Later, however, he became a bitter enemy of republicanism. By collaboration with the feudal upper classes, he gained their support in 1924 and then travelled to Qum, where he tried to gain support of clergy in 1924, he made a proclamation calling for an end to demonstrations and seeking untied cooperation for internal reforms. In the same proclamation he called for support for the Monarchy, rather than Republicanism, and gave a convincing impression of being a staunch Muslim. Next he went to Parliament, asking them to grant him the post of commander-in-chief of all the armed forces. The MAJLIS was unwilling to grant him this power, since such a move would have been contrary to article 50 of the constitution and was opposed by the influential media; but they consented and by 14thfebruary 1925, Reza Khan

had gained the powers he sought. His ambition was to become Shah and, learning from the experiences of previous prime ministers, he realized that he must secure domestic support for this; he therefore created a party called TAJADDUD (Revolution)- whose manifesto consisted of several promises to the people. For example: lands reforms, political freedom and all citizens were to be treated equally before then law.

Further, his party asked Parliament to abolish the QAJAR dynasty (55). However, after he had become Shah and thus gained supreme power, he broke his word; seizing all the land for himself and banning political parties, he ruled the country personally, (his son succeeding in 1941), without recourse to Constitutional Law.

Further, in 1925 he abolished all workers' unions and arrested 800 union leaders (56). He also arrested the communist party leaders and as a result the Communist party went underground. Reza Shah pursued these anti-Communist policies because he feared Communist influence in opposition to his rule (57).

Accession To The Throne
On 21st October, 1925, the 5th MAJLIS abolished the QAJAR dynasty on the recommendation of TADDAUN, the Speaker of the MAJLIS and provisional authority was handed to Reza khan. In the interim he published a proclamation advocating the principles of Islam as well as a higher standard of living for the people as his guiding principles; some of the influence authorities believed him and called for popular support for his regime. In November, a Parliamentary election was announced but due to the suspicions of the majority of the population, the voting attendance was minimal. The list of deputies was drawn up by the Army Officers before the election was over, and on 12th December, 1925, the MAJLI ratified Reza Khan's regime, a regime backed by feudal landlords and reactionaries (58.). In fact the regime brought few systematic charges and in effect, continued the status quo.

Upon Reza Khan's elevation to the position of Shah, he concentrated on three major problems; 1- the limitation in the power of the tribes .2- the limitation in the power of the clergy .3- the strengthening of the army to effect his intentions.

Against the treat of the tribes, Reza Shah answered by breaking their backs; (59-60) he forcibly resettled and, oppressed them, and quickly crushed various tribal uprisings.

Another possible threat was the very powerful clergy which he was determined to limit. Therefore he secularized the legal system (61-62) and removed the veil, restricting the movements of women, in effect. "On the 7th January, 1936, Iranian women were formally, ceremoniously, indiscriminately and forcibly unveiled (63). Religious meetings were suppressed by the gendarmerie, and pious foundations were seized (64). An attempt was made to abolish the religious calendar. These actions had two motives; the destruction of SHIISM and the restriction of religious institutions.

As an autocrat, Reza Shah realized the need for an army (65) capable of maintaining his power. The Iranian army he built was assembled on Western, rather than Soviet, principles; and conscription (66) was imposed during 1925. But despite the recruitment of new young officers, Reza Shah's trust and dependence rested on older generals and the army, build to suppress internal trouble, was ineffective against external forces as demonstrated by its helplessness in the invasion of 1941. After suppressing internal opposition Reza Shah turned his attention to external problems.

Reza Shah's Foreign Policy

The Soviet attitude to Iran was increasingly favorable after the Bolshevik Revolution and the treaty concluded in 1921 (67) established Iranian rights; (68-69) however Reza Shah did not altogether abide by its terms and ultimately violated it seriously by granting Northern oil concessions to the royal Dutch Shell Company. An intended agreement with the American Company, Armenian Oil, ultimately failed, mainly due to lack of communication within the U.S. administration.

The relation with Britain gradually worsened and the D'ARCY concessions (70) of 1901 decreased in importance as Germany came to replace Britain in the Reza Shah's priorities, although Britain capitulated and signed a new agreement on 29th April, 1933 (71).

In the Middle east, relation with Turkey and Afghanistan had previously been strained due to demarcation disputes and religious differences (72), but a series of treaties was executed, culminating in that of SADAT ABAD (73) between Iran, Turkey, Iraq and Afghanistan on 8th July, 1937, intended to resolve the Shatt al-Arab conflict.

By the 1930s, Reza Shah had established himself as an absolute ruler and tried to consolidate his position commercially by improving the tax system, liquidating capital assets, monopolizing foreign trade and establishing a state bank (74.), to replace the existing British-controlled bank.

Reza Shah thus planned to reduce the British influence which had placed him in power and was threatening to constrain his power, and a further step was taken with the assistance of Germany, a ready ally in an anti-British strategy. In the hiatus left by the American failure German industry and commerce was introduced to the Iranian economy on an increasingly large scale and Germany became the main recipient of goods in Iran's export market in the pre-war years, winning $41^{1/2}\%$ of Iranian exports in contrast to Britain's 8%.

By 18th October, 1939, Germany's rising importance in Europe too was unquestionable and she had also established a secret Fifth Column within Iran. Encouraged by Germany's position, Reza Shah entered into a clandestine agreement, which allotted her an increased measure of raw materials and the right to build a railway through Iran and to use Iranian airspace . By 1941 German bureaucratic penetration was widespread particularly in governmental institutions, and Germany furthermore commanded emissaries and agents, especially in the north(75), who were capable of perpetrating terrorist activities or sabotage operations in the Baku region of the USSR.

But in order to utilize Iranian territory fully, Germany was eager to persuade her new associate to enter World War II and voiced this proposal on 17th august, 1941. Despite the promise of arms, Iran claimed neutrality, which induced Germany to plan a military coup (76) within Iran, which would bring her policies into line. According to AMINI (77), this coup was to be backed by a division of the Iranian army, led by MANUCHAHRY later called ARYANA.

British And Russia Reaction Towards Reza Shah's German Policy

 Since the invasion of Russia on 22nd June, 1941, Russia had warned Iran three times of the danger of German espionage activities- on 26th June, 19th July and 26th August (78). On 26th June, they signaled the planned coup, and on 19th July they reiterated their warning, adding a reminder of the existence of German agents in Iran, which threatened Russia and Iran itself, and on 16th August and Great Britain handed a formal note to the Iranian government,

demanding the suppression of German activity in Iran. In return they promised to respect Iranian independence, neutrality and integrity and to work towards developing friendly relations. They conceded that Iran might keep those few Germans who were doing genuinely important technological work and pledged to replace any forced to leave.

> A week later Iran gave the following reply (79):
> "1. The number of German residents in Iran was no so great as pretended; it scarcely touched the figure of seven hundred (According to Russian sources the number exceeded 3,000); 2. The Iranian government was sure they could not foment any fifth column activities; 3. Iran was reducing the number of foreign specialists in its employ anyway; and 4 the Iranian government believed that the expulsion of Germans from Iran without any logical reasons was against the neutrality of the country."

This reply was not wholly satisfactory, and after a week's attempt to persuade Iran to expel the Germans, they could not make Reza Shah understand the immediate danger both for himself and for his allies, Russian and Britain. For many reasons, economic and strategic, Russian and Great Britain could no longer afford to allow the danger to develop unchecked; they had no choice but action. So on 9 August a Russian ambassador met with Sir R. Bullard to discuss the proposed German coup (which had been envisaged for the period between 22 and 28 august). At 4 a.m. on 25th August, 1941, allied troops crossed the border and attacked Iran by sea, air and ground. The Britain entered at three points from the Persian Gulf to the Turkish border. Russia struck in three areas, in the northwest pushing toward Tabriz and Bandar Pahlavi (ANZALI), and in the northeast advancing towards Mashhad (80). Reza Shah knew that he could not rely on immediate German assistance, but he continued to believe in Germany's final victory. In an effort to maintain his political position for such an eventuality, he commanded the Iranian army to resist (81.). But this action effectively sealed his own fate for the Iranian army quickly disintegrated and the Allies managed to occupy all the important centres in the south (British) and north (Russian) of the country. Churchill described this sudden invasion as "abrupt step". At the time of the invasion 120,000 Iranian troops were included in the fighting (82.). On the same day ambassadors from Great Britain and Russia promised that they would leave when the danger from Germany was over, that they would not interfere with internal affairs, and that the invasion was purely anti-German. These promises were groundless – interference, as we have seen, was present, and withdrawal did not take immediately after the expulsion of the Germans from Iran – the British withdrew in March 1946 and the Russians in May, 1946. Although reprehensible at an international level, the Soviet/British invasion at least delivered Iran from the absolutism of Reza Shah. Russia, moreover, could legitimize herself on the grounds of Article 6 of the 1921 Treaty, which stated that "if a foreign power should threaten the frontiers of Federal Russia or those of its allies, Russia shall have the right to advance her troops into the Persian interior (83)." But Britain had no such means of justification. However the Prime Minister could not cope with these problems and on 28th August, Ali Mansur was replaced by the Foreign Minister FOROUGHI and a ceasefire was announced. The Shah was still in control of the situation but found himself under the irreconcilable pressure of two antagonistic domestic forces. A radical group in the army insisted on continuing resistance by political means, whereas most civilian politicians, including Preemie FOROUGHI, were ready to utilize the crisis to overthrow the Shah (84.). Reza Shah inclined to the first group. On the first of September he demanded that the Allies evacuate certain towns and that they pay war reparations; they replied with a demand for the internment of non-diplomatic persons in the German colony. Germany tried to prevent this by intervention and several top German agents managed to escape or to go underground (85.). On 15th September the allied forces began their advance on Tehran.

Reza Shah's Abdication

On 16th September Reza Shah was forced to abdicate partly because of his own procrastination, partly due to allied pressure and partly on account of a lack of popular support. Bullard claims that it was the Russian advance to Tehran, not explicit allied pressure, which forced his abdication; Reza Shah's son suggests that his father could not, as a popular leader, rule an occupied country; Reza Shah himself claimed he was making way for a "younger force". He was deported to Mauritius, thence to Johannesburg where he died in 1944.

By the time of Reza Shah's abdication, all of the major landowners and initial leaders and those clergy and politicians who had been in opposition to him, and all the leaders of parties such as the Communist Party had been killed, imprisoned or expelled. Neither at the time of the coup in 1921 nor upon his becoming Shah in 1925 did Reza Khan possess any land or money, but by the time of his abdication he was one of the wealthiest Iranian landowners and one of the world's richest men. According to AHMADI (86), a deputy of the 13th MAJLIS at the time, Reza Shah had 46,000 title deeds to and, the annual value of which over the 17 years of his reign amounted to 30 million dollars (U.S.), and he possessed about 360 million dollars in foreign banks (87), including those of Britain, America and Switzerland. He amassed this by imprisoning or exiling other wealthy landowners and seizing their property for himself (88). He was a principal shareholder in the Anglo- Iranian Oil company and received 12,000 per annum from Britain for shares in the company (89). On his journey from Iran to Mauritius, Reza Shah confided in Kerman to two friends that he had collected 1,000,000,000 dollars during his reign and was now leaving with nothing (90).

Reza Shah banned most political groups and his growing fear of Republicanism and any movement threatening his rule (91) caused the eventual disbanding of all parties. One exception to the ban was Reza Shah's own creation, SAZMAN-I PARVARESH-I After (92), which was little more than Reza Shah's propaganda machine. The lack of political communication meant that Iranian administration was prey to corruption and illegalities .

CONCLUSION

The period between"1905 – 1921" was one of political and economic turmoil in Iran. Intense political activity derived from the granting of Constitutional law, in 1905. (93) while it was enthusiastically received by the populace, especially in Azerbaijan, it came into increasing disrepute with the new shah," Muhammad Ali Shah"

A power struggle ensued between monarchy and central government. The Constitutionalists, fought right through to 1911. Hostility between east and west centring on each of their individual concerns was of no great importance to the Constitutionalists. Tension was rather caused in Iran itself through the unwanted presence of any foreign influence in the country, although it centred quite naturally on Britain and Russia (94). Both of these powers were seeking concessions from Iran, particularly on oil, and the populace was growing increasingly restive with a government that had neither the capability to restore economic to heal Iran nor the determination to promote the rights of its own citizens in the face of foreign pressure.
These tow source of discontent, deriving from the relation between the central government and foreign powers, induced a rash of revolutionary movements within Iran whose main goals constituted the removal of foreign influence and intervention in Iran, the abolition of Iran's feudal system, and the institution of comprehensive reforms.

Geographically Iran was situated between Britain and Soviet Union and played as a buffer state in 19th and 20th century. Concurrently with the rise of the parties, and in direct response to the

presence of foreign powers in Iran and their influence over the central government, together with the economic decay within the country, Reza Shah had an opportunity to gain power to rule the country tyrannically for 20 years. Throughout his reign, he controlled the MAJLIS personally, (95) in the elections, in order to choose individuals from local nominations which were predetermined and organized by the Shah.

The judgment passed by the Russian Communist Party from a brief resume of Reza Shah's twenty-year reign, as quoted by MELKOVE: he was "the bitterest enemy of the political freedom of the workers and peasants". He was "the incarnation of the regime of feudal-clerical reaction, who is, and will be, the definitive champion of British Imperialism", and he was the "careerist- adventurer who has tied the State to the military interests of England (96)".

One respected member of the British Parliament commented that Reza Shah had purged Iran of all its thieves and bandits, leaving the country with only one supreme bandit... Reza Shah (97).

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