

European Journal of Contemporary Economics and Management  
December 2014 Edition Vol.1 No.2

# **European Journal of Contemporary Economics and Management**

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# **European Journal of Contemporary Economics and Management (EJE)**

***2014 / December***

## **European Scientific Institute (ESI)**

Reviewed by the "European Journal of Contemporary Economics and Management" editorial board 2014

***December 2014 edition vol. 1, no. 2***

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***EJE, Team***

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# DETERMINATION OF STEADY STATE OF NIGERIA'S ECONOMIC GROWTH; VECTOR AUTOREGRESSIVE ANALYSIS

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Doi: 10.19044/elj.v1no2a1 [URL:http://dx.doi.org/10.19044/elj.v1no2a1](http://dx.doi.org/10.19044/elj.v1no2a1)

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## Abstract

The paper focuses on the prediction of steady state of Nigeria's economy; the data covers the period of 1970–2012, unit root test result shows that the variables were not stationary at level and they became stationary at first differencing and are integrated of I(1). Using the Vector Autoregressive co-integration test procedure, a long run relationship was found to exist among Gross Domestic products (GDP), Interest rate, Population Growth and Depreciation rate. The model has a self-adjusting mechanism for correcting any deviation of the variables from its long run equilibrium. The result shows that GDP will reach it steady state in 31 to 32 years, interest rate will reach it steady state in 11 to 12 years, population growth will reach steady state in 16 to 17 years and depreciation rate will become stationary at 20 to 21 years in Nigeria economy. The following recommendations were; (1) that policy makers should increase the level production at the moment and moderate it in future as the economy has not reach the golden state of production yet (2) interest rate should be reduced to boost investment (3) policy aimed at moderating population growth rate should be encouraged (4) lastly, infrastructural facilities should be put in place to augment the existing ones which will go a long way in reducing the depreciation of fixed capital in the economy.

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**Keywords:** Determination of Steady state, Nigeria's Economic Growth, Vector Autoregressive Analysis

## Introduction

Developed and developing countries alike has come to believed that an ever expanding economy is a panacea to solving societal problem of poverty, distribution, population growth, food production and unemployment

in their economy. This problems could be better solved if the economy is operating in a steady state of growth. Nigeria like any other country of the world has experience tremendous economic growth since independence; successive governments seek such an increase and do everything in their power to make it come about. To them growth is good, and the bigger the better. Governments have two objectives – to foster economic growth, and to manage its consequences. Ever increasing economic growth is over emphasized above a steady state of economic growth that is potentially more beneficial to the society. In microeconomic theory the optimal scale of a microeconomic activity production of a company or consumption of a household is determined at the point where marginal costs equal marginal revenue.

The law of decreasing marginal benefit indicates that after the point of optimal scale further growth becomes uneconomic, because costs are higher than benefit. Neoclassical economics does not demand economic growth as such, but it provides the theoretical preconditions for it and sees it as “axiomatic necessity” (Georgescu-Roegen 1977). Orthodox economists are convinced that only economic growth can solve the ‘classical problems’ of society, formulated by Smith (poverty), Malthus (overpopulation), Marx (distribution) and Keynes (involuntary unemployment). Not only that, it is also offered as a (or the only) remedy for pollution problems, debt repayments, balance of payment deficits, depletion of natural resources, crime, etc.

The article is structured as follows: The next section present literatures review, section three highlights the methodology employed in the study and the sources of data. Empirical results and analysis will be done in fourth section while the discussion is completed by conclusions and policy recommendation in section five.

### **Literature Review**

Stationary state was first mentioned by Adam Smith “The Wealth of Nations” (Smith, 1776) although he certainly laid the foundations of the future growth paradigm, he did not believe that growth would be possible indefinitely. Daly (1991) opined that, an economy with constant stocks of people and artifacts, maintained at some desired, sufficient levels by low rates of maintenance ‘throughput’, that is, by the lowest feasible flows of matter and energy from the first stage of production to the last stage of consumption. Smith (1776) predicted that in the long run, population growth would push wages down, natural resources would become increasingly scarce, and division of labor would approach the limits of its effectiveness. He even predicted 200 years as the longest period of growth, followed by population stability. Mill (1909) developed the idea of the steady state

economy in the mid-19th century believed that after a period of growth, the economy would reach a stationary state, characterized by constant population and stocks of capital “It is scarcely necessary to remark that a stationary condition of capital and population implies no stationary state of human improvement. There would be as much scope as ever for all kinds of mental culture, moral and social progress; as much room for improving the Art of Living and much more likelihood of its being improved, when minds cease to be engrossed by the art of getting on”.

Keynes (1933) predicted that, avarice is a vice that the exaction of usury is a misdemeanor, and the love of money is detestable. We shall once more value ends above means and prefer the good to the useful. And the day is not far off when the economic problem will take the back seat where it belongs, and the arena of the heart and the head will be occupied or reoccupied, by our real problems – the problems of life and of human relations, of creation and behavior and religion. Georgescu-Roegen (1971) asserts, the second law of thermodynamics, the entropy law, determines what is possible in the economy. He explained that useful, low-entropy energy and materials are dissipated in transformations that occur in economic processes, and they return to the environment as high-entropy wastes. The economy, then, functions as a conduit for converting natural resources into goods, services, human satisfaction, and waste products. Increasing entropy in the economy sets the limit on the scale it can achieve and maintain.

Boulding (1966) recognized the material and energy constraints of the economy and proposed a shift from the expansionist “cowboy economy” to the conservative “spaceman economy.” In the cowboy economy, success is gauged by the quantity and speed of production and consumption. In the spaceman economy, by contrast, “what we are primarily concerned with is stock maintenance, and any technological change which results in the maintenance of a given total stock with a lessened throughput (that is, less production and consumption) is clearly a gain.” Georgescu-Roegen’s (1971) fourth law of thermodynamics, unlimited growth is physically impossible. Samuelson (1943) the stationary economy was considered as some kind of equilibrium condition that needed to be understood in terms of capital formation and depreciation, interest rates, and the business cycle. Andreas (2010) finds that in a neoclassical economy with endogenous capital- and labor-augmenting technical change the steady-state growth rate of output per worker is shown to increase in the elasticity of substitution between capital and labor.

The Early Economist as stated above has theorize steady state economic growth but no or little has been done empirically to explain stationary state of economic growth in Nigeria. Hence the need to carry out this research to shed light on the theoretical postulation.

**Methodological Framework**

This paper uses a Vector Auto Regression to identify the relationship between Economic growths (Steady state), interest rate, Population growth, Rate of Depreciation.

$$Y = f(\text{INT}, \text{POP}, \text{DEP}) \dots \dots \dots (1)$$

In an explicit and econometric form, equation (1) can be stated as

$$LY_t = \alpha_0 + \alpha_1 LINT_t + \alpha_2 LPOP_t + \alpha_3 LDEP_t + \varepsilon_t \dots \dots \dots (2)$$

Where;

$LY_t$  is Economic growth (GDP)

$LINT_t$  is interest rate

$LPOP_t$  is the population growth rate

$LDEP_t$  is depreciation rate (% of domestic demand)

$\alpha_0$  is the constant term, “t” is the time trend, and “ $\varepsilon_t$ ” is the stochastic random term. Following Legrenzi & Milas, (2002) nominal values were used in order to avoid the difficulty of identifying an appropriate deflator for the series of variables. Data used for this analysis is for 42 years from 1970 to 2012 for Nigeria from World Development indicators (2013), World Bank website.

**Determination of unit roots**

In order to test the analyzed stationary variables, the Augmented Dickey-Fuller (ADF) test and Philip and Perron (PP) were applied, based on the following regression:

$$\Delta y_t = \alpha_0 + \alpha_1 y_{t-1} + \sum_{i=1}^n \alpha_i \Delta y_{t-i} + e_t \dots \dots \dots (3)$$

Where;

“y” is a time series, “t” is a linear time trend, “ $\Delta$ ” is the first difference operator, “ $\alpha_0$ ” is a constant, “n” is the optimum number of lags on the dependent variable and “e” is the random error term. The difference between equation (1) and (2) is that the first equation includes just drift. However, the second equation includes both drift and linear time trend. This study also employs the Philip-Perron test due to Phillips (1987) and Phillips and Perron (1988). Since the possibility of the presence of structural breaks makes the ADF test unreliable for testing stationarity. The presence of a structural break will tend to bias the ADF test towards non-rejection of the null hypothesis of a unit root. The regression equation for the PP test is given by

$$\Delta y_t = \alpha + \beta Y_{t-1} + e_t \dots \dots \dots (4)$$

**Empirical Analysis**

**Testing for Unit Root**

First is to test if the relevant variables in equation (2) are stationary and to determine their orders of integration. I use both the Augmented Dickey Fuller (ADF) and Phillips – Perron (PP) tests to find the existence of

unit root in each of the time series. The results of both the ADF and PP tests are presented in Table 4.1.1 and 4.1.2.

Table 4.1.1. Testing for Unit Root

VARIABLES	ADF(INTERCEPT)	ADF(INTERCEPT & TREND)	PP(INTERCEPT)	PP(INTERCEPT & TREND)
LY	-2.168(-3.596)*(-2.933)**(-2.604)***	-2.160(-4.192)*(-3.520)(-3.191)***	-2.112(-3.596)*(-2.933)**(-2.604)***	-2.094(-4.192)*(-3.520)**(-3.191)***
LIR	-1.798(-3.596)*(-2.933)**(-2.604)***	-1.833(-4.192)*(-3.520)(-3.191)***	-1.848(-3.596)*(-2.933)**(-2.604)***	-1.931(-4.192)*(-3.520)**(-3.191)***
LPOP	-1.979(-3.596)*(-2.933)**(-2.604)***	-1.976(-4.192)*(-3.520)(-3.191)***	-1.979(-3.596)*(-2.933)**(-2.604)***	-2.015(-4.192)*(-3.520)**(-3.191)***
LDEP	-1.654(-3.596)*(-2.933)**(-2.604)***	-1.849(-4.192)*(-3.520)(-3.191)***	-1.654(-3.596)*(-2.933)**(-2.604)***	-1.894193(-4.192)*(-3.520)**(-3.191)***

**Note:** \*, \*\* and \*\*\* denote significance at 1%, 5% and 10% level, respectively.

Figures within parenthesis indicate critical values. Mackinnon (1996), critical value for rejection of hypothesis of unit root applied.

Source: Author's Estimation using Eviews 7.0.

The result in table 4.1.1 shows that all the variables were not stationary at levels. This can be seen by comparing the observed values (in absolute terms) of both the ADF and PP test statistics with the critical values (also in absolute terms) of the test statistics at the 1%, 5% and 10% level of significance. Result from table 4.1.1. provides strong evidence of non stationarity. Therefore, the null hypothesis is accepted and it is sufficient to conclude that there is a presence of unit root in the variables at levels, following from the above result, all the variables were differenced once and both the ADF and PP test were conducted on them, the result as shown in table 4.1.2

### Testing for Unit Root

VARIABLES	ADF(INTERCEPT)	ADF(INTERCEPT & TREND)	PP(INTERCEPT)	PP(INTERCEPT & TREND)
LY	-7.420(-3.600)*(-2.935)**(-2.605)***	-7.417(-4.198)*(-3.523)**(-3.192)***	-7.460(-3.600)*(-2.935)**(-2.605)***	-7.613(-4.198)*(-3.523)**(-3.192)***
LIR	-5.218(-3.600)*(-2.935)**(-2.605)***	-5.079(-4.198)*(-3.523)**(-3.192)***	-5.218(-3.600)*(-2.935)**(-2.605)***	-5.079(-4.198)*(-3.523)**(-3.192)***
LPOP	-5.605(-3.600)*(-2.935)**(-2.605)***	-5.469(-4.198)*(-3.523)**(-3.192)***	-5.605(-3.600)*(-2.935)**(-2.605)***	(-4.198)*(-3.523)**(-3.192)***
LDEP	-5.930(-3.600)*(-2.935)**(-2.605)***	-5.846(-4.198)*(-3.523)**(-3.192)***	-5.930(-3.600)*(-2.935)**(-2.605)***	(-4.198)*(-3.523)**(-3.192)***

**Note:** \*, \*\* and \*\*\* denote significance at 1%, 5% and 10% level, respectively.

Figures within parenthesis indicate critical values. Mackinnon (1996), critical value for rejection of hypothesis of unit root applied.

**Source:** Author's Estimation using Eviews 7.0.

Table 4.1.2, reveals that all the variables became stationary at first difference, on the basis of this, the null hypothesis of non-stationary is rejected and we can safely conclude that the variables are stationary. This implies that the variables are integrated at order one, that is I(1).

### Co-integration Test Result

Having found that the variables are stationary at 1(1), we proceed to determine the presence or non presence of co-integration among the variables. When a co-integration relationship is present, it means that Economic growth, Interest rate, Population growth and depreciation share a common trend and long-run equilibrium as suggested theoretically. We start by co-integration analysis by employing the Johansen and Juselius multivariate co-integration test.

Table 4.2.3  
Unrestricted Co-integration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None*	0.472830	43.03828	40.17493	0.0448
At most 1	0.196421	12.78873	24.27596	0.6395
At most 2	0.086066	3.822848	12.32090	0.7363
At most 3	0.003238	0.132960	4.129906	0.7636

Trace test indicates 1 cointegration at the 0.05 level

\* denotes rejection of the hypothesis at the 0.05 level

\*\*MacKinnon-Haug-Michelis (1999) p-values

### Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.472830	26.24955	24.15921	0.0257
At most 1	0.196421	8.965882	17.79730	0.5982
At most 2	0.086066	3.689888	11.22480	0.6781
At most 3	0.003238	0.132960	4.129906	0.7636

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level

\* denotes rejection of the hypothesis at the 0.05 level

\*\*MacKinnon-Haug-Michelis (1999) p-values

Ensuing stationarity test is the examination of the long run (co-integration) relationship among the variables. The Johansen multivariate co-integration technique was adopted rather than the Engel-Granger techniques.

This was based on the two reasons, first, the variable for analysis are I(1) series which is a pre-conduction for the adoption Johansen techniques and secondly, the model is a multi-variate as specified in model Equation 2, consequently, there is a possibility of having >1 co-integration vector in the model. This is against Engel-Granger techniques which are only suitable for testing co-integration between two variables. The result obtained from Johansen multivariate co-integration method is shown in tables 4.2.1 and 4.2.2. The null hypothesis of no co-integration of  $r=0$  and  $r \leq 1$  in the model was reject in the trace statistics and maximum Eigen value statistics.

The statistical value of these test were greater than the critical values, however, the null hypothesis, that is,  $r \leq 2$  could not be rejected in both the trace statistics and Maximum Eigen value statistics because their values were less than the critical values implying that there are at less two co-integrating vector among the series. The implication of this result is that there exist a long-run relationship among the series and hence we would go ahead to estimate the error correction model (ECM) to determine the speed of adjusted in the short-run to it long run equilibrium state.

### Error Correction Result

Table 4.2.4.

Error Correction:	D(LGDP)	D(LINT)	D(LPOP)	D(LDEP)
	-0.032127	-0.090932	-0.062975	-0.049544
	(0.54275)	(0.73432)	(0.56116)	(0.58697)
	[-2.43442]	[-1.23833]	[-1.12224]	[-0.84406]

Table 4.3.2 shown the result of error correction model for each of the variables involve in the analysis, LGDP has a negative coefficient of -0.032 which shows the speech at which it revert back to it long run equilibrium (Steady state) that is 3.2 percentage change or moving away from the steady state is corrected each year. It implies that the GDP is moving 3.2 percentage each year toward the steady state, the interest rate is Lint also has negative -0.090 implying that about 9.0 percent of the shift are corrected each year and that the interest rate is moving toward it steady state by 9.2 percent each year, LPOP is -0.062 imply that 6.2 percent of disequilibrium is corrected every year and it then imply that Population is moving 6.2 percent closer to its steady state each years and also for the LDEP is negative too with the value -0.049, implying that 4.9 percent of shift away from equilibrium is corrected each year, it then means that depreciate rate of the economy is moving toward its steady state each year by 4.9 percent in the economy.

### Conclusion

The premise of this paper has been prediction of steady state of the Nigeria's economy. The data used covers the period of 1970–2012, using the

Vector Autoregressive co-integration test procedure. The results show that the variables were not stationary at level and they became stationary at first differencing and integrated of I(1). A long run relationship was also found to exist among Gross Domestic product (GDP), Interest rate, population growth and depreciation rate. The error correction test indicating that the model has a self-adjusting mechanism for correcting any deviation of the variables from equilibrium. The implication of this is that GDP will reach its steady state in 31 to 32 years, interest rate will reach its steady state in 11 to 12 years, population growth will reach steady state in 16 to 17 years and depreciation rate will become stationary in 20 to 21 years in Nigeria economy.

It is therefore suggested that policy makers should (1) strive to increase the level of production at the moment and moderate it in a future as we have not reached the golden state of production yet, (2) interest rate should be reduced to boost investment which will ultimately increase productivity, (3) policy aimed at moderating population growth rate should be encouraged and (4) lastly, infrastructural facilities should be put in place to augment the existing ones which will go a long way in reducing the depreciation of fixed capital in the economy.

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# INVESTIGATING FINANCE-NON-RESSOURCES ECONOMIC GROWTH NEXUS; EVIDENCE FROM OMAN(1972-2012)

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Doi: 10.19044/elj.v1no2a2 [URL:http://dx.doi.org/10.19044/elj.v1no2a2](http://dx.doi.org/10.19044/elj.v1no2a2)

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## **Abstract**

This paper aims to investigate the type of relationship between financial development indicators and non-resources based economic growth in the case of sultanate Oman by using annual data 1971-2012 retrieved from international financial statistics (IFS) of the International Monetary Fund (IMF) and the world Bank development indicators (WB), This study employs the Johansen and Juselius Cointegration test and Vector Error Correction Model (VECM) to reveal the long-run and short-run causality between the financial development and non-resources economic growth. The results show that there is a long-run causality from the non-resources Gross Domestic Product (GDP) to all the financial development selected indicators, the short-run deviations are corrected to the long-run equilibrium within one quarter. In the other side, it seems that in the case of Omani economy, the impact of financial development on the non-resources GDP is limited to run only in the short term. This study provides the policy makers in sultanate Oman with the appropriate evidences to redesign their policies in fostering the non-resources sector.

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**Keywords:** Finance-Growth nexus, Granger causality, Cointegration, VECM, Oman

## **Introduction**

There are several hypothesis tried to provide a realistic analysis in explaining the relationship between the financial intermediation development and economic growth in the long run. In this section we will try to discuss

the existing literatures. We can summarize the different opinion in four main categories; the first group of economist believes that the financial and banking deepening is considered to lead the development in the real sector realized in the economic growth in the long-run, this hypothesis is called *Leading-supply hypothesis*. The second group argued that the developments in the real sector is the main motivator to push the financial and banking institutions to improve their banking and financial services and provide the appropriate package of financial and banking product to fulfill the real sector requirements, this was known as *Following-demand hypothesis*. In the other side, there is a range of economist who suggested that the relationship between the financial sector and economic growth is bi-directional, which means the existence of double side causality. The extremist opinion was represented in the fourth category, academicians who believe that the financial development has no impact on the economic growth; in contrast it could harm the development in the real sector in some circumstances. (HerveHannoun, 2008).

According to the IMF report about the Omani Banking Sector resilience, the Omani financial system is dominated by banking intermediation. Banks' assets represent around 93% of the total assets of Omani financial system. The local banks dominate the banking sector. The foreign banks represent less than 15% of total banking system assets. A significant share of the banking system is state-owned.

Regarding depth and concentration benchmarks, the banking system in Oman is representing high level of concentration and lack of depth in comparison with the other financial system in GCC countries three banks in the Omani banking system represent around 65% in total assets and deposits. (Pologna and Prasad, 2009)

The liquidity in the Omani banking system is quite adequate, for example, assets that are readily marketable are estimated to be 67% of short-term funding and demand liabilities. The structural liquidity support provided by the government and public enterprises deposits might results in an inefficient allocation of liquidity within the system at an aggregate level. Bank may not have adequate incentives to monitor and fund their liquidity needs effectively.

The main vulnerability in the banking system is credit risk, the total credit-GDP ratio was 40.2%, not substantially different from those observed in previous years, and substantially lower than several other GCC countries. The level of household indebtedness has grown more than level of disposal income; the ratio of household debt to disposable income has grown from 78% in 2004 to 137% in 2008. The level of personal loans granted by banking system has increased from 1.3 billion rials in 2003 to 3.9 billion

rials in 2009. Most of such exposure is collateralized by the pre-assignment of salaries.(Pologna and Prasad, 2009)

The reminder of this paper is organized as follow; Section II makes a review of the existing literatures that explains the causal relation between economic growth and financial development indicators. Section III discusses data and methodology used to investigate the causal relation in the case of Oman. Section IV covers the main results and finding. Section V concludes with policy implications.

## **Literature Review**

In this section we will try to discuss the existing literatures. We can summaries the different opinion in four main categories; the first group of economist believes that the financial and banking deepening is considered to lead the development in the real sector realized in the economic growth in the long-run, this hypothesis is called *Leading-supply hypothesis*. The second group argued that the developments in the real sector is the main motivator to push the financial and banking institutions to improve their banking and financial services and provide the appropriate package of financial and banking product to fulfill the real sector requirements, this was known as *Following-demand hypothesis*. In the other side, there is a range of economist who suggested that the relationship between the financial sector and economic growth is bi-directional, which means the existence of double side causality. The extremist opinion was represented in the fourth category, academicians who believe that the financial development has no impact on the economic growth; in contrast it could harm the development in the real sector in some circumstances. (HerveHannoun, 2008)

## **Supply-Leading Hypothesis**

Is called also the external financial development (Franklin, Santomero, 2001,2008), it explained the phenomena where the existence of financial institutions and supply of financial assets and financial products related to it were setup before requested by the real sector, which means that financial development leads the economic growth, this hypothesis is widely accepted by economist, the main idea is that the well developed financial sector will provides a crucial functions through reducing information and transaction costs (Allen .F .Gale D, 1997), there are a lot of literatures that explained how could the well developed financial intermediation to reduce these costs and increasing saving, investment decisions and the technological innovation and as consequence the economic growth. (Levine, 1997) suggested that in order to well understand the finance-growth nexus, a functional approach should be considered, this approach focuses on the linkage between the key functions provided by the financial system and the

economic growth. The other approaches in explaining the finance-growth nexus focused more on the monetary aspects of the financial and banking system, in their contributions, (John Gurley, 1955) (James Tobin, 1965), (Renald McKinnon, 1973) they focused in their mathematical as well as the theoretical explanation on money, this narrow focusing on money could limit the understanding the finance-growth nexus.

### **Innovative Power of Credit**

There is no doubt that the first contribution in this area belong to *Schumpeter*, he considered that financial services is in origin of the economic growth (Hendrik Hakenes, 2004), according to *Schumpeter*, the production process needs credits, so the main idea is that you cannot be an entrepreneur without being debtor for a while. From the *Schumpeter's* point of view, the entrepreneur couldn't realize his project without securing the required funding to materialize his technology in the new project (Schumpeter, Joseph, 1934). He considered that the main role of banks is to create money for the innovative entrepreneurs; because the innovation came by individuals they don't have means of productions, he mentioned that if the existing companies will materialize the new innovation, there will be no role for banks, but when the innovation came basically from individuals they don't have means of production, the money bank will be the tool through which the banks could control the means of production by take it away from the existing companies and provide it to the new entrepreneurs to achieve their innovative projects(Giancarlo Bertocco,2008) . With the absence of the money created by banks there will be no space for the new entrepreneurs to achieve their project because the new innovation will be financed by the effective saving but by using the expected saving<sup>1</sup>. (Laurence, 1999) Because the existing companies they would continue using resources in the traditional production process, and there is not reason for them to allocate the resources for the new entrepreneurs who would to change the existing production equilibrium. Many economists in Europe were convinced by this point of view which leads to arise many theories that give the leading role to the banking and financial system.

(Tobin, 1965) for example support the non-neutrality of money from the economic activity, he argued that the increase in money supply will decrease the cost of funding which will affect positively the accelerator effect. (Fisher, 1997) see that the relationship between financial and economic development exists only in the long term, he argued that the spread of banking practices has a positive impact on money and current deposits velocity that has a positive impact on economic activity. (Ibrahim Omar,

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<sup>1</sup>For more in this role see (David R, 2008)

2007). However, the more modern approaches that explained the impact of monetary variables on real sector is running through bank credit channel or so called banks' balance sheets (Bernanke, 1995,2008)

### **Financial intermediation Functions for the economic Growth**

In his attempting to organize the literature related to Finance-Growth nexus, (Levine, 2004) distinguished five main functions of financial intermediation which each one has an impact on economic growth in the long-run:

- Facilitating trade, Hedge and risk diversification.
- Allocation of resources
- Monitoring managers and establishing corporate governance.
- Collect saving
- Facilitating exchanging goods and services

He demonstrated the existence of two main channels where each function of the previous could affect the economic growth; capital accumulation and technological innovation. Regarding the first channel, banks and financial institutions could maximize capital accumulation by increasing saving and allocating saving to the productive projects. Regarding the second channel, technological innovation that was a focus subject by the second generation of economic growth models, the financial and banking intermediation could contribute by providing funds to these projects. The incentive growth models focus on high-tech, they didn't consider the innovation as public good could be provided free of charge, scientific knowledge is not subject of diminishing returns law because the returns from high-tech will not decrease by increasing its accumulation.

- a) *Liquidity and economic Growth:*
- b) *Risk management and Economic Growth*
- c) *Information production and Economic Growth*
- d) *Delegate Monitoring and Economic Growth*
- e) *Collect saving and Economic Growth*
- f) *Transaction cost and Economic Growth*

### **Demand-Following Hypothesis**

Is called also the internal financial development, is referring to the phenomena where the existence of financial institutions and supply of financial and banking services as response of demand by investors and savers, then the financial development is part of the economic development in other word the developments in financial and banking institutions id following the economic development. The pro economist for this theory believes that financial development is a positive function in the real wealth. (Khalid Al-Qadir, 2004). (Robinson, 1952) has stated this hypothesis is one

sentence: ‘ *when the projects lead, finance follow*’. He considered that finance and banks appear only as a response of economic agents internal demand.

### **Growth affect risk management and information production functions**

An increase in economic growth rates, will push economic agents to ask for more intermediaries financial services, especially those services related to information production function in order to bridge the asymmetric information. Knowing that during economic upturns, the *Adverse Selection* risk rises, the entrepreneurs will be more risky during economic upturns, during these periods, banks and financial institutions increase their efforts to collect information in order to be able to distinguish among the good and bad debtors. In the other side, during the economic slowdown, *Moral Hazard* risk increases and adverse selection decreases. That will change the structure of information production for the banking and financial intermediaries, they will double their efforts in the delegated monitoring<sup>2</sup> in order to follow the agreed funded projects<sup>3</sup>. The main idea here is that the function of producing and collecting information of the banking and financial intermediaries is following the status of the economic activity in the real sector. The other argument is that the initial wealth of the debtors and the guarantees that they could provide it will contribute in decreasing asymmetric information effects in the banking credit market, which will save a lot of banking and financial costs related to information production. (Marc Hay, 2004)

### **What growth is providing for banking and financial intermediation**

There is no doubt that the banking and financial system is affected by the changes occurring the real sector, changes in communication, computers, non-financial sector policies and the economic growth affect the financial and banking services as well as the financial structure. For example the changes in high-tech work to decrease the transaction cost and facilitate financial arrangements. (Merton, 1992). In the other side, the economic growth affects the investors and savers willingness to pay the participation cost in the financial and banking system. (Greenwood, Jovanovic, 1990)

In general, the GDP per capita could affect the financial and banking intermediation through different channels:

- In the High- Income countries, it appears to have big companies; the net assets for the big companies will decrease monitoring costs, which leads to decrease intermediation costs (External Finance

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<sup>2</sup> For more about the role of Banks in delegated monitoring see (DiamondDybvig, 1996) and (Handrik Hakenes, 2004).

<sup>3</sup>For more about asymmetric information and the role of banks to bridge the gap see (Franklin A, A Santomero, 2001) and (Bert Scholltens, Dick Wensveen, 2000,2003)

Premium) which will result in supporting financial and banking intermediation.

- It is observed that the increase of GDP per capita is accompanied by high amount of public goods, which facilitate and help the financial and banking intermediation to perform efficiently such as the accounting standards, legal framework.
- Huge number of companies with high level of net assets will allow stock markets to get more space in financing the real sector in the aim to provide liquidity to the small and mid savers, which will support the development of these markets.

### **Bi-Directional Causality hypothesis**

A third hypothesis in explaining the causality between the financial, banking development and economic growth focused on the Bi-directional causality, and the type of causality depends on the stage of economic development (Ali Ahmad, 2004), during the low income periods, financial and banking development will lead the economic growth and support it until it reaches its regular levels, and during the late stages of economic development, this latter will lead the financial and banking development. (Robinson, 1979) has mentioned this bidirectional causality between financial and economic development. Regarding the first direction from Finance to economic growth; he argued that the company needs to a funding based on the bank credit, later when the project earn profits, it will be provided for the company to issue shares or bonds to pay its financial commitments. The second concept of causality from economic growth to finance as follow; when the investment increases, it will lead to more bank credit required from the banking system, which will result in an increase in bank deposits that could help the banks to create more money required for the new projects.

This bidirectional causality of Finance-Growth nexus will lead us to conclude that Schumpeter was right is his theory. (Robert G, R. Levine, 1993)

### **Direction of causality during development' stages**

(Greenwood, Jovanovic, 1990) confirmed that during the early stages of development, the economic growth is weak and the trading process is unorganized, but when the national income increases, the financial structures start taking in a good positions, economic growth speed-up, but the inequality among individuals increases in the same time. In the other side, during the late stage of economic development, there will be well-organized financial arrangements with a stable mechanism of wealth distribution with high level of economic growth in comparison with the early stages of

developments. Verse versa, whenever the financial development could support growth, this latter will be able to reinforce the financial system whole performance.

### **Threshold effect in bidirectional causality**

Another approach to understand the Finance-Growth nexus is to take in consideration the *Threshold effect*, starting from a certain level of financial and banking development, the economic growth will be more slowly and the possibilities to catch-up will be very difficult and the poverty trap start to appear (Berthemelemy, 1995). The weak economic growth leads to more weaknesses in the financial and banking sector which its return to weaken the economic growth. This could be described by pernicious feedback loop between the real sector and financial sector. This happens usually during the financial crisis, when the public policies fail to face the uncertainties in the business environment. Financial assets drop down, household wealth decreases, which leads to drop in the consumption. Businessmen postpone their projects; a wide credit crunch will result in creating pressures on household consumption, investment and economic growth.

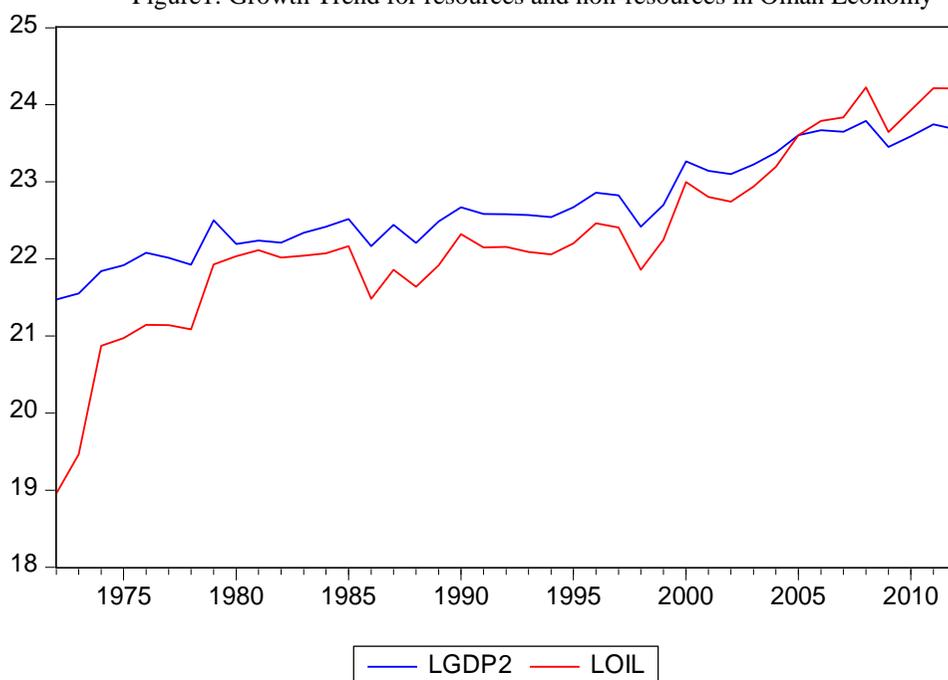
## **Stylized Facts about the Omani Financial System**

### **Economic Background**

Since 1967, Oil has been considered as the main driving force of the Omani economy, The oil industry supports the country's high standards of living and is primary simulating its modern and expensive infrastructure, including electrical utilities, telephone services, roads, public education and medical services. Plus to its expensive oil reserves, Omani has considerable natural gas reserves, which are expected to play a leading role in Omani economy in the next future.

In order to reduce its dependence on oil/gas income, the government implements five-year development plans to encourage private sector to invest in various industries. About 59% of Omani's GDP is now generated outside the oil and gas sector, as compared to 33% in 1975, when the first plan was employed. Oman's Eight Five-year Development Plan (2011-2015) continues the policy of encouraging private sector investment into non-oil and non-gas industrial activities. With the objective of reducing the oil sector's contribution to GDP to 9% by 2020 and creating more jobs to employ the rising numbers of Omanis entering the workforce. The following chart shows the part of non-resources based GDP (GDP2) and the share or oil and gas rents in the total GDP of Omani economy (OIL) (Doing Business,2014).

Figure1: Growth Trend for resources and non-resources in Oman Economy



Source: Authors' estimates by using Eviews 8

From the above chart, it is clear that from 1975-2012, there is convergence between the natural resources rents (Oil and Gas) and the non-resources based GDP. The public investment program conducted by the government in the non-resources based sectors using the natural resources rents could explain this. According to the IMF concluding statement about Omani economy 2013, during 2014-2018, a large public investment program will support an average real growth of 5.4% in the non-oil sector. However, as crude oil production levels off and starts declining, overall GDP growth is projected to average 3.6%.

### Banking sector in Oman's economy

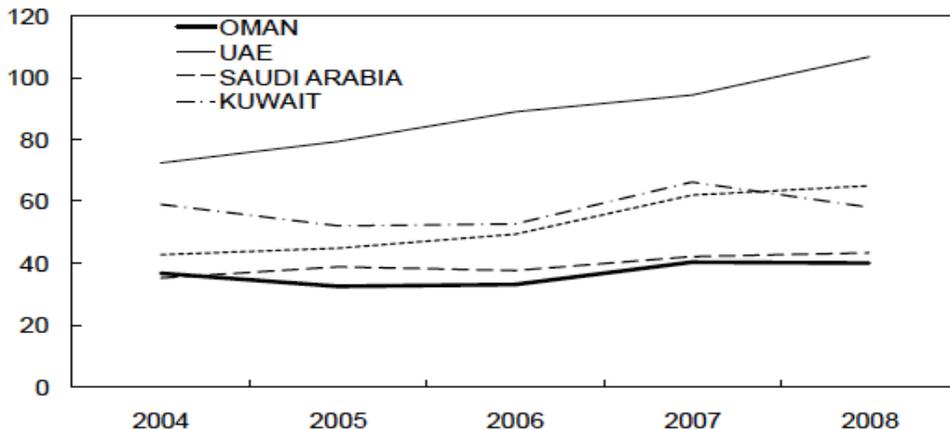
According to the IMF report issued in 2009 about the Omani Banking Sector resilience, the Omani financial system is dominated by banking intermediation. Banks' assets represent around 93% of the total assets of Omani financial system. The banking sector is dominated by the local banks. The foreign banks represent less than 15% of total banking system assets. A significant share of the banking system is state-owned.

The liquidity in the Omani banking system is quite adequate, for example, assets that are readily marketable are estimated to be 67% of short-term funding and demand liabilities. The structural liquidity support provided by the government and public enterprises deposits might results in

an inefficient allocation of liquidity within the system at an aggregate level. Bank may not have adequate incentives to monitor and fund their liquidity needs effectively.

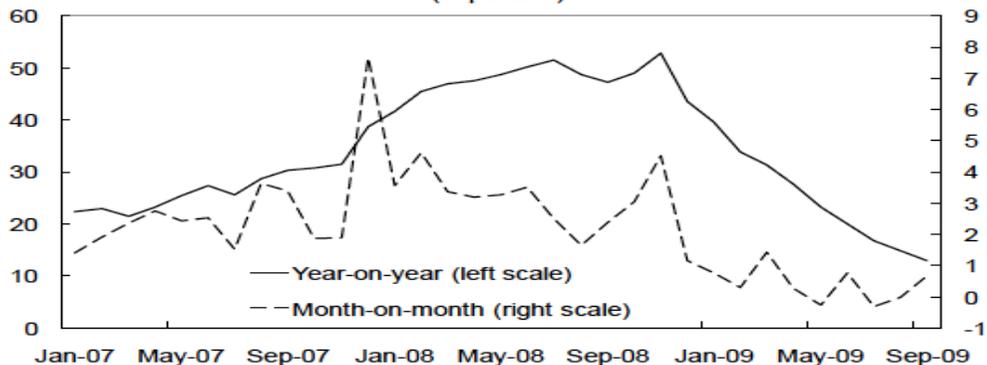
The main vulnerability in the banking system is credit risk, the total credit-GDP ratio was 40.2%, not substantially different from those observed in previous years, and substantially lower than several other GCC countries. The level of household indebtedness has grown more than level of disposal income; the ratio of household debt to disposable income has grown from 78% in 2004 to 137% in 2008. The level of personal loans granted by banking system has increased from 1.3 billion rials in 2003 to 3.9 billion rials in 2009. Most of such exposure is collateralized by the pre-assignment of salaries.

**Figure 3. Bank Credit in the GCC Countries, 2004–2008**  
 (In percent of GDP)



Sources: IMF World Economic Outlook; and authors' estimates.

**Figure 4. Oman: Private Sector Credit Growth, 2007–2009**  
 (In percent)



Source: Central Bank of Oman.

## Data and Methodology

**Data:** In line with the main purpose of this paper which is to investigate the long term and short term causality between the financial development and non-resources economic growth for Oman, the selection of proxies to both financial development and non-resources economic growth are very crucial. By reviewing the previous literatures, the majority of them use GDP to measure the economic growth either via GDP per capita or using the real GDP growth.

However for the case of the resources based economies, using the total GDP as proxy of the economic growth could alter the causality between financial development and economic growth. (Bekaert and Harvey, 1998) suggested that studies of finance-growth relationship in resource-based economies should focus on non-resource growth rather than total GDP, because windfall resource revenues affect the latter.

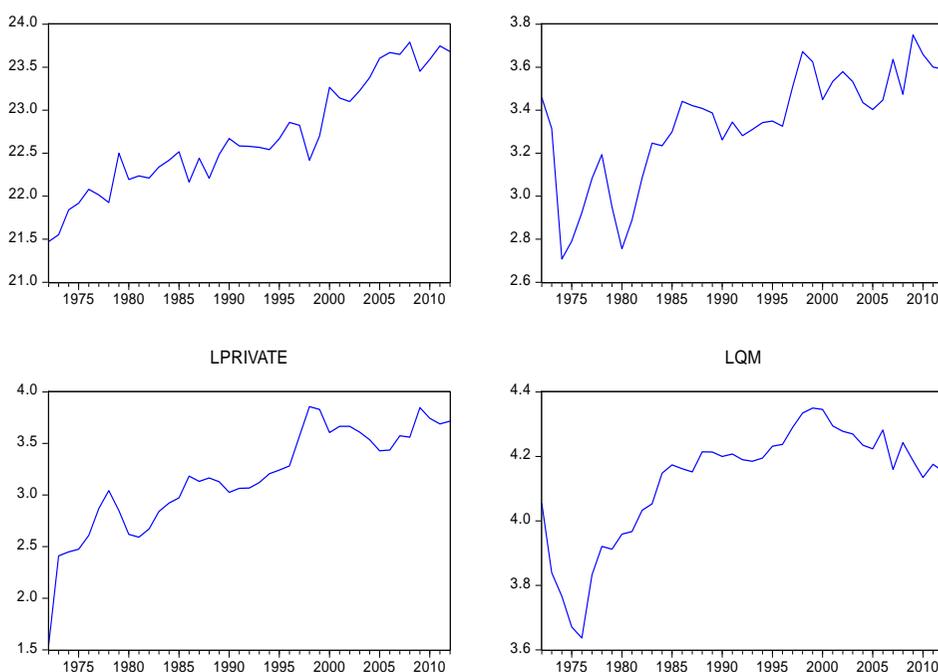
In our study we will use the Non-resources GDP as defined by the IMF; Non resource GDP is approximated by subtracting the real values of natural resources rents from total GDP in 2005 adjusted USD (see Hamilton and Ruta (2008). Natural resources give rise to rents because they are not produced; in contrast, for produced goods and services competitive forces will expand supply until economic profits are driven to zero. An economic rent represents an excess return to a given factor of production. (Rabah Arezki et al, 2011). Meanwhile, the selection of proxies for financial development was a subject for big divergence among the empirical studies. In this study we will use the following proxies for financial development variable<sup>4</sup>:

1. The monetary aggregate M2 as a ratio to nominal GDP; is a traditional proxy used to measure the weight of financial intermediaries.
2. PRIVATE: to mention the credit provided to the private sector as part of GDP.
3. QM: for the Quasi Money, it represents the ratio of financial saving to GDP, where financial saving is measured by the difference between M2 and M1, the exclusion of M1 focuses on the quasi liquid assets considered as the main source of investment. M1 is generally more oriented to finance current transactions. An increase of this ratio may reflect an increase in banks' deposit, which is required for accumulation and then the economic growth.

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<sup>4</sup>For more about financial intermediation measurements, see (Gunther Capelle-Blancard and al, 2008)

Figures 5: Trend of LGDP2, LM2, LPRIVATE and LQM



Source: Authors' Estimates using Eviews 8

- Methodology:** in order to determine the relationship between financial development and non-resources GDP, the econometric technique that we will use consists of three phases: first we have to check whether the time series are stationary or not, in a model for a correct evaluation, time series should be separated from all effects, and the series should be stationary. Thus logarithms of time series were taken. Augmented Dickey Fuller (1981) test was used. After that, Johansen Cointegration test was used to investigate the long-run relationship between financial development and non-resources GDP. If the Johansen Cointegration test was positive, then we have to apply the Vector Error Correction Model (VECM). But if the Johansen test was negative means there is no Cointegration between the variables, we have to apply unrestricted Vector Autoregressive (VAR) Model. We use Eviews 8 software to test and analyze the results.

- Unit Root Test:** we used the Augmented Dickey Fuller test. In ADF test, we test the null hypothesis that the series are not stationary (there is unit root), against the alternative one that the series are stationary by calculating the ADF *t-statistics* value with the critical *t-statistics* value obtained from McKinnon's table. If the series appears to be non-stationary, then we have to

run the test again using the first or the second difference until stationary is achieved.

**2. Johansen test for Cointegration:**

The Johansen approach developed by Johansen and Juselius (1990) and Johansen (1991) used to investigate the possible long-run relation existence between the study variables. Johansen approach uses two test statistics, as suggested by Johansen (1988) and Osterwald-Lenum (1992) to determine the number of co-integrating vectors. These are the trace test and the maximum Eigenvalue test, represented by equation (3) and (4).

$$\lambda_{trace}(r) = -T + \sum_{i=r+1}^n \ln(1 - \lambda_i) \quad (3)$$

$$\lambda_{max}(r, r+1) = -T \ln(1 - \lambda_{r+1}) \quad (4)$$

Where  $\lambda$  shows the estimated values of the characteristic roots, in assuming that the series are I(1). This number of observations and  $r$ , is the rank of the vector matrix.

We test the null hypothesis of Trace test that there is at most ( $r$ ) co-integrated relation against the alternative one that there are more than ( $r$ ) co-integrated relations. In other words, a rejection of the null hypothesis means that there are more than ( $r$ ) co-integrated relations. The Trace test rejects the null hypothesis if the trace statistics exceeds the critical value. On the other hand, we test the null that there is ( $r$ ) co-integrated relation versus ( $r+1$ ) co-integrated relations. The test rejects the null hypothesis if the Eigenvalue test statistics exceeds the respective critical value. If the null hypothesis for both statistics is rejected, this indicates that there is one co-integrated relation among the variables under testing.

**Results and Discussion**

**• Unit root test**

Results from ADF test implemented to the selected time series show that all the series belong to non-resources economic growth and financial development proxies are not stationary at level. So we run the ADF test again but this time by using the first difference. ADF results are shown in Table 1; from this table, we conclude that all series are stationary at the first difference at 1%, 5%, 10% level of significant. For PRIVATE for example, the P (value) before the first difference is 86.43%, which more than 5%, so we cannot reject the null hypothesis of ADF test. But after the first difference the P(value) become 0% which is less than 5%, so we can reject the null

hypothesis of ADF test. The rejection of the null hypothesis indicates that all the variables are stationary after the first difference.

Table 1: Unit Root Test

Unit root test	ADF test		Phillips-Person Test			
	Level 1	1 <sup>st</sup> difference	Level 1	1 <sup>st</sup> difference		
Variables	<i>t</i> -statistics <i>P</i> (value)	<i>t</i> -statistics <i>P</i> (value)	<i>t</i> -statistics <i>P</i> (value)	<i>t</i> -statistics <i>P</i> (value)		
Lag	LogL	LR	FPE	AIC	SC	HQ
0	39.59559	NA	1.81e-06	-1.873452	-1.701075	-1.812122
1	173.2887	232.2037	3.71e-09	-8.067824	-7.205937*	-7.761171
2	193.4388	30.75551	3.07e-09	-8.286254	-6.734856	-7.734278
3	219.2787	33.99981*	1.98e-09*	-8.804141*	-6.563233	-8.006843*
<b>LGDP</b>	-1.387713 0.5787	-6.697002** 0.0000				
<b>LM2</b>	-0.004102 0.6754	-5.704709** 0.0002				
<b>LPRIVATE</b>	-1.322186 0.9506	-7.669324** 0.0000				
<b>LQM</b>	-1.333892 0.8643	-6.373995** 0.0000				
*, **,*** significant at 1%,5%,10% level respectively						

### Johansen Co-integration Test

The number of optimum lags used for the Cointegration model is selected by VAR lag Order selection criteria which is based on AIC, FPE, LR, HQ. For this study we selected lag 3 to be used in Johansen and in VECM later.

Table 2 shows the results of Johansen test for the long relationship between financial development indicators and non-resources economic growth.

Table 2: Johansen test results

Cointegration Hypothesis		Trace statistics	Critical values (5%)	Max-Eigenvalue	Critical values (5%)
<b>Null Hypothesis</b>	None	69.32540	47.85613	46.80946	27.58434
<b>Alternative hypothesis</b>	At most 1	22.51594	29.79707	13.48577	21.13162

The first row of table 2 shows that the trace statistics (69.32540) is more than critical value at 95% confidence level (47.85613). So the null hypothesis of no cointegrating relationship is rejected. The results confirmed that there is a Cointegration relationship among the variables

Regarding the eigenvalue test, it rejects the null hypothesis if the test statistics exceed the respective critical value. From table 2, the results from the first row show that the eigenvalue of test statistics (46.80946) exceeds the critical value at 95% confidence level (27.58434). This confirmed that

the null hypothesis is rejected. the failure of rejection of the null hypothesis indicates that there is one Cointegration relationship between financial development indicators and non-resources economic growth in Oman.

### Causality Test Results Based on VECM

Table 3: Causality Test Results Based on VECM

<b>Dependent</b>	<b><math>\Delta</math>LGDP</b>	<b><math>\Delta</math>LM2</b>	<b><math>\Delta</math>LQM</b>	<b><math>\Delta</math>LPRIVATE</b>
<b>Lagged</b>	Coefficient. P-Value ()	Coefficient. P-Value ()	Coefficient. P-Value ()	Coefficient. P-Value ()
<b>ECT</b>	0.005840 (0.9528)	-0.117898 (0.0087)*	-0.371784 (0.0010)*	-0.183860 (0.0182)*
<b>DLGDP (-3) Chi-square (P-Value)</b>	-	0.514940 (0.9156)	8.197469 (0.0421)*	4.235464 (0.2371)
<b>DLM2 (-3) Chi-square (P-Value)</b>	1.555989 (0.6694)	-	0.169324 (0.9824)	8.661314 (0.0341)*
<b>DLQM (-3) Chi-square (P-Value)</b>	7.844508 (0.0493)*	23.64626 (0.0000)*	-	12.68940 (0.0054)*
<b>DLPRIVATE (-3) Chi-square (P-Value)</b>	2.784552 (0.4260)	4.225059 (0.2382)	5.968847 (0.1131)	-
<b>R<sup>2</sup></b>	0.526366	0.724964	0.608092	0.681209
<b>F-Statistics</b>	1.966211	4.663497	2.745169	3.780588
<b>P-value</b>	0.075699	0.000655	0.016635	0.002649
<b>F-ARCH test</b>	0.419185 (0.7405)	0.681841 (0.5701)	0.568240 (0.6402)	0.355305 (0.7856)
<b>JB Normal</b>	3.890788 (0.142931)	0.099333 (0.951547)	1.535277 (0.464108)	3.126755 (0.209428)
<b>Breusch- Godfrey</b>	11.26203 (0.0104)	1.196342 (0.7539)	2.550492 (0.4662)	2.221779 (0.5277)

### Long-run Causality Results

According to the first row in table (3) results we can conclude the following interpretations:

The coefficient on the ECT (Error Correction Term) for LGDP is positive and not significant at 5% level. Which means there is not long-run causality from financial development indicators (LM2, LPRIVATE, LQM) to.

### Conclusion and Recommendation

#### Conclusion

In this paper, an investigation has been conducted to explore the relation between financial developments indicators and non-resources GDP

in sultanate Oman over the period 1972-2012, focusing on Granger causality effects within VECM environment. The results show that there is unidirectional long-run Granger causality from the Non-resources GDP to all the proxies of financial development. Regarding the short-run causality, there is bidirectional Granger causality only between the financial saving (QM) and the economic growth in non-Oil/Gas sectors. The other two financial development indicators; credit provided to private sector (PRIVATE), and M2, there is no evidence of short-run causality presence toward or from non-resources GDP in the case of Oman.

### **Recommendation**

According to the finding, the absence of causality running from PRIVATE to GDP may be interpreted by some common factors in resource based economies and especially in the case of Oman:

1. In line with Beck (2011) who analyzed finance and growth relationship in resource-based economies and finds some indication of natural resource curse in financial development in form of limited funding supplies for enterprises, because banks prefer lending to household. Although firms' demand to external financing is comparable to non-resource based economies, in general, they use internal financing and some bank loans.
2. The role of Government in Oman is crucial especially in the non-resources economic sectors, through the public investment program. This public leadership in non-Oil/Gas sectors could explain the absence of causality between the non-resources GDP and the Credit provided to the private sector.
3. In the case of Omani economy, the role of private sector is to be an entrepreneur of the government in implementing the big infrastructure projects without need to the bank credit. We are suggesting separate government liquidity to be hold by the central bank with a separate account, also motivate more private companies to contribute in the public project by using banks funds.
4. The credit provided to the private sector was negative with the non-Oil/Gas GDP, because a considerable amount of this credit is oriented to personal loans for households, which could increase the import instead motivating the local tradable products.
5. Concentration and lack of competitiveness in the Omani Banking system may result in absence of incentives to provide more credit to corporation, we are recommending to decrease the personal and households' loans in order to push banks to search for more funding opportunities within the non-oil based companies.

6. We recommend to the policy makers to continue building a good environment for the business and reinforce the Private-Public partnership in achieving the mega project in non-Oil/Gas sectors by facilitating.

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# **ARE THE INVESTORS OF ISLAMABAD STOCK EXCHANGE (ISE) SUFFERING FROM BEHAVIORAL BIASES(OVERCONFIDENCE, ANCHORING, AND & CONFIRMATION BIAS)?**

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Doi: 10.19044/elv.v1no2a3 [URL:http://dx.doi.org/10.19044/elv.v1no2a3](http://dx.doi.org/10.19044/elv.v1no2a3)

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## **Abstract**

Traditional finance theories assume that investors are rational, whereas, the behavioral finance research contends that investors suffer from psychological biases, which affect their decision making process. In this paper we will check the rationality of investors of Islamabad Stock Exchange (ISE). For this purpose, we have identified three core psychological factors (Overconfidence, Anchoring, and Confirmation bias) of an individual, which are central to human decision making process. The presence of these behavioral biases among the investors of ISE got confirmed with help of frequency and percentage.

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**Keywords:** Rationality, Behavioral Biases

## **Introduction**

Traditional finance theories assume that investors are rational. This rational approach expects that investor generates different alternatives and selects an alternative which best suits the decision making situation. In other words, the investor tries to reach optimum decision and maximum efficiency by using all available information. Whereas, the behavioral finance research contends that investors suffer from psychological biases, which affect their decision making process. Behavioral Finance, evolve as recognized field within the broad boundaries of finance advocated by renowned people of the area. For instance the bubbles and crashes of financial world in year 2008 can be explained to a certain extent with the help of traditional financial models. Ball (2009), in his paper on the global financial crisis argued that the crumple of Lehman Brothers and other large financial institutions, far from

resulting from excessive faith in efficient markets, reflects a failure to notice the lessons of efficient markets. To grasp their underpinning completely, one need to understand the psychology of the market players; because it helps to explain the irrational behavior of the investors.

Kahneman and Riepe (1998) in their paper titled “Aspects of Investor Psychology” argue that investors do not accurately judge their cognitive and emotional weaknesses relating to the investment decisions. This results in faulty assessment of their own interests and true wishes, the relevant facts that they tend to ignore, and the limits of their ability to accept advice and to live with the decisions they make. In such scenario, the investor suffers from biases of judgment or decision making, also called cognitive illusion. The cluster of related biases and cognitive illusions in intuitive judgment that are most likely to affect investment decisions, includes (1) Overconfidence (2) Anchoring (3) Confirmation bias (4) Hindsight bias (5) Gambler’s fallacy (6) Herd Behavior. In this investigation, we have included first three of above mentioned judgmental biases of an investor.

To confirm the presence of these psychological factors among investors of ISE, we have conducted this investigation, in which we presented related psychological dilemmas through a questionnaire to investor and recorded how he/she responds to that. From the responses of the investors, we came to know how many market participants are rational.

The main objective of the study isto trace the presence of behavioral biases in the behavior of ISE investors. This study is important because it will be instrumental in explaining the famous volatility of Pakistani stock markets.

## **Literature Review**

### **1Overconfidence**

The overconfidence is defined as occurring when the confidence judgments are greater than the relative frequencies of the correct answers (Gigerenzer, Hoffrage, & Kleinbölting, 1991, p. 506). Human being is overconfident creature and overconfidence results in due higher knowledge perception in contrast to reality. This means people are poorly calibrated. They are inclined to strongly believe that their judgments are right, which shows that they are overconfident. Block and Harper (1991) argues that, an overconfident person believe that he know more than in fact he knows and overconfidence is also called “cognitive conceit”.

There is lot of research work on how overconfidence effects the decision making or human judgments. Human being, normally unaware of inferential errors they make and don’t adjust their subjective confidence according and become victim of overconfidence. Fischhoff (1982) surveyed all literature till that date relating to effects of overconfidence on decision

making and concluded that overconfidence is harsh reality of the decision making world and cannot be eliminated through carrots and sticks.

Overconfidence is generally high where feedback system is few and far between and indistinct (Fischhoff, Slovic, & Lichtenstein, 1977). On the basis of this comment by earlier referred authors; one can expect that there will be low tendency of being overconfident among people who forecasts for unambiguous events. Professional forecasters, like the ones, working in stock markets, rely on their better knowledge and experience, and remains less overconfident as compared to common man.

Shefrin (2000) argues that there is fine line between confidence and overconfidence; he supported his argument with demonstration, in which he asked a research group about their driving ability. Between 65 to 80 percent people rated them above average with regard to their driving abilities.

The people in financial market are not different from others. A study was conducted by James Montier (2006), in which 300 funds managers were surveyed, surprisingly everyone consider his/her job performance average or better. The investor generally exaggerates their knowledge, information, experience and skills, when it comes to selecting, purchasing and disposing-off securities. There will be two commonly observed repercussions if the investor is overconfident. Firstly they get involved in bad bets without realizing that they are at informational disadvantage. Secondly they trade too actively.

Investor can be subject to behavioral error of overconfidence and there is relationship between demographics and overconfidence. For example Lundeberg, Fox and Puncochar (1994) and Barber and Odean (2001), is of the opinion that males are more inclined towards overconfidence. The other demographic characteristics like age, investment experience, education, income and wealth influence the subsistence and level of overconfidence (Bhandari&Deaves, 2005)

In decision making the amount of information and time allowed for analysis results in increase in confidence (Oskamp, 1965; Ryback, 1967). But these two factors does not ensure accuracy in decision making. Therefore Koriat, Lichtenstein, and Fischhoff (1980) comment that, the quantity and quality of information affects the level of people's confidence on the decisions made.

### **Anchoring**

Phung, (2008) defines the heuristic anchoring as the human inclination to connect or "anchor" one's thoughts to a reference point – regardless of the fact it may have no logical connection to the decision at hand. An example will make the concept further clear; if one is asked to judge the performance of and other, the anchor of his final judgment may be

his own performance. On the basis of his own performance, he might underestimate or overestimate one's performance.

Kahneman and Tversky (1974), in their paper "Judgment under uncertainty" explained the anchoring effect with the help of an experiment. In the experiment a wheel bearing the numbers 1 to 100 was spun twice. First time, the wheel landed on no. 10 and second time on no. 60. After spinning the wheel for the first time, the subjects were asked whether the percentage of U.N. membership accounted for by African countries was higher or lower than the number on the wheel. The average of actual estimates given by the subjects for the first was 25%. When the wheel spun for the second time, the same question was asked and the average of estimates of subjects was 45%. One can clearly see that the two random numbers (10 & 60) obtained by spinning the wheel twice had an anchoring effect on the estimates of the subjects. The subjects have tried to give their estimates closer to the number shown to them by spinning of wheel, whereas there is no logical relationship between the answer of question asked and numbers on which wheel landed.

Anchoring has a role to play in financial world. A number of investors invest in the shares of those corporations who have shown sharp downward trend in recent past. They do so with a misperception in mind that they are buying at discount. In fact they are becoming victim of anchoring effect by anchoring on a latest "high price" that the share has attained (Phung, 2008)

One can see Anchoring effect together with representativeness heuristic and "winner loser effect" concept of Bondt and Thaler. Bondt and Thaler (1985) is of the opinion, if an investor is high on representativeness heuristic scale and a past loser as well; he/she will be overly pessimistic and will become undervalued and vice versa.

Another aspect of anchoring was highlighted by Shefrin (2000); in his view some investors are conservative enough, so that they don't change their forecasts, in accordance with new information. They remained stick to their initial predictions and rely too heavily on earlier information.

The tendency of anchoring will be high, when one is going for/trying new things or novel experience. One can reduce with anchoring by "critical thinking" i-e by not relying too heavily on one or two pieces of information but evaluating the situation from different perspective.

Anchoring is noticeable in behaviors of buyers and sellers at the time of transaction. The price offered or demanded for the first time party influence bargaining and serves as an anchor for the determination of final price. And also the party who make the first offer, normally in a better position to gain a better results from her point of view (Galinsky&Mussweiler, 2001).

After conducting an experiment by involving people from financial world, Zielonka (2004) comments that the bubbles and crashes in past stock prices serves as mental anchors. In marketing the consumer buying decision pattern is affected by the price asked in advertisement and functions as an anchor (Biswas& Burton, 1993). Simonson and Drolet (2004) are of the view that willingness to pay and accept is influenced by anchoring.

### **Confirmation Bias**

Human tendency, to support that information which conforms their beliefs/ideology or premise is labeled as confirmation bias. It is hard to meet a person, who does not have a preconceived opinion or believe and it's difficult to change this belief or opinion. People identify, select and spread only that information which conforms their initial belief/opinion and set aside the rest information, that might speak the truth. This tendency in human behavior is known as confirmation bias. In financial world, especially in investing decision, investors tend to explore and rely on information that supports their initial investment idea and ignores all contradicting information. Investor with confirmation bias see green signal for investment from its selective information and ends up with loss. Nickerson (1998) defines the term confirmation bias in way; it is defined and interpreted in the literature of psychology. In confirmation bias the subjects look for substantiation in a way that supports/conforms their original view/theory/belief or hypothesis.

Commonly people failed to put behind their indigenous thoughts on a particular subject while they are studying/investigating that subject. Such confirmation bias leads them to come up with researches, which comply with their original school of thought and don't reflect true picture. (Jones & Sugden, 2008).

The players of financial markets are generally considered to be rational optimizer. The underlying reason of this notion is the experience of these players in making transactions in financial markets. If it is so, the question arises that, such way of confirming one's decision is rationally correct? (Jones & Sugden, 2008).

In 1998 U.S presidential election, Forsythe et al (1992) have studied the students' political bets and forecasts. They found strong evidences of students suffering with confirmation bias. The subjects tend to believe that their presidential candidate (whom they are favoring initially) had won the presidential debate. They also found that people who were not victim of this bias have played a significant role in pushing the political stock market towards efficiency.

People look for confirmation in two ways. Firstly they give preference to the information which conforms their opinion on the issue. For

instance people tend to assign more weights to their argument supportive information and fewer weights to contradicting information (Baron, 1991). Secondly the confirmation bias comes to surface when people look for “supportive” facts to prove their version. This can be done shaping and asking question that validate the argument instead of violating it (Skov&Sherman, 1986).

## Methods

In this study primary data is obtained from the individual and institutional investors of Islamabad Stock Exchange (ISE) through questionnaire. The population for this study is all investors (institutional and individual) of Islamabad stock Exchange (ISE). The sample from this population is drawn through convenience and quota sampling and sample size in 117.

The questions in the questionnaire of this study are adapted from two studies (Berneus, H., Sandberg, C. &Wahlbeck, D., 2008 and Montier, J., 2006). Face validity is established through panel of judges, content validity through content validity ratio (CVR), and construct validity through pretest and post test method. The reliability of instrument is confirmed with Cronbach’s alpha and the Kuder–Richardson Formula 20.

The gathered through questionnaires is analyzed with the help of percentages, table and graphs.

## Results and Discussion

### Overconfidence

#### Question 01

Are you a better driver than average?

a) Yes.b) No.c) No preference.

Table 01  
*Survey results of question 01*

Options	No. of respondents	Percentage
Yes	74	63%
No	29	25%
No Preference	14	12%
<b>Total</b>	<b>117</b>	<b>100%</b>

### Analysis

It said that human being is an overconfident creature and that is why poorly calibrated, this inference got proved by the response of our target group in above question. 63 % of our target group thinks that they are better driver than others, 25 % thinks otherwise and 12% has no preference. The above results strongly show the tendencies of overconfidence in investors.

## Question 02

Are you above average at your job?

a) Yes.b) No.c) No preference.

Table 02

*Survey results of question 02*

Options	No. of respondents	Percentage
Yes	67	57%
No	35	30%
No Preference	15	13%
<b>Total</b>	<b>117</b>	<b>100%</b>

## Analysis

The results of second question conform to the responses of first question. Here 57% of our respondents think that they are better in their jobs, 30 % think otherwise and 13% has no preference. Our survey results matches with the results of the study of Montier, conducted in 2006. In which he found that 74% of the 300 professional fund managers who were included in his target group think that their performance is above average.

The one reason of above shown overconfidence could be prevalence of no or little and inappropriate feedback system in this part of world. That is why the people's perception about their knowledge and skill is high in comparison to reality. The same reasons are provided by Fischhoff, Slovic, & Lichtenstein, in their study in 1977. The other reason could be the inexperience of investors of an emerging market.

The impact of investor's overconfidence can be seen in following commonly observed trends of the market. Firstly, the investors get involved in bad bets without realizing that they are at informational disadvantage. Secondly, overconfident investor trades too actively. Thirdly, these investors deviate from Bayes' rule when aggregating information. Lastly, they overreact to private signals and underreact to public signals.

These above stated behaviors of an overconfident investor results in irrational decision making, which in turn makes the Islamabad Stock Exchange inefficient.

## Anchoring

### Question 03

Imagine 100 book bags, each of which contains 1,000 poker chips. Forty-five bags contain 700 black chips and 300 red chips. The other 55 bags contain 300 black chips and 700 red chips. You cannot see inside any of the bags. One of the bags is selected at random by means of a coin toss. Consider the following two questions about the selected book bag.

(a) What probability would you assign to the event that the selected bag contains predominantly black chips? \_\_\_\_\_

(b) Now imagine that 12 chips are drawn, with replacement, from the selected bag. These twelve draws produce 8 blacks and 4 reds. Would you use the new information about the drawing of chips to revise your probability that the selected bag contains predominantly black chips? If so, what new probability would you assign? \_\_\_\_\_

Table 03

*Survey results of question 03*

Options	Average of responses
Part (a) of question	46%
Part (b) of question	55%

### Analysis

The correct answer to the first question is 45 % and the average of responses of the target group is 46%, which understandable and not unexpected. The part (b) is interpreting part of this question and hence important part as well. In this part, the respondents have not used the information given in part (b) and just use their answer of part (a) as an anchor to guess about the answer of part (b).

The correct answer of part (b) is 96%; it means that there are 96% chances that the selected bag contains predominately black chips. Survey result shows that, the average of answers of the selected respondents is 55%; which is close to the percentage which they are using as their anchor (46%, answer of part (a)). So anchoring bias is visible in this case.

### Question 04

- 1) Please write down the last four digits of your telephone number:
- 2) Is the number of physicians in Islamabad higher or lower than this number?
- 3) What is your best guess as to the number of physicians in Islamabad?

Table 04

*Survey results of question 04*

Response to part (1) of the question (your telephone number?)	Response to part (3) of the question (Average of guesses made by the respondents about the numbers of physicians in Islamabad)
Respondents having telephone numbers below than 6000	4500 physicians
Respondents having telephone numbers 6000 and above	7500 physicians

### Analysis

The logic behind this question is to check whether people use their phone numbers as an anchor to guess the number of doctors in Islamabad. The result of the survey shows; yes people used their telephone numbers as anchor. As shown above in table; people, who have telephone numbers above 6000, think that there are on average 7500 doctors in Islamabad. People with a telephone number of less than 6000 believe that the average numbers of doctors in Islamabad is 4500.

This example clearly shows that target group is using their telephone numbers as anchor to guess the number of doctors in Islamabad. Unconsciously, the respondent uses the answer of part 1 as anchor to provide estimate in third part of the question. That is why the average of their estimates falls around their telephone number.

Such tendencies can be seen in the financial world in which professional investors respond in similar fashion to earnings announcements. They do not adjust their earnings estimates enough to reflect the new information. Resultantly, favorable earnings surprises tend to be followed by more favorable earnings surprises, and unfavorable surprises by more unfavorable surprises (Shefrin, 2000).

### Question 05

A health survey was conducted in a sample of adult males in Islamabad, of all ages and occupations.

Please give your best estimates of the following values:

(a) What percentage of the men surveyed have had one or more heart attacks?

(b) What percentage of the men surveyed are both over 55 and have had one or more heart attacks? \_\_\_\_\_

Table 05  
*Survey results of question 05*

Parts of the question	Average of responses
Part (a)	11%
Part (b)	26%

### Analysis

Bondt and Thaler (1985) is of the opinion, if a person is high on representativeness heuristic scale it is more likely that he/she will suffer from anchoring bias. So anchoring and representativeness can be checked together, and this is what we are doing in this question. The average of responses of part (a) and part (b) is 11% & 26% respectively. These percentages show noticeable signs of presence of representative heuristic in respondents.

As results shows in this question, the respondents allowed the representativeness heuristic to prevail over the reasoning. A true myth, that older people are more prone to heart attacks, prevents the respondents from understanding the question in true sense. The respondents used this true myth as anchor to estimate the percentage in part (b) of the question. That is why the average response of second part of the question is high. Keeping a side the heuristic, it is impossible that part (b) would result in a higher percentage than part (a). The percentage of men having had a *heart attack and are over 55* can never be higher than the percentage of the *men who have had a heart attack*. Same could happen in financial world, a company belonging to a popular industry or group, is not necessarily a good investment avenue.

### Confirmation Bias

#### Question 06

Imagine these are four playing cards laid out in front of you. Each one has a letter on one side and a number on the other. If a card has an E, it should have a 4. Which cards do you need to turn over in order to see if I am telling the truth?

[E] [4] [K] [7]

Table 06 Survey results of question 06

Options	Percentage (%)
E	79%
4	75%
K	5%
7	13%

#### Analysis

The two most obvious choices for this question are [E] and [4]. Nevertheless, the correct cards that need to be turn over are [E] and [7]. The [E] option is pretty clear, because if one turns it over and don't find a [4] on the backside of the card, then he/she was told a lie. If one turns over the [7] and finds the [E] on the opposite side, then he/she can also infer that, he/she was told a lie. The trick of the questions quotes that an "[E] should have a [4], *not* that a [4] should have an [E]". So turning [4] will not tell you anything and will be non productive exercise.

The above shown result survey tell us that 75% respondents choose to turn over [4], which is a clear symptom of confirmatory bias – a human tendency to search for information that conforms with our prior belief/knowledge. Karl Popper argues that the only way of checking a hypothesis is to form it and spend whole time to look for evidences to disconfirm it. But it is other way round in our daily working, showing our inclination toward confirmation bias.

### Question 07

You are about to invest in a specific stock but are still uncertain about whether or not to go along with the purchase. Who are you most likely to discuss your investment plan with?

(a) A co-worker and good friend that you know from previous experience has similar investment preferences as you.

(b) A co-worker that you know from previous experience has different investment preferences than you.

Table 07

*Survey results of question 07*

Options	No. of respondents	Percentage
(a)	68	58%
(b)	49	42%

### Analysis

The higher percentage response of part (a) proves our case i.e investors exhibits irrational tendencies. In this case the investors again showed from their response that they are victim of confirmation bias. In above question, most people are referring to those colleagues and friend who think like them and not to those who have other thinking patterns.

Still a healthy percentage (42%) wants to discuss with people who have opposite thinking pattern. By doing so, they can have valuable information about new/uncovered aspects of the uncertain situation. So if someone wants to ensure, not to miss the important information, he/she should discuss with people on opposite pole. But, obviously this healthy percentage cannot rule out the majority, which shows tendency of confirmatory bias.

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# PAWN STARS: PUTTING THEORIES OF NEGOTIATION TO THE TEST

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Doi: 10.19044/el.p.v1no2a4 [URL:http://dx.doi.org/10.19044/el.p.v1no2a4](http://dx.doi.org/10.19044/el.p.v1no2a4)

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## Abstract

Theories of negotiations are tested using a unique data set. The History Channel television show *Pawn Stars* portrays negotiations between customers and agents of a pawn shop. This provides a novel data set not typically available to researchers as the tactics of bargaining can be observed, recorded, and analyzed. Many, but not all, of the primary theories of negotiations developed receive empirical support. The use of experts, experience of the negotiators, the gap between the initial offers, and the use of final offers all affect the likelihood of a deal being made as well as the division of the surplus. The party making the opening offer suffers a disadvantage, which stands in contrast to predictions of sequential bargaining and anchoring effects.

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**Keywords:** Asymmetric information, bargaining, experts, final offer, negotiation, Pawn Stars

## Introduction

Negotiating is a central activity within any organization. A systematic evaluation of the success of the methods used and the environment within which negotiations are taking place must be developed. To be able to formulate and implement successful strategies, an organization must appreciate the effectiveness of the process involved.

Previous management research focuses on the relationship between the bargaining process and outcomes. Wall (1984) investigates, for example, the impact of mediator proposals on bargaining outcomes. Walsh (1989) evaluates the bargaining process involved with merger and acquisition negotiations. His analysis focuses on how the process is correlated with management turnover. Turnover, for example, is higher following a hostile takeover and with negotiations that involve multiple counteroffers. Michael (2000) is interested in bargaining over franchise agreements by investigating

the following rate of litigation. The components of a negotiated agreement and how they relate to the success of joint venture is analyzed by Luo and Shenker (2002). Roosenboom (2005) investigates bargaining on board structure by analyzing a data set of French IPOs. In short, the previous empirical investigations into bargaining, rather than focus on the process itself, looks at its spillover onto other related outcomes.

Experimental research has been able to generate laboratory results of specific features of the bargaining process. Adler, Brahm and Graham (1992) focus on the key processes affecting face-to-face commercial negotiations comparing results of Chinese and American negotiators. They show, for example, that negotiators who exhibit problem-solving traits earn greater profits and have more satisfied bargaining partners. Experiments assessing the ability of opening offers to take advantage of the anchoring effect are analyzed by Ritov (1996). Zwick and Chen (1999) investigate a preference for fairness in an alternating-offers bargaining game. Galinsky et al (2002) consider the impact of counterfactual thinking, specifically on one's satisfaction when a better deal could have been reached. The back-and-forth nature of extended negotiations is shown to be associated with higher levels of satisfaction than when an opening offer is accepted. Adair and Brett (2005) use data from training sessions to investigate cultural differences in the bargaining process. Magee, Galinsky and Gruenfeld (2007) use priming techniques to induce power in bargaining experiments and analyze the impact. A broad discussion of the extent to which social influence research has affected negotiation is done by Malhotra and Bazerman (2008). Finally, McCannon and Stevens (2014) conduct experiments of alternating-offer bargaining games to assess how personality traits correlate with behavior and outcomes. What is missing is an empirical investigation, using real world rather than experimental data, into the processes used in the negotiation.

Numerous theories have been proposed regarding successful bargaining and the conflict that can arise. Empirical investigations of these theories are limited. The common problem the previous research on bargaining has is that the process, preferences, and (all too often) the outcomes are not directly observable. One would desire data that would allow for hypotheses derived from these theories to be tested. Previous research only has data created from laboratory settings or data from covariates of bargaining.

The television show *Pawn Stars* provides a unique opportunity to remedy this problem and formally test bargaining theories. The reality show airs actual negotiations between agents of a pawn store and customers who bring in interesting items to sell. More than just the outcome of the negotiation is provided. The show depicts the entire transaction with the initial offers, counteroffers, bargaining tactics, and use of third-party experts.

Furthermore, since there have been multiple seasons, a large data set of these transactions is available. Our objective is to provide a rigorous empirical test of many popular theories of negotiation using this unique data set. Being able to identify which theories explain real-world negotiations can aid businesses in the training and evaluation of negotiators.

We find evidence supporting many of the theories put forth in business and economics. A review of these theories is presented in detail in the following section. The theoretical work is organized into two research questions: (1) whether or not a deal is made and (2) how the gains from trade are divided. Theories for lack of success at the bargaining table, including asymmetric information and optimism bias, receive empirical support. For example, the use of experts reduces information asymmetry and is shown to increase the likelihood of a deal being made. Some of the theories for the division of the gains from trade, such as the tactic of using final offers, can also be substantiated.

Not all theories receive empirical support. Specifically, the theory of sequential bargaining (Rubinstein, 1982) argues that the party who makes the initial offer in a negotiation has a strategic advantage in that it is able to extract a disproportionate share of the gains from trade. Also, the psychological theory of anchoring in negotiations (Tversky and Kahneman, 1974) predicts that the party making the initial offer is able to set the expectations of the other party (provide an anchor) with the opening bid. Both theories predict that if a party makes the initial offer, then she should gain more in the negotiation than in those situations where she does not make it. We find the opposite result.

Ours is not the first to use information presented in a television show to test theories in management. Post, van dem Assem, Balthussen, and Thaler (2008) uses the show *Deal or No Deal* to evaluate individual's preferences for risk and to identify which theory of decisionmaking under uncertainty is accurate. Engelberg, Sasseville, and Williams (2012) investigate stock market reaction to recommendations made by Jim Cramer on *Mad Money*.

## **Theoretical Background**

Numerous theories have been developed to understand negotiations. One may divide the research into two categories. First, theory can be used to explain whether or not a negotiation is successful. Does a transaction occur? Second, theory, presuming a transaction arises, addresses the issue of how are the gains from the trade split. How is the pie divided amongst the parties? Rather, what price is paid? Ruben and Brown (1975) define negotiation as a "process whereby two or more parties attempting to settle what each shall give and take, or perform and receive, in a transaction between them." (p. 2)

Thus, the investigation of negotiations can be decomposed into the issue of settlement and the issue of give and take. Adair and Brett (2005) emphasize that negotiations are mixed-motive. Parties cooperatively want to find a mutually-agreeable outcome (i.e., get a deal done) and competitively want to get a good deal for themselves (i.e., gain a big slice of the pie). We first investigate these two lines of inquiry to summarize the relevant theories developed to derive testable hypotheses.

### **Whether a Deal Gets Done**

If a positive surplus, the difference between the willingness to pay of the buyer and the willingness to sell of the producer, exists then standard equilibrium analysis assumes a deal gets made (Lippman and Rumelt, 2003). Of course, the willingness to pay and willingness to sell are difficult in practice to measure. Neither party to a negotiation has the incentive to truthfully reveal this information. If, for example, the buyer is able to convince the seller that he is unwilling to exceed a price  $v$ , which is less than his true value  $v'$ , then one might expect the buyer to pay a lower price for the good.

Suppose one is unable to directly observe the true willingness to pay and willingness to sell but, instead, is able to observe the opening offer of both the buyer and seller. If one assumes that true surplus is inversely correlated with the observed gap, then the gap between the announced prices can be used as a proxy for the surplus. If the willingness to pay is less than the willingness to sell (so that a negative surplus arises), then the price initially requested by the seller will more likely far exceed the price initially offered by the buyer. A large gap tends to occur with negative surpluses. Alternatively, if the willingness to pay is closer to the willingness to sell, which increases the surplus, then the gap between the initial offers contracts. The importance of this measurement has been illustrated experimentally by van Poucke and Buelens (2002) and is commonly argued to drive success and failure in the literature on pre-litigation bargaining (see Deck and Farmer (2007) and Marselli, McCannon, and Vannini (2014) for illustration and discussions).

**Hypothesis 1:** *The likelihood of a deal getting made is higher when the gap between the initial prices proposed decreases.*

Markets, though, occasionally fail to efficiently allocate a resource. Market failures arise when the negotiations are unsuccessful and a deal is not reached even when a mutually beneficial transaction exists. Two broad categories of theories have been developed to explain such failures.

The first is the theory of asymmetric information pioneered by Akerlof (1970). If one side of a transaction is endowed with superior information, then the other party is left with a strategic disadvantage. For

example, assume a seller of an item has solid information that the item is authentic, rare, and would command a high price in resale markets. High transaction costs prohibit him from utilizing them (Shervani, Frazier and Challagalla, 2007). The poorly-informed buyer may be uncertain whether she is negotiating with someone selling such an item or interacting with a seller who knows that the item is not authentic or simply would not command much demand in secondary markets. Fearful of the latter she would be unwilling to pay a high price for the good. The potential arises for failed negotiations, not because of a negative surplus, but because of the poor information. What is important for the market failure is not just that there exists incomplete information, but that the information is lop-sided. Coff (1999), in a discussion of the division of rents between stakeholders of a firm, highlights the value of information, specifically asymmetric information, to bargaining.

One way to deal with this problem is to collect the lacking information. One of the many examples of information collection is to involve outside, third-party experts. Such an agent has the opportunity to provide two similar but distinct benefits. First, information on the authenticity, rarity, background, and potential secondary market demand can be provided. This reduces uncertainty and, even for highly-valued items, has the potential to expand willingness to pay for risk averse buyers. Second, the information provided reduces the asymmetry of the information. Even with incomplete information, symmetric information mitigates the imperfections in markets. If both sides to a transaction are poorly but symmetrically informed, uniform expectations can arise and mutual *expected* benefits can arise. Ironically, if outside evaluation provides one party to the negotiation even better information than it previously had, the expertise acts to exacerbate the market failures.

**Hypothesis 2:** *The use of third-party experts increases the likelihood of a successful deal.*

A second theory of market failure has been developed using insights from behavioral economics. Each party to a negotiation must make assessments as to the value of the item. This includes, importantly, the value of the item in resale markets. This opens up the possibility of an optimism bias in one's private information. If parties to a negotiation exhibit optimism bias, then the seller's belief that the item is high-value will be relatively high, while the buyer's similar belief is relatively low. This leads to an expected value calculation that is distorted upwards for the seller and an expected value calculation biased downwards for the buyer. As a consequence, with the biased assessments there may not exist a bargaining zone of prices that are mutually agreeable even when there exists prices that are, in fact, mutually beneficial.

One would expect more experienced traders and organizations with a longer career engaging in bargaining to exhibit less optimism bias. List and Millimet (2008), conducting field studies of preferences for the status quo, find evidence that behavioral biases diminish as experience in market transactions accumulate.

A dominant theory addressed in management theories of bargaining is the idea of anchoring (Tversky and Kahneman, 1974). The opening offer acts as an anchor. This heuristic generates a needed estimate of the value of the good by anchoring on a salient available point. The counteroffering of the bargaining adjusts the value from that anchor. As noted by Northcraft and Neale (1987) and Ritov (1996) the adjustment is typically insufficient. Consequently, the final estimate is overly affected by the anchor. Thus, a deal may fail to be made due to the anchoring effect.

As an example, Kristensen and Gärling (1997; 2000) conduct bargaining experiments. For each fixed reference/reservation price different anchor prices were given. Higher anchors were associated with higher counteroffers made when selling.

Experience may be hypothesized to reduce the distortion caused by anchoring since the agent may be less swayed by the other's assessment. Thus, for both optimism bias and the anchoring effect, one would predict that experience in similar bargaining situations would increase the likelihood of a deal getting done.

**Hypothesis 3:** *Optimism bias is reduced, anchoring effects are mitigated and, consequently, the likelihood of a successful deal increases as experience of participants increase.*

### **Division of the Surplus**

There are numerous theories regarding how the gains from trade are split between the parties. Absent assumptions on market structures (i.e. numbers of buyers and sellers, information, form of strategic interaction, etc.) there are a range of possible outcomes of a negotiation. Theories, then, attempt to reduce this multiplicity to singular points to be forecasted.

An early and important contribution to this "bargaining problem" was provided by Nash (1950). Using an axiomatic approach he showed that there exists a unique solution to any bargaining problem that satisfies a number of reasonable criteria. He illustrated that the primary factor influencing how much a buyer pays for the good is the outside option of both the buyer and seller if they fail to reach an agreement. Additionally, after each is compensated for their default outcomes, the remaining surplus is equally divided. Market power, in the Nash bargaining environment, is then simply the ability to extract more of the gains from trade because one's outside options are better.

Rather than rely on axiomatic approaches to solve the bargaining problem, a non-cooperative model was pioneered by Rubinstein (1982). He shows, under the assumption that the back-and-forth of the bargaining is costly, not only does a deal get done, but there is *not* an equal division of gains from trade. The party that makes the first offer, because of the preference to reduce the duration of the negotiating process, is able to extract more than half the surplus.

Similarly, while anchoring effects may affect whether a deal gets done, it may also affect the division of the gains from trade. Galinsky and Mussweiler (2001) provide experimental evidence that opening offers serve as an anchor and result in the party making the offer to do relatively better in the negotiated outcome. Hence, the order of the proposals should matter.

**Hypothesis 4:** *The party making the opening offer gains a greater share of the surplus.*

In an attempt to explain conflict and peace, Schelling (1960) developed ideas on success in bargaining. One point, emphasized throughout his work, is the value of making take-it-or-leave-it offers. If one is able to reach a point in the negotiations where a final offer is made and the other side believes that it is a final offer, then the recipient is left with the choice to either accept the offer, resulting in a successful deal, or to veto the offer, resulting in no trade. So long as the offer does not leave the recipient worse off than declining it, such a tactic ends the negotiations and generates a transaction.

What is especially noteworthy about the take-it-or-leave-it offer is that the one who makes the offer is able to extract a disproportionate share of the gains from trade. If the buyer makes such an offer he can pay relatively little for the good. As an example, if a consumer is negotiating with a true monopolist, one who has no competitors with no readily available substitute goods and no potential challengers from market entry, then the monopolist sets a price equal to the consumer's willingness to pay extracting all surplus.

**Hypothesis 5:** *Final offers should be associated with both successes in deal-making as well as a disproportionate share of the surplus gained.*

## Data

A unique data set is collected and employed to test the validity of these theories. The television show *Pawn Stars* is aired on the History Channel. The show consists of footage from a pawn store in Las Vegas, Nevada. While there are many employees of the pawn store, the business is run by a family. Ownership is divided between Richard Harrison, who initially created the business, and his son Rick. On the show the founder is simply referred to as "Old Man." Corey Harrison is Rick's son and the third

member of the family. Customers bring in items to the pawn shop to sell, pawn, or trade. The television show records the discussions and negotiations between the three Pawn Stars agents and the customers.

The television show provides a unique glimpse into the workings of real-life negotiations. Researchers in organizational science are typically denied the opportunity to witness the negotiations and are unable to collect empirical data for numerous transactions to formally test theory. The television show *Pawn Stars*, then, provides a unique opportunity to collect a large data set of negotiations in which to test the validity of popular theories.

Data is collected for every item shown on the television show over the first three seasons. Information on the deal-making, characteristics of the negotiation, and characteristics of the items are coded. Hence, a total of eight-seven episodes were coded.

With regards to the deal-making many variables are recorded. First, the initial price announced by each party, *openC* and *openPS* for the customer and Pawn Stars respectively, is collected. If a deal is successfully made the final agreed upon price is noted, *price*. Also, a dummy variable, *deal*, is created to identify whether or not a deal was made. Finally, it is recorded whether or not the final agreement reached is for a pawn or involves a trade, both of which are rare.

It is recorded whether a final offer is made by one of the parties. Language emphasizing that a party is unwilling to change his/her price is used as indication of a final offer. For example, Pawn Stars may state, "this is the best I can do" or "that is the price and not a dime more". If a final offer is made by Pawn Stars, then *finalPS* is equal to one. If a final offer is made by the customer, then *finalC* is equal to one. In no circumstance did a party make what is clearly a final offer demand and then later revise it. There are cases in which Pawn Stars made a final offer, the customer attempted to convince them to pay a higher price, and Pawn Stars refused though.

Dummy variables controlling for characteristics of the negotiation are also created. The variable *backforth* is equal to one if the negotiation included more than one price announced by each party. If a party stands firm to his/her initial offer or agrees without revision to the other's request, then there is no back-and-forth. Also, *Copen* is a dummy variable which captures the case of the customer making the opening offer. Dummy variables for which of the three Pawn Stars agents are included in the negotiations is created: *OldMan*, *Rick*, and *Corey*. While at least one of these agents is involved in every negotiation, some items involve only one agent while others involve two.

Occasionally, third-party experts are consulted. The Pawn Stars agent involved will from time to time bring in an outsider who is known to be an expert with a particular class of items. For example, a customer may bring in

a rare coin and a professional grader of coin mints may be utilized to provide a proper grading. Other goods may be, for example, extremely rare such as historical memorabilia. American history experts, either museum curators or auction-house managers, are consulted. The dummy variable *expert* equals one if an expert is brought in. When experts are called they provide information to the parties jointly so there is no additional private information. Many outside experts also provide information on expected prices in retail settings or auctions. If any such information is given it is recorded.

Finally, numerous dummy variables are created to control for the type of item that it is. Table 1 provides the complete list of item characteristics. Over three-quarters of the items fall into one of these categories. Along with controlling types of goods, dummy variables are generated to measure whether the consumer acknowledges that he/she bought the item, *purchased*, whether the item is autographed, *signature*, whether the item is associated with a famous individual, *famous*, and whether the item is not in working condition, *notwork*. If an individual specifically purchased a good to, for example, resell it quickly for a profit, then that person's bargaining behavior may be substantially different from someone who found the item or who received it as a gift. Items that are not working require repairs and restoration and may generate different prices than working items.

Table 1 presents the definitions and mean values for the variables in the data set. There are 363 observations. This does not include those items pawned (3.66% of all goods) or where a trade (e.g. barter, consignment) took place (2.33%).

Table 1: Variable Definitions

Dependent Variable		<u>mean</u>
<i>deal</i>	= 1 if an agreement is reached	0.628
Characteristics of the Negotiation		
<i>gap</i>	= difference in initial offers	3741.50
<i>gapPS</i>	= <i>gap</i> (as % of Pawn Stars opening offer)	2.028
<i>finalC</i>	= 1 if the customer makes a final offer	0.022
<i>finalPS</i>	= 1 if Pawn Stars makes a final offer	0.226
<i>expert</i>	= 1 if an expert is brought in to assess the item	0.347
<i>Copen</i>	= 1 if the customer makes the initial offer	0.736
<i>backforth</i>	= 1 if a counteroffer and a revised offer are made	0.562
Pawn Stars Agents		
<i>Rick</i>	= 1 if Rick is involved in the negotiations	0.763
<i>OldMan</i>	= 1 if the Old Man is involved in the negotiations	0.256

<i>Corey</i>	= 1 if Corey is involved in the negotiations	0.303
<b>Item Characteristics</b>		
<i>notwork</i>	= 1 if the item is not in working condition	0.132
<i>famous</i>	= 1 if associated with a famous person	0.168
<i>military</i>	= 1 if it is a military item or a weapon	0.187
<i>UShistory</i>	= 1 if the item is associated with an important event in US history	0.083
<i>signature</i>	= 1 if the item is signed	0.061
<i>vehicle</i>	= 1 if the item is a vehicle	0.124
<i>sports</i>	= 1 if the item is related to sports or gaming	0.113
<i>music</i>	= 1 if the item is related to music	0.066
<i>money</i>	= 1 if the item is money or similar	0.052
<i>toy</i>	= 1 if the item is a toy	0.066
<i>art</i>	= 1 if the item is art	0.033
	<i>purchased</i> = 1 if the customer expressly states that the item was previously purchased by the customer	0.471

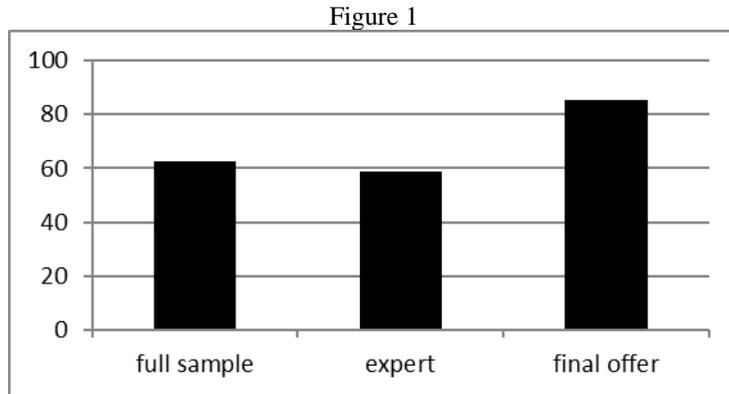
As one can see, deals are frequently made. The gap between the opening offers is \$3741.50, which represents 202.8% of the opening offer by Pawn Stars. There is much variation in these variables. The standard deviation of *gap* and *gapPS* is 27,542 and 5.415, respectively, with median values of 350 and 0.80. While customers only occasionally make final offers, Pawn Stars takes advantage of this bargaining tactic 22.6% of the time. Rick is most commonly involved in the transactions. With each item at least one of the three Pawn Stars agents is involved. Some transactions include only one, while others involve two of them. The fourth individual highlighted in the show, Chumlee, does not engage in any negotiations in the first three seasons and therefore is not included. Finally, the distribution of items is rather widely dispersed across the many categories of goods.

## Results

Just as the theory is divided into those pertaining to the likelihood of a success making a deal from those related to the division of the surplus conditional on a deal being made, the results are separated by the same two questions.

### Likelihood of Making a Deal

Does the data collected from the television show Pawn Stars exhibit the relationship between successful deal-making and the environmental determinants predicted by theory? Figure 1 illustrates the proportion of negotiations in which a successful deal is reached.



Inconclusive evidence exists between the use of experts and successful deal-making as the proportion of cases involving an expert which result in an agreement is similar to the proportion of cases in the full sample. Thus, further investigation is needed to support Hypothesis 2. When Pawn Stars issues a final offer a deal frequently arises. In such cases an agreement is reached in 85.4% of the negotiations and the correlation coefficient between *deal* and *finalPS* is 0.25 (p-value < 0.001). This is evidence in support of Hypothesis 5. Also, the average gap between the initial offers is only \$1933.73 when a deal is reached, or rather, a value of 1.745 for *gapPS*. Since these are less than the mean values presented in Table 1, support for Hypothesis 1 exists as well. Formal econometric evidence, though, is needed to verify that these relationships have statistical significance and are not driven by omitted variables.

A logit analysis is conducted to identify whether the determinants predicted by the theories show statistical significance. Table 2 presents the results.

Table 2: Likelihood of Making a Deal (dep. var. = *deal*)

	I		II	
<i>gapPS</i>	-0.097 **	(0.042)	-0.089 **	(0.042)
<i>finalC</i>	-1.247 *	(0.723)	-1.320 *	(0.798)
<i>finalPS</i>	1.229 ***	(0.464)	1.243 ***	(0.463)
<i>expert</i>	-0.281	(0.314)	-0.292	(0.276)
<i>Copen</i>	0.738 **	(0.323)	0.675 **	(0.310)
<i>backforth</i>	2.119 ***	(0.317)	2.079 ***	(0.289)
<i>OldMan</i>	0.711 **	(0.361)	0.576 *	(0.318)
<i>Corey</i>	0.397	(0.329)	0.189	(0.299)
<i>purchased</i>	-0.046	(0.282)		
<i>notwork</i>	0.711 *	(0.423)		
<i>famous</i>	-0.490	(0.416)		
<i>signature</i>	-0.400	(0.592)		
<i>UShistory</i>	0.244	(0.497)		
<i>military</i>	0.091	(0.413)		

<i>vehicle</i>	-0.865 *	(0.463)	
<i>sport</i>	-0.540		(0.507)
<i>toy</i>	0.260		(0.722)
<i>music</i>	0.390		(0.658)
<i>art</i>	0.055		(0.743)
<i>money</i>	0.330		(0.513)
season FEs?	YES		NO
McFadden $R^2$	0.281		0.254
AIC	390.4		375.4
% correct	78.8%		79.3%

Coefficients of the logit analysis are reported with  $N = 363$ .

\*  $p < 0.1$       \*\*  $p < 0.05$       \*\*\*  $p < 0.01$

QML standard errors are reported in parentheses and a constant is included in each specification.

Column I presents the results from the full model. An  $F$ -test of the joint null hypothesis that the season fixed effects have no effect fails to be rejected at the 10% level ( $F$ -stat = 0.38). An  $F$ -test for the joint null hypothesis that the item characteristics have no effect also fails to be rejected at the 10% level ( $F$ -stat = 1.07). Similarly, an  $F$ -test for the joint null hypothesis that the Pawn Stars actors have no effect fails to be rejected at the 10% level ( $F$ -stat = 2.19). Consequently, the logit regression is re-specified excluding the season fixed effects and the item characteristics. Since the theory predicts the experience of the Pawn Stars is important, the coefficient on *OldMan* is significant, and the joint null hypothesis can be rejected at the 12% level of significance, the Pawn Stars dummy variables are included in Column II. Column III presents the results of the full model when, rather than considering the gap between the opening offers relative to the size of the offers, the absolute magnitude of the gap is considered.

The results presented in Table 3 conform to the predictions of the theories. The gap between the offered and asked prices made by the two parties has a negative and statistically significant effect on the likelihood of a deal getting done. Hence, the farther away the two sides are at the start of the negotiation the more probable it is that there is indeed no positive surplus to be divided. The marginal effect is estimated to be a drop in the likelihood of a deal being by 3.1 percentage points for an increase in the gap by \$1000. This is evidence in support of Hypothesis 1.

When Pawn Stars makes final offers to the customer it has a large and statistically significant increase in the likelihood of a deal getting made (Hypothesis 5). This corresponds favorably to the argument made by Schelling (1960). At the mean the marginal impact on the likelihood of making a deal is an increase of 0.227, which using the mean value of *deal* from Table 1 is an increase of 36.2%. Interestingly, when a customer makes

a final offer there is evidence that it decreases the chance of a successful deal. This is in contradiction to Schelling's theory and signals that the experienced, professional agents are unwilling to be coerced into a disadvantageous deal. This can be explained, for example, by the repeated game engaged in by the employees of Pawn Stars. While the interaction with any one customer is a one-time affair, numerous negotiations are undertaken by each of the Pawn Stars employees. An informal policy of not yielding to customer final offers could lead to improved firm profitability as the lost transactions are made-up for by lower prices paid by adopting the strategy.

With regards to the theory of optimism bias leading to market failures, it was hypothesized that the Old Man with the most experience would exhibit the least amount of optimism bias. This is confirmed in the Table 2. The marginal effect of including the Old Man in the negotiations is an increase in the likelihood of a successful deal of 0.143 relative to including Rick. Again using the mean value of *deal*, this is a 22.7% increase in the likelihood of making a deal. It was also predicted that the coefficient for Corey would be negative since he has the least amount of experience. The results in Table 2 illustrate that there is no statistically significant difference between the chance of Corey making a deal and Rick making a deal. Hence, the impact of the experience is the Old Man being more successful than both Rick and Corey. This result conforms to the belief that experienced negotiators are able to successfully navigate the process, as outlined by Fisher and Udry (1981), and provides support for Hypothesis 3.

Most of the item characteristics are insignificant and, as stated, are jointly insignificant. The exceptions are items that do not work properly and vehicles. The former are more likely to have a deal get done and the latter are less likely. Pawn Stars has a number of restoration specialists available where a repeated business relationship exists. The customer is unlikely to have access to such services at low transaction costs. Thus, deals get done. Similarly, a significant amount of uncertainty likely exists for the purchasing of vehicles and the negative coefficient can be explained by risk aversion.<sup>5</sup> With regards to the season fixed effects the likelihood of a successful negotiation is invariant to the season, which supports the contention that the behavior of Pawn Stars and the customers does not vary with the duration of the program. Also, as one would expect, *backforth* is positive and statistically significant. If a deal is going to fail, then it is more likely that one will not see offers followed by counteroffers. If parties are willing to go back and forth on the price, then it is quite likely a deal can be made.

The variable *Copen* is positive and statistically significant in each specification. While no theory presented anticipates its effect, this is

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<sup>5</sup> A casual observer of the show would note the Pawn Stars hesitation when buying vehicles.

evidence that the amateur sellers are more likely to agree to a deal if they are actively announcing prices.

An unexpected result arises regarding the effect of an expert on the likelihood of a deal being made (Hypothesis 2). As previously discussed, with asymmetric information market failure can arise even when efficient transactions exist. By bringing in a superiorly-informed third party, improved and level information arises. This should increase the likelihood of a deal being made. The management studies of the structure of the negotiations all indicate that expert involvement encourages success as they can separate the issue from the person and provide objective criteria (Fisher and Udry, 1981). The results in Table 3 show that the effect is statistically insignificant and, in fact, the estimated coefficients are negative.

An important issue regarding the use of experts is that their involvement is not random, but rather an endogenous choice made by the Pawn Stars. This is an especially poignant observation when one notes that endogeneity of the consultation of the expert is most likely highly correlated with the likelihood of a deal getting made. Pawn Stars are highly-informed traders with years of experience. If they are confronted with a good that they are uncertain about, risk aversion will likely drive them towards rejecting a deal. It is these very uncertain deals where the value of the expert is greatest. Hence, it seems reasonable that experts are brought in when items come into the pawn shop that would, absent the expert, be rejected. Thus, there are opposing forces influencing the sign of the coefficient: experts may increase the likelihood of a deal but they are only called in for situations in which a deal is unlikely. The endogeneity of *expert* may be causing the counterintuitive, insignificant result.

A common way to econometrically deal with the endogeneity problem is to use instrumental variables. The idea is to find variables that are correlated with the use of experts, but are not correlated with the likelihood of a deal getting done. In the first stage to the estimation, these instruments can be regressed on the endogenous variable so that its fitted value can be estimated. This removes the noise associated with the endogenous choice from the variable. In the second stage of the estimation, the “cleaned” value of the variable can be used as an independent variable. Using the instrumental variables in this procedure is known as two-stage least squares.

We use a few item characteristics as instrumental variables since the knowledge of the Pawn Stars and, hence, the value of third-party experts is stronger for some categories of goods than others. One variable is *vehicle*. Cars, trucks, and motorcycles, for examples, are typically professionally restored before Pawn Stars resells them. Outside auto body shops are used and frequently the magnitude of the repairs requires expert assessment. Similarly, sporting items and art pieces will frequently require experts to

assess the authenticity and value of rather rare objects. Finally, monetary items often need outside assessment. This is especially true given the grading system used to determine the quality of a rare coin. Thus, the four variables *vehicle*, *sport*, *art*, and *money* are expected to be highly correlated with *expert*.

A proper instrument is correlated with the endogenous explanatory variable, but uncorrelated with the dependent variable. All four are uncorrelated with *deal*. The statistical significance of the correlations between *expert* and the instruments *art* and *money* are poor. Hence, Table 3 presents the two-stage least squares results using all four proposed instruments along with only the two that are correlated with the use of experts.

-Table 3: Effect of Experts on Deal-Making (dep. var. = *deal*)

	<b>All 4 Instruments</b>		<b>Only <i>vehicle</i> &amp; <i>sports</i></b>	
<i>gapPS</i>	-0.012 **	(0.006)	-0.096 **	(0.043)
<i>finalC</i>	-0.323	(0.245)	-0.321 *	(0.177)
<i>finalPS</i>	0.209 ***	(0.063)	0.207 ***	(0.070)
<i>expert</i>	0.534 *	(0.299)	0.514 *	(0.303)
<i>Copen</i>	0.206 ***	(0.079)	0.204 ***	(0.075)
<i>backforth</i>	0.344 ***	(0.068)	0.346 ***	(0.067)
<i>Rick</i>	-0.223 **	(0.094)	-0.219 **	(0.094)
adj $R^2$	0.126		0.132	
<i>F</i>	17.05 ***		16.10 ***	

Coefficients of the two-stage least squares analysis are reported with  $N = 363$ .

\*  $p < 0.1$       \*\*  $p < 0.05$       \*\*\*  $p < 0.01$

Heteroskedastic-robust standard errors are reported in parentheses and a constant is included in each specification

Similar results arise if *art* is added to the original two instruments and if *money* is added to the original two instruments. Correcting for endogeneity, the coefficient on *expert* both turns positive and becomes statistically significant. Thus, the use of an expert does increase the likelihood of a deal being made and support for Hypothesis 2 arises. This is also evidence that experts are consulted only when Pawn Stars are uncertain about the good and ex ante unlikely to purchase it.

While not presented, the results of Table 2 continue to hold using probit analysis. Also, all standard errors reported are robust to heteroskedasticity issues. This allows for more accurate hypothesis testing.

### Division of the Surplus

To address the theories of the division of the surplus, the data set is restricted to only the subsample of items in which a trade occurred. As

provided in Table 1, 62.8% of the negotiations resulted in a deal. This corresponds to a sample with  $N = 227$ .

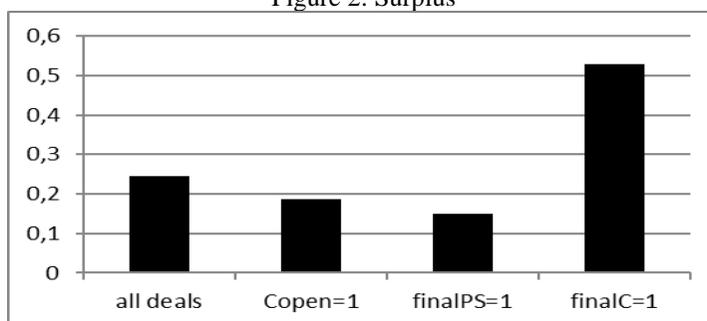
For each successful trade the agreed upon price is recorded and denoted *price*. Since the primary question is how the gains from trade is divided the variable *surplus* is created. It is defined as the proportion of *gap* that is paid by Pawn Stars, or rather,  $surplus = (price - openPS) / gap$ . Hence, an increase in the variable *surplus* corresponds with Pawn Stars paying relatively more for the good and the customer receiving a price closer to his/her initial asking amount. Table 4 presents the descriptive statistics for the subsample.

Table 4: Descriptive Statistics – Deals			
variable mean		variable mean	
<i>price</i>	2578.8	<i>purchased</i>	0.489
<i>% openC</i>	0.652	<i>authentic</i>	0.405
<i>% openPS</i>	1.233	<i>notwork</i>	0.154
<i>surplus</i>	0.246	<i>famous</i>	0.137
<i>openC</i>	4139.1	<i>military</i>	0.189
<i>openPS</i>	2201.1	<i>USHistory</i>	0.079
<i>finalC</i>	0.018	<i>signature</i>	0.048
<i>finalPS</i>	0.308	<i>vehicle</i>	0.132
<i>expert</i>	0.326	<i>sports</i>	0.115
<i>Copen</i>	0.846	<i>music</i>	0.075
<i>backforth</i>	0.753	<i>money</i>	0.066
<i>Rick</i>	0.722	<i>toy</i>	0.088
<i>OldMan</i>	0.278	<i>art</i>	0.031
	<i>Corey</i>		0.326

Hence, the average price paid for a good by Pawn Stars is \$2578.80, which represents about 65% of the customers opening request and 123% of Pawn Stars initial offer. As expected, given the previous econometric results, the proportion of items in which Pawn Stars makes a final offer increase and those where the customer makes a final offer decrease. Similarly, the fraction of items in which an expert is consulted decreases due to the selection bias of when they are called in for consultation.

As before, the sample can be analyzed for evidence favoring the testable hypotheses. Figure 2 presents the average surplus paid.

Figure 2: Surplus



The proportion of the initial gap in the offers paid by Pawn Stars is less when the customer makes the opening offer. This is in opposition to Hypothesis 4. Alternatively, Pawn Stars pays a smaller fraction of the surplus when it makes a final offer, but a greater proportion when the customer makes the final offer (15.0% and 52.9% respectively). This is consistent with Hypothesis 5. Again, formal econometric tests are needed to investigate these descriptive means.

To formally put the theories presented to the test the characteristics of the negotiation and the items are used as explanatory variables to predict the proportion of the surplus paid by Pawn Stars. Table 5 presents the results with heteroskedastic-robust standard errors reported.

Table 5: Division of the Surplus (dep. var. = *surplus*)

	I		II	
<i>finalC</i>	0.224 **	(0.104)	0.193 *	(0.103)
<i>finalPS</i>	-0.127 ***	(0.036)	-0.112 ***	(0.031)
<i>expert</i>	-0.040	(0.040)	-0.035	(0.033)
<i>Copen</i>	-0.413 ***	(0.075)	-0.400 ***	(0.070)
<i>backforth</i>	0.072 *	(0.041)	0.071 *	(0.037)
<i>OldMan</i>	-0.046	(0.038)		
<i>Corey</i>	0.001	(0.039)		
controls:				
items?	YES		NO	
seasons?	YES		NO	
adj $R^2$	0.288		0.296	
$F$	4.97 ***		14.13 ***	
AIC	12.31		-5.14	

Coefficients of the OLS analysis are reported with  $N = 227$ .

\*  $p < 0.1$       \*\*  $p < 0.05$       \*\*\*  $p < 0.01$

Heteroskedastic-robust standard errors are reported in parentheses and a constant is included in each specification.

Column I presents the results including controls for the Pawn Stars agents, item characteristics, and season fixed effects. An  $F$ -test of the joint null hypothesis that the season fixed effects are insignificant fails to be rejected ( $F$ -stat = 0.45). Similarly, the joint null hypothesis that the item characteristics have no effect along with the Pawn Star agents have jointly no effect can both fail to be rejected at the 10% level ( $F$ -stats of 0.92 and 0.80 respectively). Hence, Column II presents the estimation excluding them. Their exclusion increases the adjusted  $R^2$  and the  $F$  (for overall significance) and decreases the AIC, which supports their omission.

The results conform to the predictions of the theories presented. As expected (Hypothesis 5), the final offers contribute substantially to the determination of the price. If the consumer makes a take-it-or-leave-it offer, then the proportion of the surplus paid by Pawn Stars increases. Using the mean value of *surplus* from Table 4 this corresponds to an increase in the proportion of the surplus paid by 78.5% to 91.0%. Similarly, if Pawn Stars makes a final offer the amount they pay decreases. Again, using the mean value of *surplus* this corresponds to a decrease in the proportion paid by 45.5% to 51.6%.

While the tactic of encouraging the customer to make the opening price encourages deal-making, it also has the effect of decreasing the amount Pawn Stars pays for the good. This feature of bargaining proves to be quite successful for the organization. This result stands in contrast to the first-mover advantage (Hypothesis 4) of Rubinstein (1982) and the anchoring effect illustrated experimentally by Galinsky and Mussweiler (2001).

The back-and-forth nature of the negotiations favors the customer. While customer satisfaction may be higher, the value of a back-and-forth does not substitute for monetary gain and, in fact, seems to complement it.

Also, which of the Pawn Stars agents is involved in the transaction does not seem to matter for the division of the surplus. We previously argued that the agent controls captured potential optimism bias leading to market failures. While the evidence suggests that the lack of bias corresponds to the Old Man paying a smaller proportion of the surplus and the presence of optimism corresponds to Corey paying a larger proportion (relative to Rick), these effects are statistically insignificant.

The statistical significance of expert is again lacking. While, as stated, it suffers from endogeneity problems, neither the theory of market failure due to asymmetric information nor the negotiation tactics that emphasized its importance predict its effect on the price paid. The practical guides stress how expertise can facilitate success, but are mute on the impact on price. While experts help to alleviate the concerns and improve the chances of a deal being made, the uncertainty seems to lead to a decrease in the price paid (but insignificantly so) by the Pawn Stars.

Occasionally, experts provide an assessment of the anticipated market price. Frequently, for example, experts work in the retailing of such goods or manage auction houses. In such situations along with providing information on the identity and authenticity of an item, information on value is given.

As a final investigation, then, the data set is further subdivided to consider only those items in which a deal was successfully agreed upon, an expert was consulted, *and* the expert provided an anticipated retail/auction price. We consider this subsample to identify whether a final offer made by Pawn Stars and consumer opening in the negotiation affects the outcome in these special cases.

With these restrictions only sixty observations survive. Since the item characteristics, season fixed effects, and Pawn Stars control variables have been shown to not (jointly) affect the division of the surplus they are not considered in the specifications. Also, since the data set is small, only the effect of a final offer being made by Pawn Stars, *finalPS*, along with characteristics of the negotiation, *Copen* and *backforth*, are included. Along with *surplus* two other dependent variables are considered. The variable *value* is the price agreed upon relative to the provided expert's valuation,  $value = price / valuation$ . Also, *price* is used as the dependent variable with *valuation* used as an additional control variable. Typically, the expert gives both an upper bound and a lower bound to the range of anticipated prices. We choose to calculate *value* using the lower provided price since it typically is the one used as the reference point for the negotiations. We choose to use the upper bound as *valuation* since it provides the maximum level at which the item can be priced at in a secondary market. The results do not change substantially if either of these uses is reversed. Table 6 presents the results.

Table 6: Bargaining with Expert Evaluations

	<i>surplus</i>	<i>value</i>	<i>price</i>
<i>finalPS</i>	-0.116 ** (0.051)	-0.072 * (0.041)	-1207.4 * (712.1)
<i>Copen</i>	-0.238 * (0.126)	0.066 (0.067)	861.27 (736.5)
<i>backforth</i>	0.107 (0.076)	0.001 (0.051)	-12225 * (646.9)
<i>valuation</i>			0.625 *** (0.061)
adj $R^2$	0.168	0.185	0.896
<i>F</i>	5.62 ***	4.34 ***	27.60 ***
AIC	-16.32	-14.85	1117.2

Coefficients of the OLS analysis are reported with  $N = 60$ .

\*  $p < 0.1$       \*\*  $p < 0.05$       \*\*\*  $p < 0.01$

Heteroskedastic-robust standard errors are reported in parentheses and a constant is included in each specification.

The results coincide with the previous findings. Take-it-or-leave-it offers by Pawn Stars reduce how much they pay. Specifically, they reduce the portion of the surplus given, the fraction of the expert's valuation paid, and the absolute price. The reduction in the price paid of \$1207.40 (third column) represents 26% of the average price agreed upon when an expert provides a valuation. This is in contrast to a reduction in price by 17% at the mean for the deals made (calculated replicating the specification used in the third column of Table 2, but using the data set of all successful deals). Hence, using final offers significantly improves Pawn Stars' well-being when experts are consulted mitigating the asymmetric information.

## **Conclusion**

The television show Pawn Stars provides a unique glimpse into the bargaining process. Empirically investigating these negotiations allows us to put theories in economics and organizational science to the test. This is an opportunity few researchers have had. Important theories such as market failure due to asymmetric information, the value of take-it-or-leave-it offers, distortions caused by optimism bias, and the role of information and experience in deal-making find empirical support in the results. The theory of first-mover advantage in sequential bargaining environments and frictions generated by anchoring lacks such support. This is consistent with the experimental evidence presented by Cotter and Henley (2008).

While the data provides a rare insight making the empirical tests possible, it is far from ideal data. The data do not have variation in the bargaining skill and knowledge of the buyers to assess how general the results are. The potential for selection bias caused by the producers/editors of the television show is cause for one to hesitate. It is comforting, though, that the season fixed effects are repeatedly shown to be insignificant. This is evidence that as the show gained viewers and popularity no systematic biases arise. Also, the potential for distorted behavior due to the presence of the cameras cannot be overlooked. However, even given the data limitations, the depth and quality of the data that is available provides important insights into the functioning of negotiations.

Future work should search for ways to identify how to measure and evaluate important concepts such as anchoring, fairness considerations, and bargaining tactics. The present analysis is limited to only those variables that can be measured. Similarly, Weiss (1993) argues that the three key facets to negotiations are relationships, behaviors, and conditions. While a serious attempt to measure differing behaviors is done here, the data does not allow for a study of differing relationships or conditions. This, then, is left for future investigation.

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# THE IMPACT OF POSITIVE CASH OPERATING ACTIVITIES ON THE COST OF DEBT INTERNATIONAL EVIDENCE

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Doi: 10.19044/el.p.v1no2a5 [URL:http://dx.doi.org/10.19044/el.p.v1no2a5](http://dx.doi.org/10.19044/el.p.v1no2a5)

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## Abstract

This paper identifies the affiliation between the ending cash balance of the operating section in the cash flow statement and the bonds ratings. Our sample includes 600 companies from 26 countries. The study was conducted over a period of 18 years. An Ordered Probit regression analysis had been applied to identify how the positive cash balance of the operating section in the cash flow statement shapes the probability of escalating the bonds ratings. We find burly proof that the positive operating cash balance considerably affects the bonds ratings. In other words, when a company is able to generate enough cash from its main operating activities, the likelihood of having higher bonds ratings raises; this entails a low cost of debt since higher bond ratings have been proven to lessen the company's cost for raising funds (in the form of bonds). The results add more confirmation to the creditors' rights shields and how it affects the cost of debt.

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**Keywords:** Credit ratings, operating cash position, default risk

## Introduction

Information is the key to efficient functioning of the stock markets. Securities get priced correctly when the relevant information about companies get incorporated into the prices. Financial analysts play an important role in this process by bringing out new information about companies. Under normal circumstances, Stakeholders and more precisely creditors view analysts' research reports, forecasts, and recommendations as relatively accurate sources of information and use them in their rating

decisions. In Brunnermeier and Pedersen (2009), for instance, a large market shock triggers the switch to a low liquidity, high margin equilibrium, where markets are illiquid, resulting in larger margin requirements. Previous studies identified the importance of cash management mechanisms and how beneficial they are to companies if applied properly. Acceptable level of liquidity should allow companies to have access to debt financing straightforwardly and at the lowest costs (interest). Having access to the financing sources at relatively low costs allows the company to gain a competitive advantage over others. This competitive advantage enables the company to boost its income since the costs for acquiring debts becomes low.

Cash management, which is perceived as one of the important mechanisms of good firm's performance, may play an important role in enhancing the positive image about the financial situation of the company. Very positive cash balances imply that the company is solvent and can meet its short term obligation without any liquidation costs. However, consulting the ending cash balance for the year (from the cashflow statement or the comparative balance sheet) can be sometimes misleading. Companies generate (use) cash from (in) three main activities: investing, financing and operating.

Investing activities includes every activity that is related to changes in tangible assets and more precisely long term assets (properties, plants and equipments). That is to say, a positive cash balance resulting from this section may cause questions to take place. If a company is generating cash from its operating activities, meaning that the company is selling its means of production (downsizing), a fact that is not appreciated by stakeholders and more precisely creditors.

Financing activities include any changes related to Long term debts (loans, bonds and notes payable) and stockholders equity. Under this section, positive cash balances mean that the company is raising capital either by writing-off bonds, acquiring loans or issuing stocks. A positive balance doesn't imply any information, unless one knows how this money was spent and how much it cost, keeping in mind the financial leverage and the ideal capital structure. On the other side, a negative cash balance in this section implies that the company is either repurchasing its own common shares outstanding or paying off its debt. Zeidan(2010) had claimed that in almost all cases, a negative cash ending balance in the financing section implies good signals; it means that the company has the cash requirement that enables it to meet its liabilities.

Last but not least, the operating section, which is the section of concern in this research. The net cash balance from this section, if positive, implies that the company is able to generate enough cash from its operating

activities, so we have the right to not worry about the company's future, Amat (2013). On the other hand, if the ending cash balance of this section is negative, it implies that the company is not able to generate enough cash from its main operations; this will make all stakeholder worried about the company's future even in the short run.

From all the three sections discussed above, auditors and analysts base their companies' valuation mostly on the net cash generated from the operating activities. It does not mean that the financing and investing sections of the cashflow statement are useless, but it signifies that the operating section is more informative mainly because of the nature of activities and transactions that it encompasses, Ojo and Marianne (2013)

Positive cash balances results in positive signaling to all stakeholders, by implying that the company has the ability to meet all obligations and consequently reduces the external financing costs for companies. This is because, creditors, as well as shareholders, will know that the company can pay them back anytime and, hence, ask for lower returns since they have clearer ideas about the company's perspectives and liquidity risk levels. Actually, positive operating cash balance may have other impacts on a company. For example, if we prove that the positive operating cash balance affects positively companies' bonds ratings, we can conclude that low default risk leads to, relatively, lower costs of debt given that Kisgen and Strahan (2009) proved that higher ratings lead creditors to ask for lower returns. Actually, higher ratings of bonds were found to reduce the creditors' risk which is assigned to the company inability to pay back its debts (the default risk). As a result, the creditors' risk perception, for companies with high ratings, becomes lower and the company's cost of debt decreases since the creditors end up asking for relatively lower required returns. All in all, very few work related to the impact of cash management or default risk levels on companies' cost of debt has already taken place, but no study tried to explore the following hypothesis: do rating agencies value the operating cash balance of a company when rating firms' bonds? If our empirical results approve this hypothesis, we can conclude that the positive operating cash balance is another variable that leads to lower costs of debts.

Our goal is to empirically find out how operating cash balance of the cashflow statement affects the cost of debt for companies. More precisely, we intend to identify whether the rating agencies decisions to rate firms' bonds are affected by the company's operating cash position (whether negative or positive). Our study is similar in spirit to Hamdi et al. (2013) who study the value of the auditor choice and how it affects the corporate bond rating.

## **Literature review**

Information and good corporate governance is the key to efficient functioning of the stock markets. Securities get priced correctly when the relevant information about firms get incorporated into the prices. Financial analysts play an important role in this process by bringing out new information about firms, mainly their profitability and liquidity. Under normal circumstances, stock market participants view analysts' research reports, forecasts, and recommendations as relatively accurate sources of information and use them in their investment decisions. Jensen and Meckling (1976) suggest that, as information intermediaries, financial analysts are able to mitigate the agency problems present within firms. Merton (1987) argues that the market value of a firm is an increasing function of the breadth of investor awareness.

Berger (1995) has discovered a positive relationship between the return on equity and the ratios of capital to assets. He explained that by having higher capital ratio, the cost of funds on account and the quantity of funds required would be lower. As a result, the firm's net interest income will increase and thus the profitability too. On the other hand, Navapan and Tripe (2003) have concluded the opposite. They have found that a negative relationship between capital and profitability exists. Kontus (2012) explained that an increase of short-term debt leads to a decrease of profitability that is shown in terms of return assets.

Odders-White and Ready (2006) argued that companies with more liquidity have better credit quality than companies with less liquidity. Companies with high liquidity, they are less likely to default; "they have assets that they can use in case of emergency". The authors add, usually companies with more liquidity are always enjoying high quality credit terms and they always opt for more. From the side of creditors, mainly banks, good customers enjoy their privileges and they do their best not only to keep them, but they opt for more. In addition, Butler et al. (2005) discovered that liquidity affects the cost of issuing equity, and especially the direct cost of issuing debt. In other words, companies with higher liquidity have less risk, and thus lower interest rate. Oppositely, companies with lower liquidity have higher risk for return and therefore higher interest rate.

Deloof found that working capital management is considered one of the major components of corporate finance as it has a direct impact on companies' profitability and liquidity. Consequently, in order to create the highest shareholder value, having an efficient management of working capital would be primordial; in fact, most of companies try to maintain an ideal level of working capital that will boosts and raises their value (Deloof, 2003; Afza & Nazir, 2007). However, Matuva (2010) found that there are

some decisions that incline to increase the profitability and thus reduce the chances of suitable liquidity. Oppositely, if we focus only on liquidity, it may minimize the potential of companies' profitability. In addition, Lazaridis and Tryfonidis (2006) found that there is an arithmetical relationship between profitability that is measured through Gross Operating Profit, and the cash conversion cycle. They found that managers have the ability to create price for shareholders by handling suitably the cash conversion cycle and by maintaining each component to an optimum level.

### **Liquidity and the Cost of Debt**

Different firm's specific parameters have been found to influence the company cost of debt. Jenzazi (2010) found that the company's cash management affects the cost of debt. In his paper, the cash management had been assigned a score from 0 to 4 on the basis of different criteria (refer to table 1 for more information about these criteria) and the results suggested that as the score increases the cost of debt decreases.

The above arguments lead us to the following testable hypothesis:

H1: Generating positive cash balance will reduce the company's cost of debt financing.

H2: Generating positive net cash provided from operating activities leads to higher bonds ratings.

Our study will contribute to the scarce existing literature in several ways. First, we will try to assess the perception of the corporate bond market of the quality of the company's liquidity. Second, contrary to Jenzazi (2010) and the other studies, our study will focus on this issue in an international context. This will allow us to better understand the functioning of the different debt markets around the world. More importantly, this will give us the valuable opportunity to see how external governance mechanisms (such as the legal and extra-legal institutions) interact with the internal mechanisms (in our case cash generated from operating activities) to enhance the overall governance quality in one country.

### **Methodology and Descriptive Statistics Specifications**

The purpose of this research is to study the relationship between the positive operating cash and the bonds ratings. In order to study the relationship between these two variables, the following general specification is going to be used:

Bond Rating = f (operating cash position, Issuer Characteristics, Issue Characteristics)

This model includes three major determinants (Operating cash position, Issuer Characteristics, and Issue Characteristics) of bond ratings.

The issuer characteristics variables include the company profitability (measured by the company's return on assets, the company size which measured by the company total assets, the company risk that is measured by the company variability of earnings, and the leverage that is measured by the debt to equity ratio). The issue characteristics variables include the issue size or the size of the bonds, the bonds maturity, and the convertible provision (an option that gives the right to a bondholder to exchange the bonds for shares).

The ratings that are used for the bonds belong to seven different ordering categories (illustrated by the S&P ratings). This implies that the Ordered Probit Model can be used since the bond rating is an ordinal variable.

### Data Sources and Variables

Our sample includes 600 companies operating in different 26 countries. Table 2 gives a description of the sample and the distribution of the 600 observations. The observations are from 2002 to 2012. The S&P credit ratings were used in order to get the bonds ratings. The ratings range from AAA to D and include 22 possible ratings. These ratings illustrate the creditworthiness of companies. In other words, they give an idea about company's abilities to repay back their loans obligations when they are due. As it is shown in Appendix A, the initial ratings that are suggested by S&P have been converted to ordering numbers ranging from 1 as being the lowest rating to 7 as being the highest rating. The ratings were converted on the basis of the research that was conducted by Ashbaugh, Collins, and LaFond (2006). The bonds ratings data was retrieved from F- Database.

Table 2: Sample Description

The panels below give a description of the sample that was used to derive the outputs. Panel A specifies the countries that companies in the sample operate in. Panel B gives the distribution of the observation on a yearly basis (starting from 1996 to 2006). Panel C gives a description of the observations based on the industry.

Panel A: Sample Distribution per Country			Panel B: Sample Distribution per Years		
Country	Number	Percent	Years	Number	Percent
Argentina	8	1.33	1996	2	0.33
Australia	11	1.83	1997	23	3.83
Austria	8	1.33	1998	22	3.67
Brazil	23	3.83	1999	55	9.17
Canada	136	22.67	2000	100	16.67
Chile	7	1.17	2001	120	20.00
Colombia	1	0.17	2002	122	20.33
Denmark	7	1.17	2003	55	9.17
Finland	7	1.17	2004	45	7.50
France	23	3.83	2005	43	7.17

Germany	35	5.83	2006	13	2.17
Hong Kong	12	2.00	<b>Total</b>	<b>600</b>	<b>100</b>
Indonesia	3	0.50			
Israel	4	0.67			
Italy	27	4.50			
Japan	12	2.00			
Korea (South)	22	3.67	<b>Panel C: Sample Distribution per Industries</b>		
Malaysia	2	0.33	<b>Industry</b>	<b>Number</b>	<b>Percent</b>
Mexico	14	2.33	Manufacturing	230	38.33
Netherlands	13	2.17	Transport	10	1.67
New Zealand	1	0.17	Trades	40	6.67
Norway	6	1.00	Financial Services	243	40.50
Philippines	6	1.00	Utility	77	12.83
Poland	2	0.33	<b>Total</b>	<b>600.00</b>	<b>100.00</b>
Portugal	10	1.67			
Singapore	10	1.67			
South Africa	1	0.17			
Spain	8	1.33			
Sweden	19	3.17			
Switzerland	15	2.50			
Taiwan	13	2.17			
Thailand	4	0.67			
Turkey	1	0.17			
United Kingdom	123	20.50			
United States	6	1.00			
<b>Total</b>	<b>600</b>	<b>100.00</b>			

The operating cash balance is a dummy variable which takes the value 1 if the company's operating cash balance is positive and 0 otherwise.

The issue and issuer variables are control variables that are added to the model in order to give more explanations related to the bonds ratings. Table 1 gives a detailed description of the variables that were used in our study. The data for the control variables was retrieved from W.S Database.

Table 1: Variables Description and Sources

Variable	Description	Source
Bonds Ratings	Appendix A gives detailed information about this ordinal variable. The bond ratings that are used by S&P are converted to a range from 1 to 7 where 1 is the lowest rating and 7 the highest rating. The rating of bonds depends on the company bonds portfolio.	F-Database
Company's Cash balance	A dummy variable that is assigned 1 if the company's yearly operating cash balance is positive and 0 otherwise.	W-S Database
Company Profitability	A variable that measures the profitability of the company by dividing its net income to its total assets	W-S Database

Company Size	The company size is determined by its total assets in dollar amounts.	W-S Database
Company risk	The company's risk is measured by the standard deviation of the net income of every company in the sample.	W-S Database
Bonds Maturity	A variable that measures the log maturity in years. The weights are determined by the size of the issuance of the maturity class to the total size of the issuance for a given year. Then, the weights are multiplied to the respective maturity and added to get the bonds weighted average maturity.	W-S Database
Convertible Provisions	A dummy variable that gives 1 to companys with convertible provisions and 0 to companys with no convertible provisions. These provisions allow the bondholder to convert his or her bonds to shares.	W-S Database
Issue Size	A variable that identifies the size of the issuance.	W-S Database
Leverage	A variable that identifies the leverage of the company; measured by dividing the company debts to its equity.	W-S Database
Creditors Rights	This variable is an index that ranges from 0 to 4. When a country imposes restrictions in the favor of creditors, 1 is added to its score. When the secured creditors ensure that they will get their investment back, the score becomes 2. When the secured creditors are the first to receive their money in case of bankruptcy, the score becomes 3. At the end, when the secured creditors don't wait till the problems are solved to get their money back, the score becomes 4.	Djankov et al. (2005)
Public Registry	Public registry is a database that is developed by public authorities. This database includes all the debt positions of borrowers in the economy. The collected information is available to all financial institutions. The variable is assigned 1 if the country has a public registry and 0 otherwise.	Djankov et al. (2005)
Efficiency of Bankruptcy Process	When a company incurs bankruptcy costs, these costs are deducted from the company terminal value and this value is discounted to get the present value. The higher the value, the better the company.	Djankov et al. (2007)
News Circulation	Daily newspapers sold divided by the number of citizens	Dyck and Zingales (2004)
Manufacturing	Dummy variable that equals 1 if the company operates in the Manufacturing industry; 0 otherwise	
Trades	Dummy variable that equals 1 if the company operates in the Trades industry; 0 otherwise Trades	
Finance	Dummy variable that equals 1 if the company operates in the Finance industry; 0 otherwise Finance	
Utility	Dummy variable that equals 1 if the company operates in the Utility industry; 0 otherwise.	

The bonds ratings, the convertible provision, and the issue size (the issue characteristics) were computed following a portfolio approach as Anderson, Mansi and Reeb (2003) and Boubakri and Ghouma (2008) applied in their papers. The total company issues for every year were gathered and the size of the issue to the total issues was the weight that we used to compute the average bonds ratings, the convertible provision, and the issue size for every company over every year of the period of the study.

After defining the variables that are included in our model, the bond rating model can be expressed as the following:

$$\text{Prob. (Bonds Ratings=X)} = F (b_1. \text{ operating cash position} + b_2. \text{ Company Profitability} + b_3. \text{ Company Size} + b_4. \text{ Company Risk} + b_5. \text{ Bonds Maturity} + b_6. \text{ Convertible Provisions} + b_7. \text{ Issue Size} + b_8. \text{ Leverage} + \text{Institutional variables} + \text{Year Dummies} + \text{Industry Dummies} + e_i); \text{ Where } X \text{ belongs to } \{1, 2, 3, 4, 5, 6, 7\}$$

### Empirical Results

Panel (A) in table 3 gives the descriptive statistics for the variables that were used in our study. The panel starts by the credit rating variable; the mean for this variable is 4.432, which is equivalent to an S&P rating of BBB+.

Variable	Observations	Mean	Standard Deviation
Bonds Ratings	600	4.432	1.321
Cash position	600	0.423	0.342
Company Profitability	600	4.134	23.543
Company Size (in million of U.S Dollars)	600	89.89	1.54
Company risk	600	435,534.7	654,087.3
Bonds Maturity (in years)	600	6.43	0.543
Convertible Provisions	600	0.034	0.457
Issue Size	600	746,923.4	4,687,234
Leverage	600	432.367	1,432.674

The following descriptive statistics refer to the issuer characteristics variables that were used in our study. The operating cash position is the first variable and has a mean of 0.71; this means that around 71% of the companies that are included in the sample have a positive operating cash balance. Concerning the profitability of the companies, the mean average for the return on assets is 4.03. The mean of the company size was found to equal 65 million dollars; this was measured by averaging the total assets of the 600 companies that constitute the sample.

Concerning the issuance variables, the mean average for the bonds maturity is 5.44 years. The second variable in this category is the convertible bonds option; the mean for this variable is 8.5% meaning that 8.5% of the companies have offered this option to their bondholders.

Panel (B1) from table 3 illustrates the correlation between our dependent variable (Bond Rating) and the operating cash position, the issue characteristics variables, and the issuer characteristics variables. The results demonstrate that different independent variables are significantly correlated with the bonds ratings. The operating cash position, the company performance, the company size, and the convertible option were found to be positively correlated to the bonds rating at significance levels of less than 1%. The company leverage was found to be positively correlated at a significance level of 5%. One variable (bonds maturity) was found to be negatively correlated with the Bond Ratings at a significance level of less than 1%. The issue size and the company risk were found to be not significantly correlated to the bonds ratings.

Panel B1: Correlation between the operating cash position and Bonds Ratings =

Variable	Bonds Ratings	Cash Position	Company Profit	Company Size	Company risk	Bonds Maturity	Convertible Provision s	Issue Size	Leverage
Bonds Ratings	1.000								
Cash position	0.1305 (0.0016)** *	1.000							
Company Profitability	0.1156 (0.0006)** *	0.0568 (0.02340) **	1.000						
Company Size	0.3688 (0.0005)** *	0.0543 (0.0334)*	-0.1433 (0.887)	1.000					
Company risk	0.0209 (0.4534)	-0.0432 (0.3645)	-0.0366 (0.5976)	0.6789 (0.0004)* **	1.000				
Bonds Maturity	-0.2345 (0.0003)** *	0.321 (0.2342)	-0.0033 (0.8766)	-0.3456 (0.0000)* **	-0.0854 (0.4434) )	1.000			
Convertible Provision s	0.2345 (0.0000)** *	0.0322 (0.6300)	0.0543 (0.5324)	-0.0543 (0.0065)* **	0.0654 0.3324	0.0432 (0.0322)* *	1.000		
Issue Size	0.0480 (0.1690)	-0.0212 (0.5431)	0.0057 (0.8700)	0.0268 (0.4432)	0.1655 (0.0000) )***	-0.0751 (0.0312)* *	-0.0174 (0.6175)	1.000	
Leverage	0.0865 (0.0345)**	-0.0643 (0.0778)*	-0.0083 (0.6753)	0.1045 (0.0123)* **	0.0001 (0.8654) )	-0.1144 (0.0064)* **	-0.0539 (0.1345)	0.0045 (0.9753)	1.000

To test our first hypothesis, we propose to run the mean comparison tests. To do so, we split our sample into two sub groups: a first group of companies that have a positive operating cash balance and a second group

that includes the remaining ones. The T-test output confirms our hypothesis since the mean for the first group (4.7) is greater than the mean of the second group (4.1). Moreover, the T-Test and the Wilcoxon-Mann-Whitney test confirm that difference between the two means is significantly different from zero (5% significance level).

This implies that the companies belonging to the positive operating cash group enjoys higher credit ratings.

Variable	Bonds Ratings	Creditors' Rights	Public Registry	Efficiency of Bankruptcy Process	News Circulation
Bonds Ratings	1.000				
Creditors' Rights	0.1567 (0.0000)***	1.000			
Public Registry	0.1556 (0.0003)***	-0.3453 (0.0000)***	1.000		
Efficiency of Bankruptcy Process	0.0554 (0.4325)	0.5643 (0.0000)***	-0.8765 (0.0000)***	1.000	
News Circulation	0.1255 (0.0000)***	0.6543 (0.0000)***	-0.1245 (0.0000)***	0.6543 (0.0000)***	1.000

Panel A from Table 4 identifies the results for the Ordered Probit estimation for the bonds ratings. Most of the results were as we expected before running the regression. The results imply that the positive operating cash balance have a positive significant impact on the bonds ratings (+0.4 at a significance level of 5%). This support our first hypothesis since being able to generate cash from company's main operations increases the probability of enabling the company to have higher bonds ratings. The company profitability and size have a positive significant impact on the bonds ratings. On the other hand, the convertible bonds option is the only issue variable which significantly impacts the bonds ratings of companies positively. The other issue and issuer variables have no significant impact on the bonds ratings.

The results for the other control variables have met our expectations since they affect the bond ratings positively at significant levels. The total increase in cash (from all activities) affects positively (+0.3) the bonds ratings at significance level of 5%. This finding approves our second hypothesis since we have found that higher positive cash balances scores leads to higher bonds ratings.

The table gives the output for the Ordered Probit Regression of the Bond Ratings as being the dependent variable. The variables that are listed below are: Bond Ratings which is an ordinal number that ranges from 1 to 7 as the later being the highest rating and the former the lowest rating.

Company's cash: a dummy variable that assigns 1 to companies that have a positive cash operating balance and 0 otherwise. Company Profitability: the company profitability measured in term of its return on assets. Company Size: the total assets were used to get the size of the companies that are included in the sample. Company Risk: it is measured by the standard deviation of net income. Bonds Maturity: the average maturity for the bonds portfolio issued by a company; weights were assigned on the basis of the size of the issuance to the total issuances. Convertible Provisions: a dummy variable that gives 1 to companies with the convertible option and 0 otherwise. Issue Size: it represents the size of the issuance in term of dollars. Leverage: the company leverage is measured by the debt to equity ratio. Concerning the other variables, more description is given in table 1. The stars that appear in the tables mean the following: \*\*\* for a significance that is lower than 1%, \*\* and \* are for a significance that is lower than 5% and 10% respectively.

Table 4: The Effect of company's operating cash on Bond ratings

Dependent Variable = Bonds ratings	Expected Sign	Model
Company's operating cash position	+	0.341 (0.044)**
Company Profitability	+	0.0123 (0.005)***
Company Size (in billions of U.S Dollars)	+	55.6 (0.000)***
Company risk (in millions of U.S Dollars)	-	-232 (0.765)
Bonds Maturity	-	-0.543 (0.345)
Convertible Provisions	+	0.600 (0.000)***
Issue Size	-	3.65×10 <sup>9</sup> (0.678)
Leverage	-	-0.000 (0.234)
Creditors Rights	+	0.244 (0.056)**
Public Registry	+	1.432 (0.000)***
Bankruptcy Efficiency	+	0.006 (0.003)***
News Circulation	+	0.235 (0.075)*
Manufacturing		0.344 (0.333)
Trades		-0.008 (0.876)
Finance		0.788 (0.003)***
Utility		0.624 (0.054)*
N		600
Pseudo R <sup>2</sup>		13.67%
LR – Chi <sup>2</sup>		234.77
Significance		(0.0000)***

Jenzazi (2010) found that the bond rating is positively affected by the company's liquidity but his research was limited to the overall cash position and took into consideration companies operating in the U.S only. Our findings suggest that, on an international scale, the bond ratings are significantly impacted by operating liquidity. Having positive operating cash balance, allows the company to enjoy a relatively higher bond ratings

compared to companies with negative operating cash balances. As a result, the costs for incurring debts (in the form of bonds) are lowered since creditors ask for relatively lower premiums for lending their money.

### **Limitations**

We face one major limitation at the level of the sample representativeness. Actually, we took the data on the bonds ratings from the F-Database and the data on the auditors from the W-Database. The matching of the two databases provided us with 600 observations that follow the distribution which is described in table 2. This fact could affect the representativeness of our sample.

### **Conclusion**

In our research we study the relationship between the companies' liquidity and the bonds ratings on an international scale. Our sample includes 600 companies from 26 different countries and the data is taken over a period of 10 years (from 2002 to 2012). The results of the Ordered Probit regression approve our expectations. In other words, we prove that when a company has a positive operating cash balance, the probability of having higher ratings for its bonds increases. This evidence suggests that the company's liquidity and more precisely the extent to which companies are able to generate cash from their mean operations affects their cost of debt; having a positive operating cash position allows the company to enjoy relatively higher ratings for its bonds and this leads to relatively lower costs of debt (in the form of bonds). The outcome of this research will add to the existing literature since no previous studies related to that field were done on a national or international scale. Having positive operating cash balance implies that the company is doing well in its main operations, enabling it to enjoy relatively lower cost of debt and this can increase its profitability and earnings.

Previous studies had used the change in total cash balance as a proxy for liquidity; however, many companies are able to inflate their cash position using the investing and financing activities. Once limiting the proxy to only the cash generated from operating activities, we are already excluding different sources of cash that can manipulate the results. Moreover, even within the operating cash, there is still some room for manipulation and misleading. Sometimes expenses such as depreciation, can be considered as a source for operating cash; however in reality it is not; instead, it is only a non-cash expense and that is why it is considered as a source of cash; furthermore, increases in accounts payable are also considered as sources of cash under the indirect method, however in reality they are not a source of

cash, instead, it is just postponing the payment of current expenses to an upcoming period.

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#### **Appendix A: S&P Credit Ratings Conversion**

<b>S&amp;P Bonds Ratings</b>	<b>From D to CCC+</b>	<b>From B- to B+</b>	<b>From BB- to BB+</b>	<b>From BBB- to BBB+</b>	<b>From A- to A+</b>	<b>From AA- to AA+</b>	<b>AAA</b>
<b>New Ratings</b>	1	2	3	4	5	6	7

# THE ROLE AND INFLUENCE OF ACCOUNTING SYSTEM AND EFFECTIVE CONTROL THROUGH ACCOUNTING PROCEDURES AND METHODS IN COMBATING AND REDUCING TAX EVASION

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Doi: 10.19044/elpl.v1no2a6 [URL:http://dx.doi.org/10.19044/elpl.v1no2a6](http://dx.doi.org/10.19044/elpl.v1no2a6)

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## Abstract

The purpose of this study is to identify the Information System used at Income and Sales Tax Department, and the impact it has on the effectiveness of income tax in the State throughout the development of computers and software used in the department, as well as the role of the impact public and private departments in providing useful quantitative and qualitative information.

Set of assumptions have been formed by the researcher to achieve the purposes of the study and to answer its questions. Furthermore, the results of the study show that the increase of the effectiveness of sales and income tax department is impacted by all the independent variables subject matter of this study. The most influencing variable is the used computers and software contributions in information systems; followed by the development of the information systems at sales and income tax department, the final influencing variable is the activation of governmental organizations and directorates role by providing the accurate information for the department. Moreover, statistic analysis revealed a profound association between tax evasion and accounting system through the penal and control system

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**Keywords:** Accounting systems, combating tax evasion

## Chapter I: Study Framework

### Introduction

The concept of accounting has improved from bookkeeping to an information system. The American Accounting Association AAA has defined accounting as “the process of identifying, measuring and

communicating economic information to permit informed judgments and decisions by users of the information!”

The accounting as an information system serves to collect and communicate the economic information related to economic activities of the business or organization to a wide range of users. Sales and income tax department is one of the leading governmental institutions and departments to depend on the reports of the information systems issued by taxed companies and economical units. The outputs of these systems form a foundation to assess companies and individuals, as well as the clients and suppliers of such companies and units; resulting in the increase of the number of tax payers and increase the objectivity of the assessors’ judgments. Consequently, this will lead to reducing tax evasion and increasing tax department’s collection and effectiveness, in addition to achieving the economic, financial and social purposes.

### **First: the subject of Study**

Currently, taxes are the most important recourses of the state. Statements of the Ministry of Finance indicate that taxes are the main resource of revenue for State’s Treasury in Jordan. This case is not restricted to Jordan only; it applied to all other countries worldwide. Accordingly, the importance of studying taxes and their problems came to existence.

Tax evasion is a serious problem affecting many states; and the main reasons for this problem are:-

- Insufficiencies and Deficiencies in the accounting and controlling system.
- Lack of effective controlling system under intuitive information technology.
- Non compliance and non applicability of tax laws.

### **Second: The Importance of Study**

The significant development of modern technology especially of computers and communication in addition to the movement from Management Era to the Information Era increased the importance of information system development to keep abreast with these developments and to provide qualified manpower, materials possibilities and activation of the used computers and software.

This study examined The role of the importance of information system development used at sales and income tax department to achieve the department’s purposes to broaden the base of taxpayers, to increase tax collection through the statements of all income sources and reducing the attempts of tax reduction and combating tax evasion which serves assessors in making more accurate and objective decisions. Consequently, it works on

Confidence-building between the department from one side and taxpayers on the other hand.

### **Hypotheses of the Study**

Some Hypotheses have been achieved through this study:-

- No association between accounting system and tax evasion with statistically significance at the level  $\geq 5\%$ .
- No association between experience and tax evasion with statistically significance at the level  $\geq 5\%$ .
- Tax evasion is not varying with tax price with statistically significance at the level  $\geq 5\%$ .
- No association between penal system and tax evasion with statistically significance at the level  $\geq 5\%$ .

### **Objectives of Study**

This study aims to achieve the following purposes.

- Identifying the compliance of accounting system with tax evasion.
- Identifying the reasons of tax evasion.
- Identifying the factors of reducing tax evasion.
- Attainment to results, recommendations and proposals to reduce tax evasion.

### **Previous Studies**

#### **A- Arabic Studies**

1- Alessa (2000)

The role of information system in management decision making at Ministry of Education.

1- This study aimed to search about the role of information system in management decision making at the Ministry of Education in Jordan in order to recognize the role of information system in decision making at the Ministry, to identify the comprehensiveness of the information system and to identify the role of information system in management decision making at the Ministry of Education. Adel Musa Mohammad Alessa – unpublished Master Thesis – Arab Academy for Banking and Financial Sciences – Amman 1999/2000.

#### **Mohammad Islam Qasem Abdul Kareem**

(January-1<sup>st</sup>.2011- Tax Accounting System role in the assessment of direct tax)

This study examined the role and influence of the Tax Accounting System in the assessment of direct tax upon the revenue of the Sudan. The

importance of this study is in highlighting the tax accounting system through a scientific perspective and the role of direct tax in development. The subject of the research is the lack of coordination between tax income departments and the commitment of applying the accounting system assessment the direct tax proceeds hence the lack of contributions in a state's public revenue. The research's hypotheses in efficient accounting system leads to sound tax assessment meanwhile, a lack of tax proceeds in general, direct tax proceeds in particular, lack of coordination between tax proceeds departments and tax credits reduced tax with outbreak of tax evasion. This study aims to identify the role of the accounting system in direct tax assessment, to identify accounting system commitment in tax assessment and to identify the direct tax with clarifying its impacts and types upon revenues. The researcher found outcomes as lack of tax proceeds in general, direct tax in particular in addition to tax evasion and loss of confidence between financier and Taxation Chamber, shorten of tax umbrella, weakness of information system and lack of human cadre. The recommendations are the following: potentials development in all respects of Taxation Chamber in achieving tax fairness, combating tax evasion and build the bridges of confidence between financier and Taxation Chamber.

### **Abu Alfuttuh Study 2011**

The study refers to the challenges that may face banking sector in Egypt because of American Tax Law issued in 2010 which is applied in 2013, whereas the study highlighted the increase in operating costs and radical changes in payments systems and clients' data beard by banking institutions as a result for applying Foreign Account Tax Compliance Act (FACTA). The study introduced set of solutions for some challenges faced banks when this law is applied.

### **Foreign Studies**

#### **First Study: Mars an & Dean: 2010**

The study mentioned the necessity of global financial system to execute FACTA's demands, to prepare financial reports and to deduct tax at source for all Americans external accounting transactions in order to reduce tax evasion for United States and countries signed in agreement to carry on the obligation of this law, to achieve tax savings at governmental level and to be suggested in commitment it and all countries must be associated by agreements to execute this law to gain dual benefits and reciprocity.

#### **Second Study: Fariz Huseynov 2012.**

This study examines the relation between tax avoidance and tax management corporate social responsibilities by applying FATCA's law, the

ways of operating costs development and possible losses resulted by the avoidance. Consequently, it firms to get rid of bad methods of tax avoidance because it reflects the negative side in contributing the legal persons share in public expenditure and tax management must be participated in introducing full disclosure of peoples' tax to execute the perfect commitment of FATCA's law demands in full disclosure and to ensure all Americans' transactions outside the United States with full commitment of paying taxes voluntarily because they carry the American nationality, subsequently, to avoid penalties and fines.

### **Third Study: Christopher 2012**

This study examines the savings achieved by institutions as tax planning to avoid commitment risks of applying FATCA's law and to avoid the non-disclosure fines of external corporations transactions or non-disclosure of financial assets outside the United States as well as dealing with transferring price in order to avoid the high tax rate at residential country as the study refers to the importance of corporation tax planning to maintain tax savings when it depends on one of tax advisor who avoids the compliance of high tax rate or at least to avoid fines. Meanwhile, the study recommended the global banks to make procedures of costs budgets and benefits before starting the applying FATCA's law.

## **I.**

### **Theoretical Framework**

#### **Tax Evasion**

Financer works to be digressed from tax, get rid of it or transfer it to another person because it makes an additional burden for him. Digressive tax means that taxpayers could avoid paying taxes legally without transferring it to another person, whereas transferring it to another person is moving the tax burden to another person after being fulfilled, which means the stability of tax burden, incidence of a tax or tax incidence.

#### **Meaning of Tax Evasion**

It is the way used by financer trying to non-paying all or some accrued taxes through one of used methods in order to avoid taxpaying by using different and many ways of deceptions, so Tax Fraud is a synonym to Tax Evasion, which might be through tax assessment and when financer tries to obscure some taxable materials or when financer obscure his funds to prevent the financial management from collecting its rights.

### **Differences between Tax Evasion & Tax Avoidance**

Some writers found tax avoidance and tax evasion are the same, some of them considered tax avoidance is a comprehensive term which refers to all types of tax evasion and tax evasion is one of its forms e.g. each of Duverger, Tardier and Rosier considered tax avoidance is an acceptable concept whereas tax evasion is not acceptable concept. On the other side other authors such as Lerouge, Piatier and Margarites depend on opposite point of view, tax avoidance is a specific concept for tax evasion which means the same source.

While some authors differentiate between tax evasion & avoidance and agreed that tax evasion is violating the provisions of tax laws in other expression tax evasion is illegal.

Assistant Factors of Tax Evasion

First: Disadvantages in revenue law which include:

Tax Revenues are complicated.

Multiplicity of tax is being various or manifold.

Procedures of organizing tax.

Economical circumstances.

Second: Financial Management Disadvantages include:

Difficulties in tax assessment.

Inequality in applying.

Penalties: when financial management neglects in applying penalties regulated by law that leads to continued and enhanced tax evasion along with fraud.

Third: psychological factors for financers when tax evasion:

Popularity of tax consciousness.

Directing the Expenditure of State; if the state disburses the collected tax correctly in way that individuals could feel it, their tax evasion will be reduced whereas if the collected tax is spent in an un-profitable way, taxpayers will find tax evasion is excused.

### **International Tax Evasion**

International tax evasion in general is one of the tax evasion's forms, but it takes place abroad and here taxpayer works with regional tax principle which means the states' rights in imposing taxes on accessing and activities inside regional state, but with the extending of global environment inactive this principle. Hence, the taxpayer tries to reduce tax burden with legal or illegal ways 2- by moving commodities or his residency place to a foreign region to have the ability of tax evasion, in this case 3- he takes advantage of either fall in tax rate in comparison with his original country or from tax reliefs and concessions that he gained from hosting country particularly, countries are called Tax Haven which provide appropriate climate for

taxpayer in order to evade from taxes that could be within legal framework according to bilateral and multilateral agreements. Tax evader depends on loopholes in legal systems not in breaking rules. 4- Hence, international tax evasion could be differentiated from internal tax evasion. Along with our trying to identify internal tax evasion, tax fraud is identified by Lucien Mehl as “breach of the levy law to evade taxes and reduce basis of tax”.

### **Accounting Systems & Accounting Standards**

Accounting standards (rules): Those include laws and legislations which control preparing financial statements. The process of setting standards is an organizing framework or the process of forming accounting standards may be practiced in a country in different way of other country (take cognition that principles are stabled in general) so the practical applying may deviate from enforced accounting standards. The researchers mention in accounting that four reasons are existed to clarify this difference:

Lack of related penalties of non-applying accounting standard in proper way or it is not active in other countries.

Some economical units including optional for introducing non-required information.

In some cases the economical units are allowed by their countries to be deviated from accounting standards if that leading to proper results and represent its financial center ideally.

Applying accounting standards to the independent financial statements of institutions not for consolidated financial statements in some countries hence the countries choose other basis for accounting beside national standards when preparing consolidating statements.

### **Hypotheses Test**

#### **First Hypothesis**

Through Statistic Analysis it is found that scientific hypothesis has been rejected because it represents (0.00% less than 5%)

The hypothesis was formed as the following

- There is no correlation between Accounting System and Tax Evasion at a 5% level of significance
- This hypothesis has been rejected and this indicates that there is a correlation between the Accounting System and Tax Evasion.

Next figure explains that.

Test Type: One sample test

**One-Sample Statistics**

	N	Mean	Std. Deviation	Std. Error Mean
f1	44	1.8045	.52560	.07924

**One-Sample Test**

Test Value = 2.5						
	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
f1	-8.777-	43	.000	-.69545-	-.8553-	-.5357-

**Second Hypothesis**

Through static analysis it is found that scientific hypothesis was refused because it represents (0.00% less than 5%)

The next hypothesis is formed as the following:

There is no correlation between Experience and Tax Evasion at a 5% level of significance.

The hypothesis has been rejected and this indicates that there is a clear correlation between Experience and Tax Evasions.

The following figure explains that:

Test Type: One sample test

**One-Sample Statistics**

	N	Mean	Std. Deviation	Std. Error Mean
f2	44	1.7159	.42314	.06379

**One-Sample Test**

Test Value = 2.5						
	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
f2	-12.292-	43	.000	-.78409-	-.9127-	-.6554-

**Third Hypothesis**

It was found through statistic analysis that scientific hypothesis because it represents (0.00% less than 5%)

- Tax Evasion is not affected by tax price at a 5% level of significance
- The hypothesis has been rejected which means there is a clear effect between Tax Evasion and Tax Price.

The following figure explains that.  
Test Type: One sample Test

**One-Sample Statistics**

	N	Mean	Std. Deviation	Std. Error Mean
f3	44	2.1667	.46311	.06982

**One-Sample Test**

	Test Value = 2.5					
	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
f3	-4.774-	43	.000	-.33333-	-.4741-	-.1925-

**Fourth Hypothesis**

Through static analysis it is found that the scientific hypothesis was refused because it represents (0.00% less than 5%)

The following hypothesis was formed

- There is no correlation between the Penalty System and Tax Evasion at a 5% level of significance.
- The hypothesis has been rejected and this indicates that there is a clear correlation between the Penalty System and Tax Evasion.

The following figure explains that  
Test Type: One sample test

**One-Sample Statistics**

	N	Mean	Std. Deviation	Std. Error Mean
f4	44	9.6818	2.56789	.38712

**One-Sample Test**

	Test Value = 2.5					
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
f4	18.552	43	.000	7.18182	6.4011	7.9625

**Widened Questionnaire Test on SPSS System**

Analyses according to sex:

- Statistics related to sex were as the follow male: 33 but female 11.
- The percentage ratio of male was 75.0 but female was 25.0

- The percentage of male was 75.0 and female was 25.0
- Cumulative Percent was 75.0 for male but 100.0 for female.

**Statistics**

N	Valid	44
	Missing	0

**Gender**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid male	33	75.0	75.0	75.0
Valid female	11	25.0	25.0	100.0
Total	44	100.0	100.0	

**Descriptive statistics: from deviation and Arithmetic mean**

Descriptive statistics for male was 44 and for female 44, the Maximum was for male and female was 2.00 and the Minimum was -1.00

- The arithmetic mean was 1.2500
- The standard deviation was .4380

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Gender	44	1.00	2.00	1.2500	.43802
Valid N (list wise)	44				

**Age analysis**

First the ages were different from 20 – 40

The frequency for ages 20-26 is 22

The frequency for ages 31-36 is 7

The frequency for ages 36-40 is 3

**Age**

N	Valid	44
	Missing	0

**Age**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 26.00	22	50.0	50.0	50.0
Valid 26-30	12	27.3	27.3	77.3
Valid 31-35	7	15.9	15.9	93.2
Valid 36-40	3	6.8	6.8	100.0

Age

	Frequency	Percent	Valid Percent	Cumulative Percent
26.00	22	50.0	50.0	50.0
Valid 26-30	12	27.3	27.3	77.3
31-35	7	15.9	15.9	93.2
36-40	3	6.8	6.8	100.0
Total	44	100.0	100.0	

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Age	44	1.00	4.00	1.7955	.95429
Valid N (list wise)	44				

The percentage was

20 to 26=50.0

26 to 30 = 27.0

31 to 35 = 15.9

35 to 40 = 6.8

Standard Deviation was 95429

Mean was 1.7955

Qualifications Statistics

Diploma frequency = 4

Bachelor Degree = 33

Master's Degree = 7

Whereas Doctorate = Zero

Percentage

Diploma = 9.0

Bachelor Degree = 75.0

Master Degree = 15.0

Deviation = 5.0106

Mean = 3.0682

Statistics		
Qualification		
N	Valid	44
	Missing	0

Qualification					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Diploma	4	9.1	9.1	9.1
	Bachelor	33	75.0	75.0	84.1
	Master	7	15.9	15.9	100.0
	Total	44	100.0	100.0	

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Qualification	44	1.00	3.00	2.0682	.50106
Valid N (list wise)	44				

#### Specialties Statistics

Finance Sciences' frequency = 5

Economy = 2

Whereas accounting = 37

The percentage

Finance Sciences 11.4

Economy = 4.5

Accounting = 84.0

Standard Deviation = 6.59938

Arithmetic mean = 3.72727

Statistics		
Specialty		
N	Valid	44
	Missing	0

#### Specialty

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Finance Sciences	5	11.4	11.4	11.4
	Economy	2	4.5	4.5	15.9
	Accounting	37	84.1	84.1	100.0
	Total	44	100.0	100.0	

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
specialty	44	2.000	4.000	3.72727	.659938
Valid N (list wise)	44				

**Experiences Analysis**

Without Experience frequency = 11

Two years = 14

Five years 13

Whereas more than five years = 6

Percentage

Without experience = 25.0

Two years = 31.8

Five years = 29

More than five years 13.0

Standard Deviation = 1.00632

Arithmetic Mean = 2.318

**Statistic**

**Experiences**

N	Valid	44
	Missing	0

**Experiences**

	Frequency	Percent	Valid Percent	Cumulative Percent
Without	11	25.0	25.0	25.0
2 years	14	31.8	31.8	56.8
Valid 5 years	13	29.5	29.5	86.4
+ 5 years	6	13.6	13.6	100.0
Total	44	100.0	100.0	

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Experiences	44	1.00	4.00	2.3182	1.00632
Valid N (list wise)	44				

## Statistic Questions

### Question1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Totally agree	44	100.0	100.0	100.0

### Question2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Totally agree	23	52.3	52.3	52.3
	agree	19	43.2	43.2	95.5
	Neither	2	4.5	4.5	100.0
	Total	44	100.0	100.0	

### Question3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I know them	1	2.3	2.3	2.3
	I know much of them	17	38.6	38.6	40.9
	I know some of them	17	38.6	38.6	79.5
	I know nothing of them	9	20.5	20.5	100.0
	Total	44	100.0	100.0	

### Question4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Answer A	20	45.5	45.5	45.5
	Answer B	9	20.5	20.5	65.9
	Answer C	7	15.9	15.9	81.8
	Answer D	7	15.9	15.9	97.7
	Answer E	1	2.3	2.3	100.0
	Total	44	100.0	100.0	

**Question5**

	Frequency	Percent	Valid Percent	Cumulative Percent
Answer A	15	34.1	34.1	34.1
Answer B	6	13.6	13.6	47.7
Valid Answer C	5	11.4	11.4	59.1
Answer D	18	40.9	40.9	100.0
<b>Total</b>	<b>44</b>	<b>100.0</b>	<b>100.0</b>	

**Question6**

	Frequency	Percent	Valid Percent	Cumulative Percent
Totally agree	24	54.5	54.5	54.5
Valid Agree	18	40.9	40.9	95.5
Neither	2	4.5	4.5	100.0
<b>Total</b>	<b>44</b>	<b>100.0</b>	<b>100.0</b>	

**Question8**

	Frequency	Percent	Valid Percent	Cumulative Percent
Totally agree	23	52.3	52.3	52.3
Valid Agree	17	38.6	38.6	90.9
disagree	1	2.3	2.3	93.2
Neither	3	6.8	6.8	100.0
<b>Total</b>	<b>44</b>	<b>100.0</b>	<b>100.0</b>	

**Question9**

	Frequency	Percent	Valid Percent	Cumulative Percent
Totally agree	11	25.0	25.0	25.0
Valid Agree	27	61.4	61.4	86.4
disagree	2	4.5	4.5	90.9
Neither	4	9.1	9.1	100.0
<b>Total</b>	<b>44</b>	<b>100.0</b>	<b>100.0</b>	

**Question10**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Totally agree	5	11.4	11.4	11.4
	Agree	34	77.3	77.3	88.6
	Disagree	2	4.5	4.5	93.2
	Neither	3	6.8	6.8	100.0
	Total	44	100.0	100.0	

**Question11**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Totally agree	9	20.5	20.5	20.5
	Agree	33	75.0	75.0	95.5
	Disagree	1	2.3	2.3	97.7
	Neither	1	2.3	2.3	100.0
	Total	44	100.0	100.0	

**Question12**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Totally agree	13	29.5	29.5	29.5
	Agree	24	54.5	54.5	84.1
	disagree	3	6.8	6.8	90.9
	Neither	4	9.1	9.1	100.0
	Total	44	100.0	100.0	

**Question13**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Totally agree	15	34.1	34.1	34.1
	Agree	29	65.9	65.9	100.0
	Total	44	100.0	100.0	

**Question14**

	Frequency	Percent	Valid Percent	Cumulative Percent
<b>Totally agree</b>	<b>10</b>	<b>22.7</b>	<b>22.7</b>	<b>22.7</b>
<b>Agree</b>	<b>31</b>	<b>70.5</b>	<b>70.5</b>	<b>93.2</b>
<b>Disagree</b>	<b>1</b>	<b>2.3</b>	<b>2.3</b>	<b>95.5</b>
<b>Neither</b>	<b>2</b>	<b>4.5</b>	<b>4.5</b>	<b>100.0</b>
<b>Total</b>	<b>44</b>	<b>100.0</b>	<b>100.0</b>	

**Conclusion**

- Accounting system plays a main role at tax department whereas ineffective accounting system leads to tax evasion.
- Experience is associated with tax evasion; Taxpayer's opportunities in tax evasion are increased by high experience.
- Tax price affects tax evasion.
- Tax evasion is associated with accounting system through penal & control system, in case of un-existing of controlling system, laws and strict penalties lead to tax evasion and neglecting at tax department.

**Recommendations**

1- Not to deal with both accounting information system and management information system partially and focus on one of them without the other which means establishing developed and computerized management and accounting information system to reduce tax evasion.

2- To consider about related characteristics of the suggested system to the quality of appropriate information represented in ensuring and trusting the information or the neutral and depending on the information to be compared and for appropriate timing in addition to the ability of information and perfect disclosure.

3- Suggested system must observe using active and efficient contribution of system in tax, accounting and management control to reduce tax evasion e.g. cases and objections and what is related.

4- Suggested system must observe un-financial information which reducing tax evasion and what is related.

5- Must work on awarding citizens with his tax duties and remove psychological barrier between taxpayer and tax department.

6- Build bridges of relationships based on trust, relief and respect between taxpayer and tax department.

7- Concentrate on tax return since all taxpayers be abided to introduce this tax return for its importance in facilitating tax departments works.

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## **THE ANALYSIS OF INCOME POVERTY IN WAD BANDA LOCALITY, NORTH KORDOFAN STATE**

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Doi: 10.19044/el.p.v1no2a7 [URL:http://dx.doi.org/10.19044/el.p.v1no2a7](http://dx.doi.org/10.19044/el.p.v1no2a7)

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### **Abstract**

This study aimed to analysis income poverty in Wad Banda Locality, North Kordofan State. Both primary and secondary data were used. Primary data were collected through field survey conducted on Sep. 2009 using questionnaire. The study used Foster, Greer, and Thorbecke index (FGT index) as main technique for measuring poverty. The study showed that income poverty was highly prevalent in study area. The study recommended that the most vulnerable (or poor) people need to be better targeted through capacity building programs in order to have significant positive impact on their status or to make the path out of poverty.

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**Keywords:** Income Poverty in Wad Banda

### **Introduction**

Poverty is a multi-dimension concept. Experts and academics have suggested many definitions over time. For example, poverty could be the lack of command over commodities in general; alternatively, it could be the lack of command over some basic goods (e.g., food and housing). More generally, poverty is the lack of capability to function in a given society. All these definitions point to poverty as a status in which a reasonable standard of living is not achieved. A synthesis of the various positions has been made by the World Bank, poverty is the lack of, or the inability to achieve, a socially acceptable standard of living (FAO, 2005, W.B, 2005).

The most important question which arise, why we measure poverty? For answering this question there are four reasons to measure poverty. First, to keep the poor on the agenda; if poverty were not measured, it would be easy to forget the poor. Second, to be able to target interventions that aim to reduce or alleviate poverty. Third, to monitor and evaluate projects and policy interventions that is geared towards the poor. Fourth to evaluate the effectiveness of institutions whose goal is to help the poor. And finally, to help countries think clearly and systematically about how the position of the poor may be improved, (W.B, 2005).

### **Problem Statement**

Over the past several decades, livelihoods in North Kordofan State were affected by frequent drought cycles. It is also suffers from extreme fluctuations in rainfall which generally vary from 150-450 mm/year. Severe climatic conditions and land mismanagement (overgrazing, over cropping, deforestation) have caused vegetation cover in North Kordofan State to become very poor and lowest many endemic species (woody, rangeland species) that were once dominant. Furthermore, there is a persistent threat associated with shifting sand as result of bordering the desert zone, (GEF, 2009). Faki et al (2009) expressed that food poverty in North Kordofan State is the highest among four States included in survey conducted 2008 besides Kassla, River Nile, and Northern state. Using income poverty from crops alone, the incidence, depth, and severity of food poverty were 99.5, 83.9, and 84.0 percent, respectively. These points raise some questions which need to be address to establish a complete picture of poverty situation in North Kordofan State:

1. What are the key indicators of incidence of poverty in Wad Banda Locality of North Kordofan State?
2. What are the main causes of poverty in Wad Banda Locality?
3. What needs to be done to improve people livelihood and reduce their poverty? And what policies need to be developed?

### **The objective of the study**

The main objective of the study is to analysis Income Poverty in Wad Banda Locality, North Kordofan State.

The specific objectives are:

1. To Identify and describe poverty situation in the study area.
2. Identification and analysis causes of poverty in economic framework.
3. To suggest policies for poverty reduction.

### **Hypotheses of study**

1. The majority of people in the study area are under poverty line.

2. Illiteracy and drought are some causes of poverty.
3. The governmental programs which used to address poverty so far tend to excessively emphasize on symptom rather than attacking the roots causes of poverty.

### **The research methodology**

Both primary and secondary data were used in this study. A questionnaire was used to collect primary data to assess key issues related to poverty in NKS. Hundred household heads were chosen through simplified random sampling.

The main analysis technique for the study was Foster, Greer, and Thorbecke index (FGT index) which include incidence of poverty; poverty gap; and severity of poverty. Poverty indicators for both income and consumption were calculated following Faki et al (2009) approach by using 2.6 as poverty line for NKS. Descriptive statistics, correlation, Lorenz Curve, and Gini Coefficient were also used in data analysis.

### **Poverty measurement using income**

Using income for measuring poverty, findings of the study revealed that poverty was highly prevalence among people in study area. Income was decomposed into four categories, income from crops as denoted by ( $Y_1$ ), income from crops plus livestock as denoted by ( $Y_2$ ), income from ( $Y_2$ ) plus income from off farm activities as denoted by ( $Y_3$ ) and income from ( $Y_3$ ) plus income from remittances as denoted by ( $Y_4$ ). This decomposition methodology of income was taken from Faki et al (2009). Results of the study showed that the incidence of poverty was 100% with regards to income from crop production only ( $Y_1$ ). The addition of income from livestock to income from crop production ( $Y_2$ ) reduced incidence of poverty only from 100% to 99%. Adding income from off-farm activities to income from  $Y_2$  ( $Y_3$ ) reduced headcount index from 99% to 92%. With regards to total income ( $Y_4$ ) or when we added remittance to income from ( $Y_3$ ), the incidence of poverty falls to 90% which considered relatively very high table (1). This result relatively near to Faki et al (2009) results for incidence of poverty for North Kordofan which was 99.5%, 98.1%, 81.5%, and 81.3% for ( $Y_1$ ), ( $Y_2$ ), ( $Y_3$ ) and ( $Y_4$ ) respectively.

Poverty gap and severity were 83% and 71% respectively with regards to ( $Y_1$ ), 72% and 58% respectively for ( $Y_2$ ), 65% and 50% respectively for ( $Y_3$ ) and 61% and 46% respectively for total income ( $Y_4$ ). Faki et al (2009) resulted that poverty gap (depth of poverty) for North Kordofan State was 83.9%, 78.7%, 51.6% and 45.4% for ( $Y_1$ ), ( $Y_2$ ), ( $Y_3$ ) and ( $Y_4$ ) respectively, while poverty severity was 84.0%, 78.8%, 51.7% and 45.5% for ( $Y_1$ ), ( $Y_2$ ), ( $Y_3$ ) and ( $Y_4$ ) respectively.

Table (1): Income poverty indicators

income categories	Y <sub>1</sub>	Y <sub>2</sub>	D <sub>1</sub>	Y <sub>3</sub>	D <sub>2</sub>	Y <sub>4</sub>	D <sub>3</sub>
head count (incidence of poverty)%	100	99	-1	92	-7	90	-2
poverty gap	83	72	-11	65	-7	61	-4
poverty severity	71	58	-13	50	-8	46	-4
income gap ratio	83	73	-1	70	-3	67	-3
mean income of poor	45	70	25	78	8	85	7
mean income of no poor	0	3.38	3.38	3.59	0.21	3.63	4

Source: Calculated from the field survey data (2009).

**Note:** Y<sub>1</sub> = income adult equivalent from crops a day, Y<sub>2</sub> = income adult equivalent from crops + livestock a day, Y<sub>3</sub> = income adult equivalent from crops + livestock + off farm activities a day, Y<sub>4</sub> = total income per adult equivalent a day (income adult equivalent from crops + livestock + off farm activities a day + remittances).D<sub>1</sub>, D<sub>2</sub>, D<sub>3</sub> and D<sub>4</sub> change in poverty due to change in income.

### Income and consumption correlations

Findings of the study revealed that income of households interviewed was positively highly correlated with education and consumption at 0.01 level of significance. While had no significant correlation with age, gender, family size, family size in adult equivalent, and property. This indicates that education is important factor in compacting poverty and improving living standards, table (2).

Table (2): Income correlations

Variables	Pearson Correlation	Sig. (2-tailed)
Age	0.03	0.76
Gender	-0.16	0.10
Education	0.25	0.01
Family size	-0.09	0.36
Family size in adult equivalent	-0.13	0.21
Property	-0.05	0.65
Total consumption	0.98	0.00

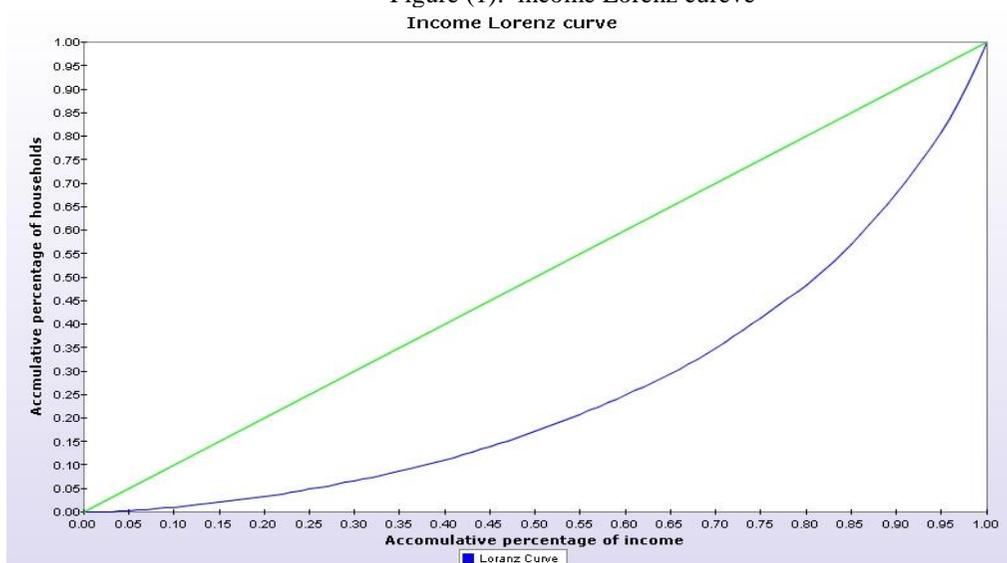
Source: Calculated from the field survey data (2009).

### Gini coefficient and inequality

The Gini coefficient is usually defined mathematically based on the Lorenz curve. It is the ratio of the area that lies between the line of equality and the Lorenz curve. Results of the study showed that Income Gini coefficient was 0.47, figure (1). Since 0 for Gini coefficient corresponding to complete equality, and 1 corresponding to complete inequality, the

households income distribution come near to the middle which indicate moderate income distribution.

Figure (1): income Lorenz curve



Source: Drived from the field survey data (2009).

## Recommendations

1. Focusing on capacity building programs to help poor in gaining essential capabilities and skills which empower them to become effective economic agents.
2. Giving more attention on women development programs which enable them to contribute efficiently in improving living standards of their households.
3. Providing more and better basic services such as education, health, transportation and communications through focusing on improvement of infrastructures for these services.

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# COMPARING JAPAN (KEIRESTU) AND KOREA (CHAEBOL) ECONOMIC EFFICIENCY ON THEIR FINANCIAL STRUCTURES

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Doi: 10.19044/elp.v1no2a8 [URL:http://dx.doi.org/10.19044/elp.v1no2a8](http://dx.doi.org/10.19044/elp.v1no2a8)

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## Abstract

In this constantly changing global environment, Japan and Korea have shown impressive economic growth by creating formidable industrial powerhouse in the past two decades that carved out markets shares in the Asia, Europe, Latin and North America regions. They are known as Asia's second and third biggest economies with a real gross domestic product (GDP) in the trillions. Their economic development strategies strongly mirror each other because of an industrial group system which was foster from *zaibatsu* (prewar) a family owned organization that dominated the both economic activities by controlling industrial and financial policies through single parent intervention concept. After the postwar (WWII) this organization was broken up by the United States (occupier) and transformed into *zeirestu* and *chaebol* conglomerates system which were suppose to promote a more free independent enterprise system. This research paper will address how these two inter-corporate group alliances systems influence their economies strategic decision-making processes.

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**Keywords:** Comparing Japan (Keirestu) And Korea (Chaebol)

## Introduction

To understand these two dynamic economies, a person must look at their histories. Therefore, a country past social and political history influences its future economic growth and development. During the thirteenth and nineteenth centuries Korea was ruled by monarchies which supported the Korean elite groups and Imperial China's economic environment by being an agricultural supplier. This feudal state system was set up as a subculture of the Chinese culture in which the Confucian values are strictly observed in every aspect of their macroeconomic and microeconomic policies and these vertical and reciprocal personal

obligations was also imbedded into Japanese society. (Chang, 2001) Table 1 shows those values.

TABLE 1  
CONFUCIAN VALUES

- 
- Positive attitudes to world affairs and faith in the transformability and perfectibility of the human condition
  - Importance of self-cultivation
  - Lifestyle of discipline and desirability of hard work and frugality as social discipline
  - Duty; consciousness in the form of reciprocity of respect and authority and public accountability
  - Centrality of overriding concern for the family in social harmony and stability
  - Political order as a moral community
  - Necessity of government leadership
  - Disinclination for civil litigation
- 

Source: Kim, 1994.

In the late 1800s, the Treaty of Khangwa was signed by Japan and Korea in which allowed trade commerce throughout Korea's ports, but by the beginning of the twenty century Japan's military might conquer the Korea peninsula and made it a colony. Some economists believe that Japan colonialism of Korea led to the "modernization" of this region. For example, "Japanese occupation destroyed the class system, abolished slavery, broke up the great estates and paved the way for land reform. It led to increase education for the average Korean, the transfer of managerial skills in industry and commerce to Korean and the creation of an urban industrial workforce." (Kennett, 2004, p.313). This colonial system was a sponsorship of the Japan's government and the *zaibatsu* diversified industrial groups which were elite policymakers and business families that controlled most economic activity in this country; and this same top-down, hierarchical structure was implemented into every colonial province to control their economic and political systems. For instance, the colonial government passed legislation that allowed complete controlled over Korean industrial sectors and business groups was formed only to serve colonial ruler interests. "These colonial rulers introduced the Company Law in 1911 requiring Korean entrepreneurs to get permission from the colonial government before setting up industrial firms." (Cha, 2004, p.281) This business law created indigenous capitalists' state that produced goods and products for the Japanese industry business, which already controlled over 70 percent of Korea capital. Although, in the 1930s, the Japanese government did implement a heavy industrialization plan for the region, its intention was not foster economic growth, but instead to use this industrial base as launching

pad for an invasion into China, Taiwan and other Asian countries. As a result, some economists are saying that the *zaibatsus*' nationalist policy that ties them with industry and state was partly responsible for Japanese military adventurism in Asian Pacific regions, which led to World War II. Fortunately, after the war the zaibatsu system was broken up by occupier the United States (U.S.) both in Japan and Korea, which led to a more independence equity shareholders such as the *keiretsu* and *chaebol* industrial groups.

*Founders*; what business role does these new industrial groups play in controlling their nation *equity capital*?

As previous mention, the development of the *keiretsu* and *chaebol* groups was brought about by U.S. dissolving the former *zaibatsu* (prewar industrial groups) that dominated Japan and Korea's economic and political activities. According to Ming and Lai (1999) "*keiretsu* is an organizational arrangement created for a group of companies or conglomerates. However, many researchers and businesspersons use this term loosely to mean business groups that use *keiretsu* as a device to systematically arrange or organize relationships among companies." (p.424). True of the matter, "the member companies of the Japanese *keiretsu* are bound by the cross-holding of stock which consists of a small percentage of shares and a great degree of personnel interaction due to the exchange of the board of directors as well as employees between member companies. Since these companies are strongly linked to each other, they share common goals which are carried out by business strategies formed jointly by the top executives of all the members companies." (Putnam & Chan, 1998, p.113). "These business leaders are divided into six separate groups that are comprised of most of the largest corporations in Japan including the largest commercial banks. Each of the six respectively is linked together by shareholding interlocks and by ties of trade and credit and the largest members of each are represented in the six respective monthly "presidents' council" meetings." (Flath, 1993, p.249)

To sum it up, "the term *keiretsu* may be more comprehensively defined as follows: 1) a systematized arrangement for internal control of member firms; 2) a means of control supported by a combination of commercial justifications (including legal ties, financial ties, and operational ties) and emotional commitments (including personal ties and cultural bonds); 3) a mechanism to facilitate policy implementation; 4) not only the effects are observed and reinforced by group members' cooperative activities but the pattern of relationships is sanctioned by a symbiotic relationship between major Japanese business groups and government bureaucrats." (Ming & Lai, 1999, p.428)

"The *chaebol* were family founded, owned and controlled, with a plethora of diverse subsidiaries linked in opaque fashion. Their Korean

nickname, octopus with many tentacles' is indicative of this. They were held together by cross share-holdings, subsidies and loan guarantees with inter-group competitive tension, distrust and rivalry. Their all-powerful founding chairmen, on the other hand they were not *de jure* legally liable for company misfortune as they did not actually hold formal positions.” (Richter, 2002). As the figure 2 shows that majority original founders still owns most of the equity capital. This is because many of the wholly owned use a high debt-to-equity ratios system that allows small equity capital to be owned large amount of assets.

*P. Bongini, G. Ferri and H. Hahm/The Financial Review 35 (2000) 31–50 41*

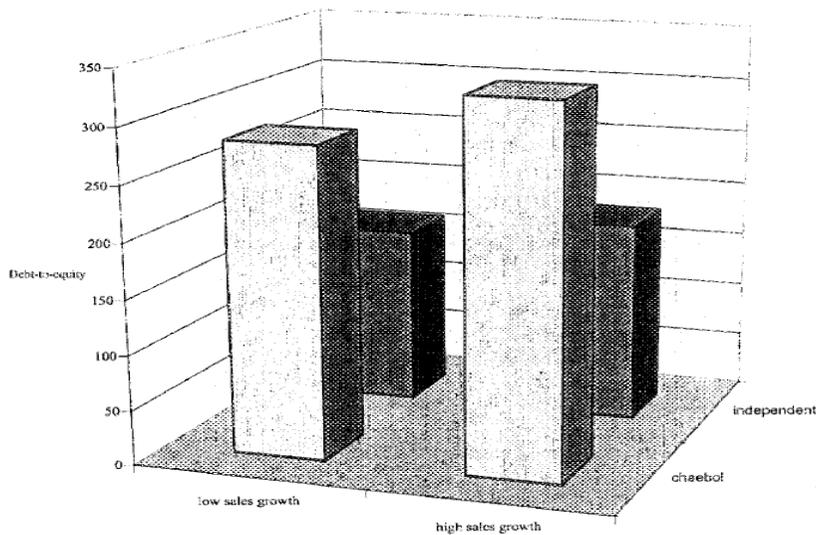
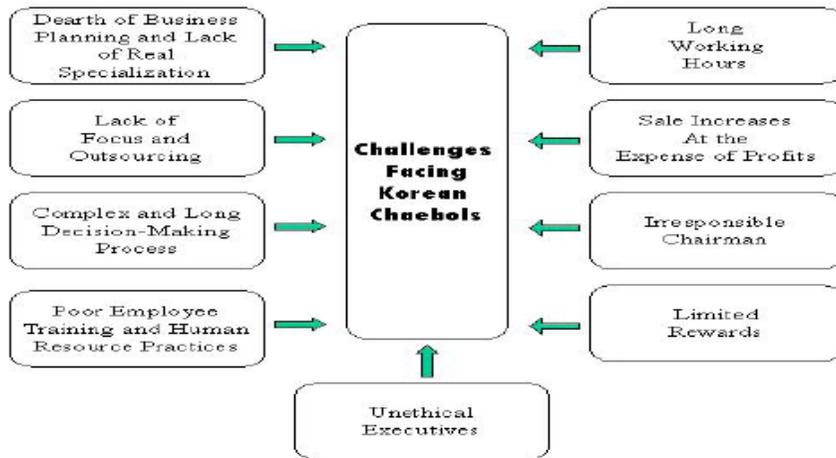


Figure 2

**Debt-to-equity ratio as a function of sales growth and corporate governance**

Figure 2 presents the average debt-to-equity ratio (in percentage on the z-axis) for low sales growth and high sales growth firms (breakdown on the x-axis) according to whether they belong to a chaebol or are independent (breakdown on the y-axis).

But, this high ratio of debt to equity also means that any failure in manufacturing could result in dire consequences for the banking system.” (Kennett, 2004, p.323). Also, “the chairman controls the company with absolute power and has no tenure limit. The chairman’s power is all encompassing, and his directive and even whims must be executed immediately. The chairman is the absolute power for many chaebols.” (Lee, 2003, p.11) Table and figure shows those challenges chaebols faces and internal ownership of the industrial groups within the past three years.



**Table 8 Internal Ownership of the 10 Largest Business Groups. Total. •**

(Unit: %)

Ownership	2000	2001	2002	2002
Chaebol head and family	11.30	8.97	8.64	8.72
Affiliated companies	31.46	32.35	32.91	32.27
Corporate equity shares	3.84	4.65	4.27	3.93
<b>Total</b>	<b>46.60</b>	<b>45.97</b>	<b>45.82</b>	<b>44.92</b>

Source: Korea Stock Exchange (2004b).

However “the chaebol group founders have survived and expanded by using their entrepreneurial skills. First, they have developed clear-cut visions for their businesses. Then, they implemented their visions through carefully prepared plans. Second, they have been successful in political manipulation, an extremely important item in South Korea. They have convinced the government and political leaders that their ideas and plans for their businesses will help the economy’s expansion. Third, they are aggressive. They created new corporations, added new product lines, bought and merged with existing corporations and challenges competition vigorously in both the domestic and international markets. Fourth, the founders and leaders of the chaebols groups are effective managers. Most top executives, including the founders of the present chaebols groups, are goods managers in that they make good decisions either through their own insight or with the help of their inner circles.” (Chang, 2001)

As a result, this corporate structure influences the corporate governance and its relationship with the government. According to Kennett (2004), “Korean the decision making process is more unilateral, flowing from government to industry. In Japan “the iron triangle” worked more cooperatively and ideas flowed in both directions.” (p.322) However, some economists believe that keiretsu and chaebol’s decision making process leads to corruption in all aspect of the business and bureaucratic systems. In recent studies researchers had found that unethical behavior between these nations’ bureaucrats and businesspeople was wrecking their economic system.

### **Government and Corporate Governance**

What role does government plays influencing the corporate governance in these groups?

The phrase: “*dango* mentality” is use to describe the interlinked types of collusion within Asian politics and industry. Also, the “*Dango Tango*” is other phrase that is use to capture the intimate, interconnected nature of the partnership among the “iron triangle” of Japanese politics: businessmen, bureaucrats and politicians.” (Black, 2004 p.606). This collusion relationship means that government and political leaders can manipulate the marketplace and thus create corrupted businesses environment. Therefore, *dango* mentality can influence corporate governance policy within both industrial groups. Corporate governance is the relationship among the many business players such as shareholders or owners, and regulators; and includes their corporations’ transparency or lack of it when dealing accounting, auditing and disclosure practices. For example, “Japan and Korea, banks have found it difficult to extract themselves from the tight binding of the industrial groups and political networks that pressure them to lend chosen companies or industries or to allow these borrowers to effectively default on loans at low point their business cycle, thus creating corrupted environment that prevent good governance structures.” (Rose)

Therefore, the omnipotent power of the conglomerates indicates that bankers or (owners) plays meaningful role corporate governance, because they have ability to influence economic development in their region. As a result, industrial conglomerates (keiretsu and chaebol) are major problem in their nations banking system. Also, poor corporate governance practices affect core groups (horizontal or vertical) activities, because they are financially linked to the industrial groups.

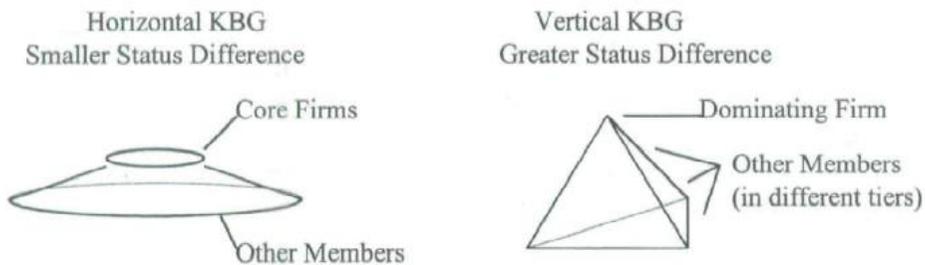
### **Horizontal and vertically oriented**

How does core groups affects the financial sectors?

According to Kennett (2004), “chaebol conduct an even wider range of activities than keiretsu. Many keiretsu are vertically oriented (like

Toyota) and although the group consists of many firms, all are oriented around a core activity. Even the horizontal keirestu, which are diversified, tend in general to be more closely grouped around core activities than the chaebol.”(p.322). “Vertical integration increases the size of an organization which results in additional hierarchical levels and greater centralization.” (Dryer, 1996, p.653). However, “one of the obvious differences between the horizontal and vertical types is the pattern of stockholding. Multiple mutual stockholding is common among members in a horizontal keirestu. Because every member is a major or minor stockholder of the others, and sometimes has representatives as directors of the other members' board of directors, mutual respect and consideration are not only important but also necessary.” (Ming & Lai, 1999, p.429). Figure 1 shows the difference between horizontal and vertical oriented system.

Figure 1  
Organizational Structure of Horizontal KBG and Vertical KBG



The Japanese *keiretsu* and *chaebol* conglomerates are financially powerful due to their relationships with in-house or non in-house financial institutions. For example, keiretsu conglomerates are organized around main financial institutions and trading companies that foster and finance their projects. As a result, “main bank plays an important role in the provision of corporate finance and the provision of corporate governance.” (Matsuura et al 1985,) However, the chaebol conglomerates are under central banking system that remains under government controlled, which leads to bureaucratic management (poor horizontal) system that favors “big four” companies which controls most of the exports and foreign investment in this economy. Despite the difference between core groups oriented process both countries’ financial sectors needs restructuring, because of their weak loan practices and over-regulated banking system. This is due to bureaucratic intervention that allows bad loans to be opened with dummy names (chaebol) and to corporations who could not repay their bad loans (keiretsu) which led to corruption in their financial systems.

## Financial Institutions

What effects do these industrial groups have over their banks?

For instance, “Korean companies remain plagued by adverse publicity, bankruptcy, state bail-out and opaque operations. High profile examples include Daewoo’s huge debts and accounting fraud, Ford abandonment of interest in Daewoo Motor (after 6 months) in September 2000 followed by inordinately long subsequent negotiations with GM (in 2002).” (Rowley & Bae, 2004, p.314). Also, “the corporate debt of the top 28 chaebols reached 247 trillion won at the end of 1997, with the average debt – equity ratio reaching 449% per firm. The figure for nonperforming loans of banks provided by the Financial Supervisory Commission (FSC) stood at 87.26 trillion on (\$63 billion) at the end of March 1998.” (Yong Ahn, 2001, p.453). Table 5 shows the average debt-equity ratios between Japan, and Korea during the 1990s.

**Table 5. Korea-International Comparison of Average Debt-Equity Ratios in the Manufacturing Sector (In percent)**

Year	Korean		United States	Japan	Taiwan Pro of Chit
	Manufacturing	30 chaebols 1/			
1991	307	403	147	209	98
1992	319	426	168	202	93
1993	295	398	175	202	88
1994	303	403	167	196	87
1995	287	388	160	196	86
1996	317	450	154	187	..

Sources: Fair Trade Commission; Financial Statements Analysis, Bank of Korea; U.S.Census Bureau Quarterly Financial Report for Manufacturing, Mining, and Trade Corporations; and The Quarterly Report of Enterprises, Ministry of Finance, Japan

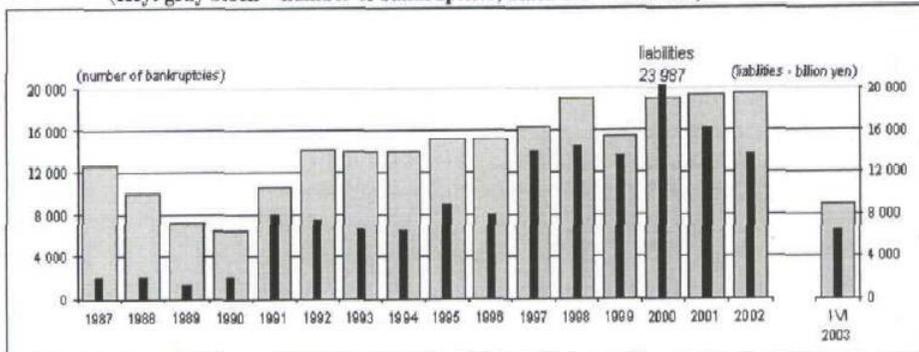
Quoted from Republic of Korea: Selected Issues, Jeanne Gobat, 1998, IMF Staff Country Report

1/ Nonfinancial subsidiaries of 30 largest chaebols.

However, Japan’s financial institutions are also pld with the same financial woes. For example, “The pillars of the *keirestu* and the main bank system began to crumble; in 2003, most of the large banks’ efforts to clean up their books had proven futile, forcing the government to purchase bank shares on a large scale to enable banks to stay in business and maintain the 8% BIS capital adequacy ratio. As a result, some of Japan’s leading banks are now owned to varying degrees by the government. (Scheade, 2000, p.286) These corporate bankruptcies should blame on the *dango* concept that allowed the collusion of businessmen, bureaucrats and politicians with the country financial institutions which induced bankruptcy behavior in this

industrial groups system. This led to financial distress because firms were unable to meet their obligations and defaulted on their notes and loans. Thus bankruptcies usually entail substantial poor corporate governance, because core groups' refusal to honor their debts. As a result, "until substantial corporate restructuring is achieved, the Japanese and Korean financial sectors will continued to be weak." (Kennett, 2004, p.337). Figure 1 shows Japan bankruptcies issues during past two decades.

Figure 1: Bankruptcies in Japan between 1987 and 2003  
 (Key: gray block = number of bankruptcies; black bar = liabilities)



Source: Data from Teikoku Databank, Ltd. 1998-2003 data retrieved on 5 October 2003 from <http://www.tdb.co.jp>; 1987-1997 data retrieved on 10 October 2003 from <http://www.jei.org/Archive/IEIR98/9804w3.html>. Teikoku Databank data indicates a greater number and severity of bankruptcies than does comparable data from the Bank of Japan.

### Deregulation and the Bad Loans Problem.

Both nations' financial sectors were under government direction promoted core groups as source for future growth and development, the government played an important role as a co-coordinator in the intra-groups cross investment system that guaranteed loans to *chaebol* or *keiretsu* groups. Therefore, if these economies want to have long-term economic growth, they must pass legislations that will deregulate and revitalize their financial sectors. Also, senior bureaucrats in both countries need to understand that the *dango* system is harming their economies, because it breeds corruption in every aspect of business and financial sectors. "Corruption is the primary barrier to reform in Japan and Korea. In short, ethical norms that legitimized cartels and incestuous ties between senior bureaucrats, politicians and industry leaders have led to the wrecking of the Japanese or Korean economic miracle. The problem is ethical and the solution should be ethics and pragmatism. (Black, 2004,p.619). Therefore, *chaebol* group must understand that they are the product of the government-industry relationship which means that their business success depends mostly on intra-groups cross investment practices; and *keiretsu* group business success also is effective by the bureaucratic and political supports that is funneled through the Ministry of International Trade (MITI), the Ministry of

Finance (MOF), and the Bank of Japan (BOJ). Therefore, financial reform is needed in both economies, because it affects their banks borrowing and lending procedures. "Thus government must revise or introduced various laws to push conglomerates (keirestu and chaebol) in the direction of improving corporate governance, capital structure and redirection of business focus, with less diversification and concentration on core competence areas." (Rowley & Bae, 2004)

### **Summary**

This study revealed that favored keirestu and chaebol groups are favored by government agencies that provides financial support these core groups regards of their bankruptcies woes. Also, it revealed that a long-term corporate governance reform is needed to ensure business transparency activities and eliminate lending without prudential rules in this international financial environment which can improve capital structure by holding shareholders and management accountable for their financial transactions. Because both nations economies are influenced by this "clique-like patterns based on alliances" (*dango*) and incentive for corporate governance reform is needed to help created healthier corporate sector that will increase their global confidence.

### **Future research recommendation**

Future research needs to be conducted how the keirestu or chaebol groups' concept can be used in other developed or developing countries heavy industrial sectors. For instance, "the Japanese keiretsu concept is embraced by American multinational corporations such as Chrysler and Ford. The successes of companies like Chrysler in developing organizational structural similar to those of dominant central firms in Japanese keiretsus can be seen as an inspiration to American companies which are striving to succeed in the global economy." (Putnam & Chan, 1998, p.199). But, the question is would Chrysler and Ford keirestu concept be stifle by government and financial regulator policies?

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# THE SUBCONSCIOUS MIND - A MARKETING TOOL

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Doi: 10.19044/el.p.v1no2a9 [URL:http://dx.doi.org/10.19044/el.p.v1no2a9](http://dx.doi.org/10.19044/el.p.v1no2a9)

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## Abstract

Historically, the idea of marketing the production orientation to sales orientation is towards developing the marketing thinking.

International markets are pronounced differently and are at different stages of development stages. The marketing strategy must be adapted to the status of a market; a country.

In developed markets, consumer do not buy a thing, a car, they buy prestige. It is subconscious. Decision making facts are increasing the awareness of life and the fulfillment of personal happiness. Shopping addiction is a mental illness that is on constant desire and greed from. The purchase is an act of satisfaction, but followed by disappointment, shame and a sense of failure. The final stage is financial ruin. In the 90s of the 20th century, there was a trend to make people a brand. For the first time there was a generation that has grown up brand awareness and brand enthusiasm. A generation that does not feel deceived, but believes himself to be able to produce. Consume can be creative and fun, and can cause uniqueness. Through social platforms, a paradigm shift has taken place. Facebook and Google are offering free games. These are again linked to the social functions of the provider. There is hardly a game without Facebook or Twitter connections. Match results are published automatically in the social networks.

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**Keywords:** Lead User, Vital Marketing, Target Group, Shopping addiction, Subconscious

## Introduction

Historically, the idea of marketing the production orientation to sales orientation is towards developing the marketing thinking. International markets are pronounced differently and are at different stages of

development stages. The marketing strategy must be adapted to the status of a market; a country.

### **Development in western world**

In the Central European countries this development occurred as follows:

#### **Post-war Period: Main Emphasis on Production**

There was a lot of catching up to do. The decisive point was that goods were available at all. They only had to be distributed.

#### **The 60s: Sales Organizations**

Market saturation was approaching and an exact system of distribution had to be introduced to avoid still having blank spots on the map and a surplus in other areas.

Exact planning of the sales organization was sufficient to fully occupy production.

#### **The 70s and 80s: Marketing**

Market saturation was making progress and more office expenditure was required in order to harmonize customer demand and the supply of one's own production. The first marketing departments arose. Mere sales organizations were no longer sufficient. Certain strategies were needed.

#### **The 90s: Exact Planning**

The initial marketing instruments like market research and market handling were often no longer sufficient. In the saturated markets of Central Europe and America more exact planning was needed than 10 years previously. Marketing was also necessary for small business owners. A hairdressing salon in a little spot can go bankrupt in a shorter time than it took to establish it.

#### **Today: Virtual Networking**

Customer and sales persons are being ever more closely connected by networks. Customers access internal data of sales people and vice versa. Business relations on the one hand, are becoming more intensive, on the other hand, more fluctuations are occurring through electronic auctions and direct sales.

### **Stages of Development Production-Orientated**

This market situation occurs particularly in poor markets and poor countries. It is the buying power that determines the market.

To define the size of a production orientated market according to need would be completely wrong. The decisive element is the possibility of successful financing. The available funds are the parameter for defining the theoretical size of the market ( size of cake).

The customer with money is always important even if he is not always treated like that. The seller dictates the market, since supply is smaller than demand. The factories cannot produce as much as is required the seller can therefore dictate the prices. On the other hand, one wishes to achieve the maximum with the meager funds available. It is better to produce a lot of goods of bad quality for little money than few goods of high quality.

The price determines the amount of sales.

We can observe this situation today in Eastern Europe but also in Latin America.

That is really "the" wish of every entrepreneur because he can work in a dictatorial manner. This also has effects on the enterprises themselves. They are primarily orientated inwards. The market and its conditions are not so important. Practically everything can be sold with little investment. It is internally important to produce as much as possible. The business is focused only on production. The amount of the output determines the success of the enterprise. All investments and organizational steps are concentrated on internal procedures.

The strategy in the market is that of the "distributor". Sales organizations have a purely distributive function. The seller does not need to fight actively for an order. He simply waits for the customer's order. Personal orders from customers merely represent a burden for the enterprise, the customer disturbs the internal course of events. "The customer is threatening with an order" it is said jokingly, since attention is being diverted from production and the enterprise has to occupy itself with the customer and with delivery.

### **Sales-Orientated**

Sales orientated markets and countries are in a transitional stage. Supply and demand are level. There is no compulsion anymore to buy from only one company. The competition already determines the conditions. Because of the balance between supply and demand, a few percent in supply or price is decisive for the overall success. 5% of the supply determines the price. The price of oil is today, even in the highly developed countries, still production-orientated. The more is produced, the lower the price. Scarcity because of war or other disturbances causes the oil price to climb quickly.

If in production-orientated markets all activities were directed inwards, in this transitional phase the internal procedures are disturbed only

by the "wicked" competition. It is not only the customer who disturbs and influences the course of the business, but also the competition. One reacts to the reactions of the competitors. One is not customer-orientated. The customer is not important, but the circumstance that one is better than the competition.

The strategy in the market is "selling" (Hard selling). This takes place aggressively via the price. The customer has to buy what has been produced. The competition is fought strategically. Advertising is not aimed at gaining customers, but at being in a better position than the competition.

### **Marketing-Based Thinking**

Supply is already greater than demand. Thus, the customer can determine the conditions. The market is orientated towards the buyer. It is no longer the seller who determines, but the buyer. The desired goods are offered to him by several firms and he can select. The customer can choose between equal offers.

The enterprises have to orientated themselves outwards. They have to adjust to customer desires. The customer wishes his problems to be solved by the supplier. He wants to derive a benefit from the goods bought. If customer relations in the previous phases - insofar as they were relations at all - were merely directed for a short time towards the aim of the completion of the sale, in this highly developed market situation they become long term. Only long term strategies secure the existence of the enterprise. Satisfied customers create the success of the company.

This success can only be achieved by

- recognizing customer desires and customer problems
- producing in a way that is customer orientated
- delivering the desired quality and also
- showing competence in problem solving

### **You produce what the customer really needs and sell problem solutions which offer the user not only goods, but also service, benefits and quality**

The greater the supply is the more intensive marketing- based thinking must become. The more competitors there are and the more similar the products become, the more marketing instruments must be deployed. The sale itself is, especially in the capital goods domain, now merely a small part of a long-term customer relation. The sale itself may be a loss-making deal for the seller if, through a long-term relationship with the customer, he enters a profitable phase.

Service contracts, later repairs and spare parts deliveries or expansions and extensions, take the buyer and the seller into a long term and intensive relationship.

Arguments like the durability of an enterprise can affect sales.

You have to stand out from the run of the mill in order to increase the demand for your own product.

### **The Subconscious**

Consumers do not buy a car, they buy prestige. Cosmetics manufacturers do not sell creams, they sell hope. People do not buy apple, they buy vitality to be young, beautiful, successful and desirable. These visions are offered in the form of personal care products or food to the consumer.

As in love, the marketing expert use instruments to go into the subconscious.

Advertising became a new power. Advertisement should shoot to the "head of the consumer" (the target group) and take money out of his wallet. In order to achieve that, not products, but promises to be sold. Those are the most effective, they cannot be verified. These are things like:

- Increasing the awareness of life  
and
- the fulfillment of personal happiness.

There are promises aimed at the unconscious or hidden desires of a consumer.

Marketing experts have instruments of motivation research into their campaigns. The stated aim is to manipulate the consumer.

### **Consumption is Communication**

"The consumer world has become part of our communication."<sup>6</sup> The consumer world is a mass medium. The difference from other media is that products are used as messengers. Products are just passively consumed. Like in a movie, they are actively integrated into people's everyday lives. Consumers exercise a certain action, adventure forms.

Consumption can often communicate a lot more than other media. Each product transports its own story. With any soap, toothpaste and any shower gel every time a promise is acquired.

### **Product Design**

The name and the design of a product suggest a specific way of life. The products help to learn how to manage some intense situations.

A gel called "Energy" is experiencing an act of charging the users. He feels the water trickling through the body differently than without this "special" gel.

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<sup>6</sup> Wolfgang Ullrich

Products stored with stories to help people to experience everyday life with more meaning.

The efficacy of the products accompanies potential customers. With this help, everyday will be upgraded and certain acts are ritualized. This happens through the staging of the products.

There are few well-staged products. Many remain superficial and with little efficiency.

A well-designed product must appeal to different cues. This must be coordinated with each other.

A shower gel called "Energy"

- have a bright color that emphasizes the Energetic.
- Contrary contrasts need to be a shimmer in the eye of the consumer incurred.
- The box should be streamlined and elegant.
- When you open the package, there must be a sound that gives the consumer the impression that he triggers a function of a technical device.
- It must smell herb that the user thinks it penetrates him.

A shower gel that is to relax and to relieve the stress that must be

- milky in its substance.
- It must operate with soft shapes.
- It should not affect opening popping sigh, but must have a soft tone.

If the sensory stimuli together agree, then the promise of the product formulated convincingly and then can there be what is called a Placebo. Then the consumer feel, that he would do well and the product made what he expects from it.

The more sensory stimuli are triggered, the more the product will be deposited in the brain. Magical worlds will be within the center of attention of the consumer.

### **Situation-specific product development**

Hundreds of years ago you called different gods for different needs. One for luck and another for health. Something like it is today with situation-specific products.

Situation-specific product development is a major trend of the last 30 years. Before it was the profit optimization ends forces. Technical marketing was crucial.

Producers have the consumer did not just a product, but sell more. For every occasion, a shower gel. One and the same product has been designed differently.

### **Advertising informs**

Advertising places a product on the market and makes it known to the public. Advertising informs compares, and creates situations. The consumer will be motivated to buy the product. One way to give the buying impulse is to point out that a lot of others buy this product. Yes, it's the norm now to use this product.

The purchase impetus can be given by a powerful argument:

- We are the best.
- We are the cheapest at top quality.
- We give a problem solution to a problem that nobody else can solve.

### **Advertising animate to use**

Another aspect is that advertising shows where the product is consumed.

A product that is bought, but never used, that dies someday. It's like an app that someone has purchased on the mobile phone, but never used. He will not gain from a purchase of a new phone.

Advertising must not only "sell", it needs to animate that the purchased is used.

### **Subliminal Advertising**

The promotional information about a product is a superficial strategy. Advertising works primarily in an unconscious way. It works on the classical information processing of human beings, without any conscious attention.

Advertising activated targets consumers have in their brain and pushes it into the goal hierarchy. Goals and targets the consumer does not think at the moment, but that is prioritized by advertising.

Another good strategy of advertising is to make a product familiar. This is possible only if the brand is present. Here advertising works on the psychology of learning experiences and instruments. The more the consumer perceives a specific logo, the more colorful, richer, more emotional this logo is charged, the more familiar it will be this brand. In front of a supermarket shelf with 25 identical products from different suppliers the consumer accesses the one that appears familiar. People react "in the moment and in the moment."

The human perceptual system is flexible and uses those things which are above, and are most frequent. Perception schemes help people to interpret the environment. This is a very worthwhile cause. In evolution, certain stimuli have always signaled something:

- That is a bit dangerous.
- That you have to show certain patterns of behavior in a given situation. When you see water, you have to be prepared for fishing.

The processing system is very dependent on the environment. This ensures the findings of today's advertising.

If a spoken sentence is accompanied by music, the consumer will react differently.

Music makes a prime effect. It activates latent memories.

In order to make advertising strategists exploit the human ability to respond in the moment and to act impulsively.

French music with the idea of France is activated. The buyer decides with French music for a French wine as from another country.

With music you can trigger a certain emotion that is already present. If someone has a positive attitude to France, then it is activated with French music still.

Music, smells and images trigger associations and lead to the desired goal when purchasing a product.

With advertising you can manipulate, in terms of influence. You can also protect yourself. Manipulation and suggestibility is limited,

Example: You go to buy a particular gift and pass a billboard of a restaurant. When you feel hungry, the shield will work. If you are not hungry, it will not work.

Consumers select and sort information, thus limiting their impact power.

Simultaneously consume is more important than ever.

Consumption of products develops identity.

By the consumption human beings define for themselves and others who and what they are.

Furniture to express the lifestyle of the buyer cares and life plans which he pursued; yes what character wants to be. Whether someone likes more classic or modern wooden furniture, he decides with this purchase also his status. The same applies to clothes. Even a visit to a restaurant has to do not only with food intake, but also expresses, what person you want to be.

The products themselves have only a symbolic value. The purchase of organic products indicated an interest in sustainable business. Customized clothing expresses exclusivity. The current iPhone refers to a young and dynamic lifestyle.

With certain products the consumer became a different person. With a purchase and the status symbol of the product the consumer obtains a human social reputation. With the choice of a product, the buyer shows who it belongs to and by whom separating himself.

### **Shopping addiction**

Shopping addiction is a mental illness that is on constant desire and greed from. The purchase is an act of satisfaction, but followed by

disappointment, shame and a sense of failure. The final stage is financial ruin.

People buy everything, so that society thinks "I am doing well."

Studies from Germany and the US have shown that 6 to 8 percent of the population is shopaholics. 20 percent are at high risk. The shopping addiction affects all walks of life. Men and women are equally affected. You only buy different things:

- Women: shoes, handbags, cosmetics
- Men: Hand tools and electronic items such as mobile phones, software from the Internet.

Shopping addiction often mask social phobias, depression or anxiety disorders.

Internet access and cashless payments via credit card or debit foster addictive behavior.

This is not based on new research, it was defined in 1909 by the German psychiatrist Emil Krepelin. The morbid desire to buy leads, although there is no need to that the consumer - in this case the patient - buying in bulk.

What triggers the buying in those affected?

What is so special, the excitement of it?

They are not the cause. It's about the whole act of purchase, which is a matter of appreciation. It is about self-worth, which is thus increased. Is the act of purchasing finished, then the thing that is purchased is completely of uninteresting. Some patients may clear away without ever again to take on hand. Others give it away and get positive contributions.

Many are picky and have specialized. Some hunt for handbags, others for the latest mobile phones.

If the object is in sight, there is no turning back. It was bought at any price, even if the bank account is overdrawn.

When buying addict after buying the mood drops and they become depressed and blame themselves.

Shopping addiction is unremarkable. Addicts can hide their problem long before others. The way the therapist is not usually self-absorbed. In therapy, patients learn when to buy and why. What they compensate with the purchase? They will learn to define their self-worth and to find new life other content. Hobbies are important and in touch with friends back strengthened.

A code of practice to get out of the addiction:

- Shopping is part of our life and cannot completely out of the everyday.
- The purchase addict must learn to buy back control.
- Only go shopping with a list.
- Before considering what needs to be purchased.

- take money paid off. Amounting to purchase ends of.
- give away by debit and credit card.

### **The act of purchasing an event**

Buy from modern life cannot be ignored. Shopping has become an experience for recreational activities. It should be fun and enjoyable are. Shopping Centers organize such events. Of the birthday celebration for children to seniors karaoke everything; awakens longings and the customers seem to king makes.

Most products are designed to strengthen the human being as an individual.

- I want to be stronger.
- I want to be cool.
- I want to have more energy.
- I wish I can relax again.
- I want to experience wellness.
- I want to retire.

Plots make today's people competitive and great. The consumer world is the engine of our type of society and our life and the world of experience. People would not be as competitive, if they were not trained by products of the consumer market and pushed.

Consumption has become the engine of the company. Products offers wishes and satisfaction. The promise but also redeemed? Are expectations?

Some products meet the promises of some consumers. People can live by different lifestyles and modify it according to personal needs. By individual set of attributes of the individual is distinctive and unique. The magic of the consumer world is the illusion of individuality and autonomy. Historically was "individuality" problematic. An individual is on their own, exposed; too weak to make something possible; lonely. The consumer world is a positive concept of individuality and shaped in recent decades to the people for individualists. She suggested to him that he alone can create everything. Only then one is successful and can be proud of over the other because one has done something alone.

Few products appeal to people as social beings, as part of a society. Virtues of solidarity, compassion lost in advertising. Man is always the lone warrior who must prevail, the success must have. The consumer world educates people about narcissists.

Not all people can participate in consumerism. Neo-liberalism has created the economic crisis, a two tier society. A third of the company does not have enough money for the necessities of life. The rest feels threatened by the poor. Envy and fear to take in today's society.

The causes:

- Increasing uncertainty by increasing flexibility.
- People need to learn self-care. Sociopolitical care takes parallel in this regard.
  - More responsibility is being asked.
  - Awareness that people can choose. If they choose wrong, they cannot make anyone responsible.
  - Social security systems decrease.
  - Away from the immediate area of society - family and friends - no one wears custody.
    - For many people this is an excessive demand, which is frightening.
    - The company is split into those who have and those who have not.
    - Similarities are becoming increasingly rare.

Promoted by the dazzling world of consumerism is one aim: to be unique. The society of the outgoing 21st century formulated individualism as an important value. At the same time there is a contradiction to the mass individualism. Individualism itself is limited to a precise market segment.

### **The Consumer as a brand himself**

In the 90s of the 20th century, there was a trend to make people a brand. For the first time there was a generation that has grown up brand awareness and brand enthusiasm. A generation that does not feel deceived, but believes himself to be able to produce.

Consume can be creative and fun, and can cause uniqueness.

With this positive and strong brand culture has become the chance is given, that people can also offer yourself as consumer products. To hope and expectation even be something like a brand. A man who not only has a personality, but also has an image that is so associated by others with something specific and therefore can be part of a star culture and gets attention.

Computer games create worlds in which players must maintain the computer and can, therefore, can occur even as a commodity. Computer games are out of the everyday lives of young people today hardly imagine.

The market is thriving. According to the federal association of interactive entertainment software in Germany was in 2011 a turnover of 1.57 billion euros. The trend is growing.

The group that is responsible for the biggest sales are still teenage boys. You buy the most expensive console games. In recent years, the online market has developed as an important pillar for game companies. There again play much of women, because the game is a different character. The games are entertaining. It is communicative. Playing online multiplayer. Serving the communication needs of women. Even those who were ten years ago and teenagers today have a family, the rapid games operate on the

Internet. Your time is limited and volume, they get the quick fix on the Internet.

Technical innovations in the mobile phone market produce additional offers. Smartphones are portable game consoles. Thus, digital games are always available everywhere.

The fascination of the game are:

- they are fun,
- they are distracting and
- increase self-esteem.

After having successfully completed games can be frustration and boredom of everyday life to cope better. There is for every mood a matching game. Doping in the virtual world of computer and video games offer atmospheres, in which the player can immerse the player. They consume fantasies and thus emotions.

Content provide the computer and video games little new. Many forms of play are based on analogue concepts. Some games are like digital shooting of a fair.

Online and Facebook games are different. The social factor is an extremely important part. These games provide access to an international community. Via mouse increase the players in an online universe that is constantly changing. It is a parallel world in which you are - can engage - if you will. Since no one is alone. There are millions of potential playmates. As they play the same game, they have the same interests. About the game creates communication. You get to know new people. It develops a social dynamic. True friendships are not these syndicates. It is producing contacts but not friendship.

### **Social Media and Advertising**

Through social platforms, a paradigm shift has taken place. Facebook and Google are offering free games. These are again linked to the social functions of the provider. There is hardly a game without Facebook or Twitter connections. Match results are published automatically in the social networks.

To participate in the free games may need to be purchased items, with which they will play again.

With its own avatar, you can increase your own self-esteem. A few decades ago it was enough to play a game. Today, the players want to build closer ties with the game itself and integrate more.

Advertising in games is also offered. In sports games, this corresponds well to reality, where sponsors are an integral part. Games can also be advertising per se, if a fast food chain offers a game in their environment.

In Europe it is not allowed, to addresses with advertising, the youth. For public service media this is prohibited. In computer and video games, this discussion is still ongoing. As advertising platforms they are coveted. Games are highly charged emotionally and make the recipient therefore accessible to commercial messages. The emotional state of the consumer defines his purchase decision.

Social media provide the advertising industry information that profiles can be created. Facebook is a new phenomenon. Young companies need capital to work innovatively. Social platforms offer das. Without the support of the economy would not LIKE button on Facebook can be developed. At the same time, this button has become a tool for advertising strategists.

How Facebook advertising works:

A promotional content will be linked to a person, a Facebook friend. This Facebook friend once told him this thing, like this product. In consequence, the advertiser of a specific target group shows that this or that friend likes this product. This creates more trust than any conventional advertising such as a poster.

The founder of Facebook - Zuckerberg - says "I can do something social - all over the world . I can make it personalize"

With the expansion of the internet we get new dimensions. The coffee maker can say on the display "Today have recovered your friend a coffee made of Type yy. Do you also take this coffee?" A product, which is recommended by friends has more attention.

### **Self-esteem of consumers**

Bought the product but only if it promises to enhance the self-esteem of the consumer. This works only if its marketing is tailored to the needs of the buyer. Because the purchased product is a way of life.

Not the consumer is relevant, but all the variables associated with it. The construct of consumption must be within certain limits. This can be a unique shopping experience. The Internet is something very special. Something that is only available to certain people. Some products are just for those they are part of a certain Facebook Group. Special offers for people who belonging to a particular group.

Consumption alone is not exciting enough. Personally addressed and recommended by friends, consumers move in a circle of the elect. It offers exclusivity.

### **Vital Marketing**

Video clips on the internet that carry hidden advertising are new message carrier. Consumers spread and voluntarily advertising messages.

A virus is not caused by the recommendation of a single person. A vital effect occurs only when it is triggered by several people. Only when a critical mass is achieved by people, spread the message of self to achieve this critical mass, it is necessary to make the content of a public company and a product.

For a video clip appears at the right time at the right place, it provides a so-called Seating agency. An agency first checks whether a message is relevant for certain networks. Is this positive, they select portals and sites which are suitable for this message. As an example, here's a video about the football player Rolandinio. The soccer player showed his skills that were taken in a break from training with a mobile phone camera. Only when it was distributed to millions of fans, it was revealed that it was a sporting goods manufacturer, the production had given them in order. Whose shoes Rolandinio wore during the shooting.

The internet is one of the most important advertising media and the dynamics of the network requires new advertising strategies. Internet has taken over the role of traditional television, only you cannot distribute traditional advertisement. New methods are needed. The banner ad on the internet is like the perimeter advertising in football. The first function of these banner ads is that consumers are familiar with the brand. The second feature is that the product can be clicked with his information.

An effective advertising happens casually. The more direct a brand appears, the more skeptical internet customers will react. They build up resistance and reject the product. If a mark in various circumstances of life always turns up, she is familiar to consumers. In the supermarket on the shelf, the buyer will decide spontaneously for this product, because they think they know. There is this plane in which we consciously choose products. Often there are many similar products that make a difficult choice. The selection is not justifiable. A pulse is required, which is associative. These positive associations can be certain images that are associated with the product. It may also be other things. It is important that they work easy and simple semantically. On a soccer banner or a poster next to the road, you cannot transport complex information. That does not work. Only simple emotions can be conveyed.

If one looks back evolutionarily humans, then those are the areas of the brain that had to evolve first. Those who are responsible for a pulse and not those have to do with thoughtful actions.

Advertising appeals to the basic human needs. A need for affection and security, for esteem and success. Associated with these emotions - after primary neurological advertising messages - speak to the reward center in the brain. They promise that the consumption of a product with happiness and

good life is rewarded. Thus changing our perception and advertising affect our emotions.

Advertising strategists must exploit all the resources available to them?

Advertising strategists cannot do anything they wanted. That's a good thing. In many European countries, there are laws against unfair competition. Where you cannot do certain things? One should not spread false information. Comparisons between products must be objectively verifiable. Information should not be presenting at the threshold of perception, so they cannot be perceived.

With the choice of the advertising medium determine target groups are addressed. They rely on the research of the marketing researcher. Their mission is to help people and their needs to break into target groups. It can also

- Target groups for his apology, when it comes to voting behavior.
- Target groups for the churches, when it comes to pastoral work.
- Target groups in marketing, when it comes to recovering from buyers for brands.

The nature of the social environment and the addressing of target groups is to reduce the complexity, because to look at society as a whole and consider everything, it cannot build a strategy.

Is the reduced complexity of the social environment, the only way to take out a part of the society.

### **Lead User**

This structuring in social classes and social layers is being increasingly questioned. Just as one has made in marketing in question, the one with simple target group definitions - for example, "women up to 30" or "people from 65" - cannot define a valid groups.

In interviews, attitudes can be raised by people who do not emerge from the social situation but common and similarities. These similar attitudes come under the attack medium.

Thus advertising access, they must be tailored to the specific target group. Advertising strategists can operate specifically with the research results of the marketing experts. This can be adaptively responds the pragmatic young for a certain party, a certain beverage or a specific computer game.

The audience needs to be addressed in their own language. Often, the designer of a strategy from a different background and do not even know the language of the target group.

The traditional marketing assumes that the consumer is passive. People who are waiting, what to expect and then select from a finished

product range. Consumers have changed, however. They are self-conscious and critical. They develop products according to their needs.

Snowboards are not developed by the sporting goods industry, but of sports-loving users. Mountain bikes are designed by enthusiastic cyclists who were looking to be able to drive through rough terrain. These so-called lead users make the argument on its head, that the producer knows what is good for the consumer.

Traditional producers consult normal users what they want. This survey is representative. The lead user approach attempts to identify extreme users and interview them. These are absolutely the current target market is not representative. They have needs that the broad market will have later.

In order to develop new markets, producers must make to the search for creative users. Thus, the ideas of the lead users are mass products also, it takes networking. On the one hand, the community of users is very important because one exchanges within the community, to develop within the community prototypes that will actually work. If demand within these communities is large, then the market is growing and will eventually cause the commercially attractive. Either a company engages in a related field with this idea and markets, or the user innovators is where the idea for themselves.

Since the 1990s, this trend favors the digital communication. The exchange of views on internet supports the formation of communities. These are the basis for lead user developments. Of some companies, the self-confident, creative consumer is discovered as a partner. Under the slogan "Open Innovation" consumers become business partners. Consumers can replace proprietary design. For example, a T-shirt manufacturing company in Chicago. You may use the Internet to 800,000 users, the daily produce 200 new design ideas. From this pool of ideas every week ten new t-shirts for the production and the market are selected. The choices that the community. Each selection will be awarded \$ 2,500.

In Germany a community that calls itself "Utopia City". They formulated new ideas about sustainability and technology.

Consumers get through networks more power over producers and markets can define and determine. Individual products are the result. The car has personally created those seat cushions, which the buyer wants and is sprayed in the color, as the future owner desires. Shoes by NIKE have an individual design and those colors that wants his support and not those that a professional designer who designed by NIKE.

Consumers have become active participants and beneficiaries of the market.

*Johann Günther*  
*Vienna, August 2014*

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# A RE-EXAMINATION OF THE RELATIONSHIP BETWEEN ELECTRICITY CONSUMPTION AND ECONOMIC GROWTH IN NIGERIA

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Doi: 10.19044/elj.v1no2a10 [URL:http://dx.doi.org/10.19044/elj.v1no2a10](http://dx.doi.org/10.19044/elj.v1no2a10)

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## Abstract

This study investigates the long run and causality relationship between electricity consumption and economic growth in Nigeria during the period 1980-2011 via the application of Johansen's maximum likelihood cointegration technique and Granger causality tests based on vector error correction model (VECM). Based on the cointegration test results, it was found that electricity consumption has a long equilibrium relationship with economic growth. While, Granger causality test revealed unidirectional causality running from electricity consumption to economic growth in both the short and long run. Therefore, the results of this study showed clearly that electricity consumption plays an important role in the economic growth of Nigeria as any efforts to conserve electricity will have a negative repercussions on economic growth.

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**Keywords:** Electricity consumption, Economic growth , Causality, Cointegration, Nigeria

## Introduction

In the past three decades, several studies have been conducted to examine the relationship between electricity consumption and economic growth across developed and developing countries. The overall results show that there is a strong relationship between electricity consumption and economic growth. Some of these studies revealed unidirectional causality running from electricity consumption to economic growth (Ahmad Golam and Nazrul Islam, 2011; Kouakou, 2011; Akinlo, 2009; and Yuan et al. 2007), whereas some studies justified the other way round (Yoo and Kim,

2006; Jumbe, 2004; Emeka, 2010; Nayaran and Smyth, 2005 and Shahbaz et al., 2011). In addition, bidirectional causality between electricity consumption and economic growth was also evidenced (Yoo, 2005; Odhiambo, 2009; and Tang, 2008).

However, The demand for infrastructure particularly electricity is growing rapidly in Nigeria, yet, for the past three decades, inadequate quantity and quality electricity services has been a regular feature in Nigeria, a country with 140 million people with a majority living on less than US\$2 a day. The electricity industry, dominated on the supply side by the state-owned electricity utility, National Electric Power Authority (NEPA), and succeeded by the Power Holding Company of Nigeria (PHCN), has been unable to provide and maintain acceptable minimum standards of service reliability, accessibility and availability (Iwayemi, 2008). The inefficiency as well as inadequate facilities to boost electricity supply has also been a major cause of the increasing gap between demand and supply of electricity. This could be due to the fact that there are only 9 working generating stations in Nigeria (3 hydro and 6 thermal) (Odularo and Okwonko, 2009).

It is not that no such study has been conducted to examine the relationship between electricity consumption and economic growth in the context of Nigeria, for instance, Emeka (2010) and Inuwa (2012). However, none of the studies applied Granger causality tests based on vector error correction model (VECM) to identify the short run as well as long causal relationship between the variables. Against this background, this paper aimed to re-examine the causality relationship between electricity consumption and economic growth, and to find out some policy implications from the results. To this achieve this, the following procedures are carried out. First, stationarity property of the variables are tested; second, Johansen maximum likelihood tests are estimated. Finally, Granger causality tests based on vector error correction model (VECM) are performed to examine the causality relationship between electricity consumption and economic growth.

The rest of the paper is organized as follows. Section 2 describes the electricity sector in Nigeria and Section 3 provides a review of literature related to electricity consumption and economic growth. Section 4 outlines the methodology used in the study. Following, Section 5 presents the empirical results of the research and the last section concludes the study.

### **The Electricity Sector in Nigeria**

The electricity sector in Nigeria is presently characterized by chronic power shortages and poor power quality supply. With an approximated installed capacity of 6000 MW, it was stated that the country consumes about half its capacity. With an increased population coupled with

diversification of economic activities, energy demand is rising but yet, electricity supply is relatively stagnant. It is therefore obvious that electricity demand is way above its supply thereby showing signs of potential economic growth (Oduaro and Okonkwo, 2009).

Although, electricity in Nigeria is generated through three major sources: hydro, thermal and fossils. The electricity generation increased from less than 1000 mega watt per hour in 1980 to a little less than 3000 mega watt per hour in 2005. Electricity consumption on the other hand increased from little over 500 mega watt per hour in 1980 to 1873 mega watt per hour in 2005 although there was a sharp decline in consumption in 1998 and 1999. In relation to the volume of electricity generated, the country has over the years carried a lot of energy losses ranging from 43.1 to 41.5 per cent between 1980 and 2000. The figure however declined to 32.6 per cent in 2005 (Akinlo, 2009).

Since inception of NEPA in 1972, (renamed Power Holding Company of Nigeria, PHCN in year 2004) the authority expands annually in order to meet the ever-increasing demand. Unfortunately, majority of Nigerians have no access to electricity and the supply to those provided is not regular. It is against this backdrop that the federal government has embarked on aggressive power sector reforms with the intention of resuscitating PHCN and making it more efficient, effective and responsive to the yawning of the teeming populace (Obadote, 2009).

### **Literature Review**

The link between electricity consumption and economic growth have received a great deal of attention from researchers. However, the direction of causality between electricity consumption and economic growth has remained empirically elusive and controversial across time, countries and methodologies. For example, Yusuf and Abdul Latif (2008) applied Engle-Granger cointegration approach and standard Granger causality test for the period 1980-2006 on Malaysian data with a view to find the long run relationship and the direction of causality between electricity consumption and economic growth. Their findings revealed the presence of long run relationship between electricity consumption and economic growth as well as the absence causality relationship between the two variables. The authors also confirmed that the existing energy policies regarding electricity regulation policies will not have effect on economic growth in Malaysia. Similarly, Tang (2008) applied the newly developed autoregressive distributed lag (ARDL) model and modified Wald (MWALD) test for the quarterly data spanning from 1972:1-2003:4 interpolated using Gandolfo's interpolation technique for Malaysia. The result suggests that electricity consumption and economic growth are not cointegrated and also the

MWALD test revealed a bidirectional relationship between the two variables contradicting the earlier findings.

Furthermore, Gupta and Sahu (2009) applied Granger causality test was to investigate the causality relationship between electricity consumption and economic growth for the period 1960-2006. The results suggests that electricity consumption has positive impact on economic growth implying that electricity consumption conservation policies have negative repercussions on Indian economy. Another study by Ghosh (2002) applied Johansen-Juselius maximum likelihood approach to cointegration tests and vector error correction model (VECM) for the period 1950-1997 and found the absence of long run relationship among the variables but there exists unidirectional Granger causality from economic growth to electricity consumption without feedback effect for India.

Moreover, Ciarreta and Zarrata (2007) applied Toda and Yamamoto non –Granger causality tests and standard Granger causality tests to analyze linear and non linear relationship between electricity consumption and economic growth for Spain during the period 1971-2005. The results revealed unidirectional linear causality running from economic growth to electricity consumption while no evidence of nonlinear causality between the variables in Spain. In another study, Altinay and Karagol (2005) examined the causal relationship between electricity consumption and real GDP in Turkey during the period of 1950 to 2000 and employed the Dolado-Lutkphol test and standard Granger causality tests, both their test results exhibited unidirectional relationship running from electricity consumption and economic growth which implies that constant supply of electricity is inevitable to sustain economic growth in Turkey.

However, some empirical evidence were also emerged from Africa as Ouedraogo (2010) conducted an empirical study with a view to examine long run and causality relationship between electricity consumption and economic growth in Burkina Faso for the period 1968-2003 and applied ARDL bounds test technique and causality test by estimating a vector error correction model (VECM) within the ARDL framework. The bounds test evidenced the absence of long run relationship between electricity consumption and economic growth. The causality result indicated a long run bidirectional causal relationship between the two variables. Likewise, Odhiambo (2009), while conducting the causal relationship between electricity consumption and economic growth for the period 1971 to 2006 and applied a dynamic Granger causality test and Johansen-Jeselius maximum likelihood cointegration test. The author found a bidirectional causality between electricity and economic growth in South Africa.

In addition, a more recent study was conducted to examine the causal relationship between the electricity consumption and economic growth and

employed ARDL bounds test and Granger causality test, Kouakou (2011) found a unidirectional relationship running from electricity consumption to economic growth in Code d' Ivoire. Another study on the long run relationship and causality between electricity consumption and GDP using Granger causality test and error correction model for the period 1970-1999 on Malawi's data, Jumbe (2004) reported bidirectional causality between electricity consumption and GDP suggesting that both the variables are jointly determined. The error correction model (ECM) revealed one-way causality running from GDP to electricity consumption implying that a permanent rise in GDP may cause a permanent growth in electricity consumption. Furthermore, Adom (2011) applied the Toda and Yamamoto Granger causality test via Seemingly Unrelated Regression (SUR) technique for the period of 1971 to 2008 on electricity consumption and real per capita GDP for Ghanaian data . The results revealed that there exists a unidirectional causality running from economic growth to electricity consumption. Thus, electricity conservation measures will not have deteriorating effect on Ghanaian economy.

Although many country specific studies have been conducted on causality issues related to electricity consumption and economic growth in energy economics literature, however, some empirical studies were also emerged on panel data basis. For example, Narayan and Prasad (2008) conducted a panel analysis on electricity consumption and economic growth on 30 OECD countries for the periods; 1970-2002 (USA); 1971-2002 (Slovak Republic and Korea); 1965-2002 (Hungary); while data for the rest of the OECD countries are for the period 1960-2002. Authors' applied bootstrapped causality techniques and found evidence of causality in favour of electricity consumption causing real GDP in Australia, Iceland, Italy, the Slovak Republic, the Czech Republic, Korea, Portugal and the UK. However, unidirectional causality was reported from real GDP to electricity consumption for the rest of the 22 OECD countries. Therefore the electricity conservation policies will negatively impact real GDP in the former countries while, electricity conservation policies will not affect real GDP in the latter countries.

In a recent study, Yoo and Kwak (2010) examined the causal relationship between electricity consumption and economic growth among seven South American countries and applied widely accepted Hsiao version of standard Granger causality test and error correction model (ECM) for the period 1975-2006. Their results revealed mixed causal relationship across countries. There is a unidirectional short run causal relationship from real GDP for Argentina, Brazil, Chile, Columbia, and Ecuador. This implies that an increase in electricity consumption directly affect economic growth in those countries. However, bidirectional relationship between electricity

consumption and economic growth was reported for Venezuela, while no causality was detected in the case of Peru. Therefore, the results of causality from seven countries can provide useful information for each government with regard to energy and growth policy. More recent study was also conducted by Apergis and Payne (2011) on dynamic panel study of economic development and electricity consumption-growth nexus with a view to investigate the relationship between electricity consumption and economic growth for the 88 countries categorized into four panels based on the World Bank classification (high, upper middle, lower middle, and low income) over the period 1990-2006 and applied panel cointegration tests and panel causality tests. Their results from the panel vector error correction models were also categorized into four different panels. Firstly, bidirectional causality between electricity consumption and economic growth in both short- and long-run for the high income and upper-middle income country panels. Secondly, unidirectional causality from electricity to economic growth in the short-run, but bidirectional causality in the long-run for the lower-middle income country panel and thirdly, unidirectional causality from electricity consumption to economic growth for the low income country panel.

Moreover, Acaravci and Ozturk (2010) investigated electricity consumption-growth nexus from the panel of 15 transition countries for the period 1990-2006 and applied pedroni panel cointegration method and error correction based causality tests. The findings suggest that the panel cointegration tests do not report a long run relationship between electricity consumption and economic growth. Therefore, causality test through error correction model cannot be run. Thus, overall findings revealed no significant relationship between electricity consumption and real GDP in all 15 transition countries. Another study conducted using the newly ARDL bounds test technique based on unrestricted error correction model (UECM) and standard Granger causality test on OPEC countries for the period 1980-2003, Squalli (2007) found a long run relationship between electricity consumption and economic growth for all OPEC members. Causality has been evidenced from electricity consumption to economic growth in five countries (Indonesia, Iran, Nigeria, Qatar, and Venezuela), while causality runs from economic growth to electricity consumption for Algeria, Iraq, and Libya and finally, neutrality hypothesis was justified for the remaining three countries.

## **Methodology**

### **Data**

The data used in this study consist of annual time series of RGDP and electricity consumption for Nigeria from 1980 to 2011. The choice of the

starting period was constrained by the availability of data on electricity consumption. Both the RGDP and electricity consumption data were obtained from the World Bank's World Development Indicators (WDI, 2014). RGDP is used as proxy for economic growth and yearly electricity consumption is measured as KWh per capita.

### **Unit Root Test**

In order to conduct the cointegration test, a series of variables need to be integrated of the same order or that the series contain a deterministic trend (Granger, 1988). In order to understand whether this condition is satisfied, the study applied Dickey- Fuller Generalized Least Square (DF-GLS) unit root test.

### **Cointegration Test**

Engle and Granger (1987) evidenced that if the two series X and Y integrated of same order i.e I(1) and cointegrated, then there would be a causal relationship in at least one direction. The presence of cointegration between the variables rules out the possibility of spurious results. But, If X and Y each are non-stationary and cointegrated, then any standard Granger causality test will lead to spurious results. Therefore, alternative tests of causality based on an vector error-correction model and Toda and Yamamoto approach (1995) should be applied as suggested by Behmiri and Manso (2012). However, if X and Y are both non-stationary and the linear combination of the series of two variables is non-stationary then the standard Granger-causality test should be adopted. Therefore, it is necessary to test for the integration property of the series of electricity consumption and economic growth prior to performing the Granger-causality test. If both series are integrated of the same order, we can proceed to test for the presence of cointegration. The Johansen-Jeselius cointegration test procedure is used for this study.

### **Granger Causality Test**

To examine the sources and directions of the causal relationship between the variables, vector error correction model (VECM) specified Granger causality test is applied. Specifically, VECM is employed to examine the Granger causality between per capita electricity consumption and per capita GDP of Nigeria. This is done via the following process: (i) Statistical significance of the lagged error correction terms (ECTs) by applying separate t-tests on the adjustment coefficients. The significance of ECT indicates the long-term causal effect. (ii) A Wald test is applied to the coefficients of the explanatory variable in one equation. For example, in the short run electricity consumption does not Granger cause economic growth if  $\beta_{12j} = 0$  in equation

(1). Alternatively, economic growth does not Granger-cause electricity consumption if  $\beta_{22j} = 0$  in equation (2).

$$\Delta RGDP_t = \beta_{10} + \sum_{i=1}^{k11} \beta_{11i} \Delta RGDP_{t-i} + \sum_{j=1}^{k12} \beta_{12j} \Delta ELTC_{t-j} + \beta_{13} ECT_{t-1} + \mu_{1t} \text{-----} (1)$$

$$\Delta ELTC_t = \beta_{20} + \sum_{i=1}^{k21} \beta_{21i} \Delta ELTC_{t-i} + \sum_{j=1}^{k22} \beta_{22j} \Delta RGDP_{t-j} + \beta_{23} ECT_{t-1} + \mu_{2t} \text{-----} (2)$$

## Empirical Results

### Unit Root Test

The study started by testing for the order of integration for RGDP and electricity consumption before proceeding to testing for cointegration. Table 1 show the results of the unit root test on the natural logarithms of the levels and the first differences of the two time series viz. RGDP and electricity consumption. Based on the Dickey- Fuller Generalized Least Square (DF-GLS) unit root test statistics, the null hypothesis of a unit root cannot be rejected. Stationarity is obtained by running the similar test on the first difference of the variables. This indicates that both the series are I(1) in nature.

Table 1: Unit Root Test

Variable	DF-GLS test at Level	DF-GLS test at first Difference
RGDP	-1.328213	-5.029289***
ELTC	-3.111398	-6.969135***

Source: author's computations \*\*\*indicates level of significance at 1%

### Cointegration Test

Having found both the variables are integrated of order one i.e I(1). The next step is to find out whether the two variables are cointegrated, the study therefore applied the Johansen cointegration test. In Table 2 below, trace statistics and maximum Eigenvalue statistics indicate that the two variables (RGDP and ELTC) have one cointegrating relation or long-run equilibrium relationship both at 5% levels.

Table 2: Johansen–Juselius likelihood cointegration tests

Number of Cointegration	Statistic	5% critical value
<i>Trace Test</i>		
None	20.57100	15.49471
At most 1	0.143943	3.841466
<i>Max eigenvalue Test</i>		
None	20.42705	14.26460
At most 1	0.143943	3.841466

Source: author's computations.

### Granger Causality Test

Table 3 below shows the results of causality test based on the VECM framework. The result of the short-run causality shows the *F*-statistics is statistically significant in the RGDP equation indicating short-run causality running from electricity consumption to economic growth. The long-run causality, on the other hand, is supported by the coefficient of the lagged error correction term, which is negative and statistically significant, also in the economic growth equation. Hence, the results evidenced a unidirectional causality running from electricity consumption to economic growth in both the short-and long run. This finding concur with the findings of Ahmad Golam and Nazrul Islam (2011) for Bangladesh, Akinlo (2009) for Nigeria and Gupta and Sahu (2009) for India. This result therefore suggests that electricity consumption stimulates the growth of Nigerian economy and any electricity conservation measures will be detrimental to economic growth.

Table3 Granger Causality Based on Vector Error Correction Model (VECM)

Dependent Variable	Short run		Long-run
	$\Delta$ RGDP	$\Delta$ ELTC	
$\Delta$ RGDP	3.286 (0.053)	-	-0.108 (0.05)
$\Delta$ ELTC	-	1.746 (0.194)	0.375 (0.00)

*Source:* author's computations.

### Conclusion and Policy Implication

This study has explored the dynamic relationship between economic growth and electricity consumption using time series data for the period of 1980–2011. In doing so, the DF-GLS unit root test is used to test the order of integration of the variables. Johansen maximum likelihood test approach to cointegration is applied to investigate long run relationship and vector error correction model (VECM) to examine causality between the variables. The results confirmed the cointegration which further validates the existence of long run relationship between economic growth and electricity consumption. The Granger causality tests revealed unidirectional causality running from electricity consumption to economic growth in both the short- and long run without feedback. Therefore, electricity consumption causes economic growth. This implies that the increase in electricity consumption can be viewed as a leading indicator of growing economy. The study conclude that the Nigerian economy will be electricity dependent in the long run and therefore any conservation policy would have negative effects on economic growth. Thus, the study recommends that the government should design policies aimed at improving electricity production and even create new electricity sources.

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# POLITICAL ECONOMIC CONSIDERATIONS FOR THE OUTDOOR RECREATION

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Doi: 10.19044/elj.v1no2a11 [URL:http://dx.doi.org/10.19044/elj.v1no2a11](http://dx.doi.org/10.19044/elj.v1no2a11)

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## Abstract

The objective of the present paper is analyzes important aspects related with the economics of outdoor recreation. Many of these aspects depend on the understanding of the demand for such activity in general and for determined recreational sites. We considered the general issue of the optimal visitation level at a public parks and brought in the issue of congestion cost. Also, given the growth of the population and income, the paper focused on the ration use of public parks from nonfee and fee charge for entry. Then consider the relationship between prices and revenues. Finally, the paper ended syuding the ecotourism, incuding fee options, the possible ecological impacts and the distribution of the generated rent.

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**Keywords:** Ourdoor recreational demand, congestion costs, efficient visitation level, rationing use

## Introduction

In this paper, the objective is apply the economic analisis to get an interesting conclusions about the nowadays increasing sector of the outdoor recreational activities. Of course, in wide meaning, the outdoor activities include all leisure's activities which the people hold outside of their house.<sup>7</sup> Nevertheless, in this paper the focus is those recreational activities where use intensively natural resources, such as forests, lakes, rivers, etc. Now, even there are no clear dividing line between resourse intensive activities and the opposite activties, it is reconizable that activities like picniking in public or national parks are closely linked to the quantity of the natural resources with which the visitors interact, than another activities such as jogging where in spite of use resources in certain level, the roads in it's case, it does not imply direct demand for natural resources.

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<sup>7</sup> One goodreference about the issue is Jensen, Clayne R.

The interest of this paper in the outdoor recreational activities arise from the fact that, as could be seen in table.1 which treat as example the case of US, during the last decades there were evidently a quick growth of such activities in the most developed countries. Table.1 shows that excepting few activities all the others have been increased. Besides, during the last decades, there were a growing private markets dedicated to the outdoor recreational activities. Such markets cover the hunting, fishing, skiing resorts, whale watching, etc. For this reason, in this paper arise the interest in the managing of the public reservations, the good roles of the public and private initiatives, and the managing problems posing for the specialized firms.

Table.1. Participating in outdoor recreational activities 1982-2000 (numbers in millions of persons)

Activities	1982	2000	% change (1982-2000)
Walking	93.6	173.7	85
Bird watching	21.2	69	225
Sightseeing	81.3	111.5	137
Hiking	24.7	69.2	180
Swimming (nonpool)	56.5	90.8	61
Picniking	84.8	114.4	35
Motor boating	33.6	50.6	51
Camping (developed area)	30	52.7	76
Boating	49.5	76.1	54
Camping (primitive area)	17.7	31.9	80
Outdoor team sports	42.4	45.4	7
Backpacking	8.8	22.4	155
Downhill skiing	10.6	17.2	62
Water skiing	15.9	17	7
Snowmobiling	5.3	9.5	79
Cross-country skiing	5.3	8.1	53
Bicycling	56.5	80.8	43
Sailing	10.6	10.6	0
Horseback riding	15.9	20.3	28
Fishing	60.1	70.9	18
Hunting	21.2	22.8	8

*Note:* The table includes the people aged 16 and more.  
*Source:* USDA Forest Service, National Survey on Recreation and the Environment. 1982-2000. [www.srs.fs.usda.gov/trends/nsrr/nsre.html](http://www.srs.fs.usda.gov/trends/nsrr/nsre.html). Accessed 3/12/2007.

## The demand

Understand the demand for the outdoor recreational activities is necessary for different perspective. One of them, is to know the demand for certain type of outdoor recreational activities among one group of people. For example for one company of Granada which is dedicated to the camping equipment it would be important the information about how the demand for backpacking by the residents of Granada (or all Spain, if it sells bymail-order

or online) could be grow during the next years. Of course, studying the future growth of the demand could imply the need to estimate the impact of factors such as the growth of the population or the income, and another possible factors which could also determine how many people would engage in the activity. Then, the company might need to determine the implications of this demand growth for the demand growth of certain products it expect to sell. The perspective is interesting also to the public agencies and private individuals who supply parks and areas necessary for the backpackers to pursue their activities of recreation.<sup>8</sup>

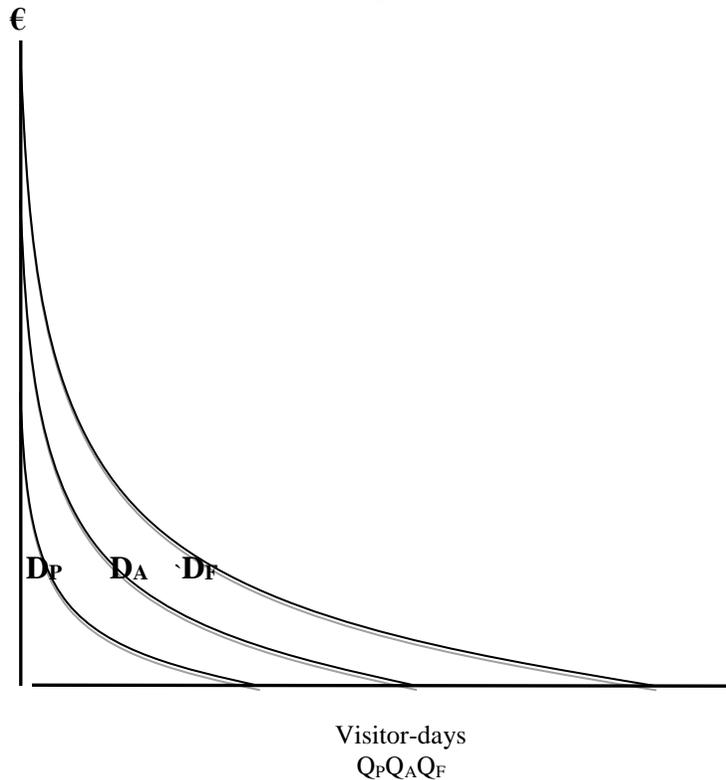
One another perspective is what could be denoted as viewpoint of facilities management. For the in charge of, supposing, a particular park, it is necessary to develop a comprehension of the demand for the park facility which is affected by population, incomes, transportation services and the existence of other competing or complementary areas. A demand curve of the park is shown in figure 1. The horizontal axis has an index of visitor-days, defined as the total number of day-long visits (e.g., two half-day visits make one visitor-day). Note that this may be a significant simplification, since, many parks produce a multiplicity of recreational services, Those include day trips, overnight, longer visits, active recreational visits, sightseeing visits, and others. So, to have manageable study, it is better to boil all these down to one single variable, that is, the choice of visitor days. The vertical axis measure in euros the entrance price to visit the park. Now, even in many cases there are no entrance fee charge, but there are still other costs of visiting the park, specifically, the travel costs of getting there.

In the figure 1, each one of the curves represent different time. Each curve is aggregate demand constructed by the summing all the individual demands curves of the visitors of the park. Now, if we suppose  $D_P$  represents the past demand, for example of the past decade, and  $D_A$  is the actual demand,  $D_F$  represent the future expected demand, perhaps one decade in the future. The most important possible factors behind the shift of the demand curve are the growth of the population and the income, decrease of travel costs, build more and better roads, and change in the personal preferences in favor of the outdoor recreation.

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<sup>8</sup> For an interesting article about the recreational demand preferences, see Daniel Wolf-Watz, et al. The article explores the linkage between nature-based recreation and preferences of individuals

Figure 1.



Naturally, in the absence of direct market, it is not difficult suggest the existence of these demand curves, nevertheless, in reality it is not equally easy measuring them or estimate how they have shifted along the time. In stead, the only what have been successfully developed by the resource economists for assessing the recreational demand functions are techniques of indirect market-price, such as the travel costs as proxies for the normal market prices that are used in market demand analysis.<sup>9</sup>

### Efficiency consideration

In case of areas operating by the private sector, supposedly the area will accept a visitation level that maximizes the net income. Such level of visitation, to be socially efficient or maximizing the social net benefit, it should be exempted from externalities (environmental or nonenvironmental) arising from the operation, no free riders and that the public goods have standard conditions.<sup>10</sup> Nonetheless, we will focus on the publicly supplied

<sup>9</sup>About indirect market approaches, see Barry C. Field; Paul Cameron Mitchell & Richard T. Carson.

<sup>10</sup>About optimal capacity of resource-based recreation, see Fisher, Anthony C., and John V. Krutilla.

outdoor recreational facilities, since along the history such was the general aspect of their supply, and most of the public facilities have not necessitated significant entrance fee. Following figure 1, if the entrance fee is zero, the past, actual and expected number of visitor-days will be respectively  $Q_P$ ,  $Q_A$  and  $Q_F$ . Where  $Q_P$  is the historical number of one decade ago,  $Q_A$  of the actual year and  $Q_F$  represent the expected visiting level of one decade later. Evidently, the result could not be considered efficiently from the social point of view, since, such visitation rates do not cover the operating and maintaining costs of the park. This fact implies a disconnection between the people who pay for the park and those who use it. So, there will be no excuse to accept that the willingness to pay of the marginal user fits the real marginal cost of accommodating that visitor. Then one more possible cost which will not be covered through a zero entrance fee is the cost of the degradation of certain resources especially when the visitors number is big. The another reason for the inefficient result, is the presence of the congestion externalities, since, if there is not entrance fee, the situation will be of open access, which generally leads to use rate above the social efficient level.

In many of the contingent valuation studies of willingness to pay for backpacking experiences, the possibility of meeting another backpackers significantly affects the valuations showed by the respondents.<sup>11</sup> The quantities  $Q_P$ ,  $Q_A$  and  $Q_F$  of figure 1 show an increase in the open-access use levels of the park and the congestion externalities tend to increase as the demand curve shifts outward, and finally when the visitors number becomes significantly high, might choke off any further increases in visitation despite increases in population and another factors. This situation could have been occurred in certain natural parks, when during the summertime the visitation rates can be so high that physical capacities are reached. Now, in many other parks where the visitation is below the maximum supportable level, question has raised about which is the optimal level and how could be achieved. The answer of such question could be met examining the model presented by figure 2. In the figure we supposed  $D$  is the normal market demand curve of the visits to the public park,  $CM$  is the marginal cost of operating the park and we supposed constant.  $D-C$  is the demand curve minus the externality of the congestion cost. That is, the congestion cost of each level of visitation, as we supposed, is measured by the vertical distance between the curve  $D$  and the curve  $D-C$ .

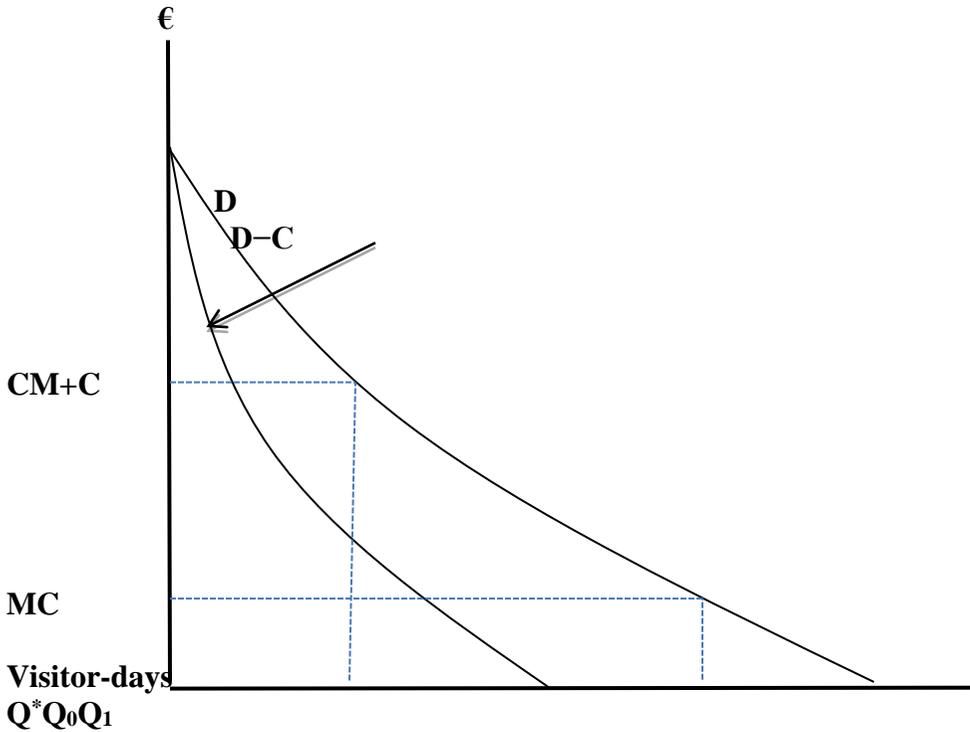
Following figure 2,  $Q_1$  would be the open access visiting level,  $Q_0$  is the social optimal visiting level when there are no congestion costs, since it

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<sup>11</sup> Regarding the negative relationship between the congestion level and the valuation expressed by the respondents, see Charles J. Cicchetti and V. Kerry Smith.

corresponds to the condition  $CM=D$ . And  $Q^*$  is the social optimal level of visitation when there are congestion cost. Now, according to  $D$ , to achieve  $Q_0$ , it would be enough fixing the entrance fee equal to  $CM$  and, according to  $D$ , to achieve  $Q^*$  the entrance fee should be equal to  $CM+C$ .<sup>12</sup>

Figure 2.



### Rationing possibilities

As could be expected, in many recreation areas and public parks the open access causes overuse, congestion and often to the degradation of the natural resources in the area. So, for the managing agency which wish to limit the access till a level consistent with the social efficiency, or exclude all those who only would have continued the visits if the open access had maintained, it would be possible the consideration of several options. One of them is limit the entry to certain categories of people. For example many communities limit the access to the town beach only to the residents of the town. The second option is the first-come, first served. So, determine the desired level of the visitation on the first-arrival basis; when such level of visitation reaches, close the points of entry. The third possible option is charge fee for entry sufficiently that the visitation reduce till  $Q^*$  of figure 2.

<sup>12</sup>In Hanley, Nick, W., et. al., found good economic treatment of the demand and other aspects of outdoor recreation.

The two first options, which are nonprice based are usually accepted in the name of an equity objective, and normally imply certain amount of wealth distribution, since if the cost of operating the park is not covered by the visitors, it should be attained by other means, for example general tax. This involves that some people will participate in the parks cost and not enjoy their services. Of course, it is possible use the two first options in combination, admitting only the residents of the town up to certain maximum.

The third option based in entrance charge to rationing the use, historically it has not been commonly used given the consideration of the provision of public parks and reservation as an important part of the civic life and cultural identity, so should not be submitted to the market force. Nonetheless, this idea is changing for some factors. One, is the need of revenues to cover the costs of park areas. Another factor is the increase of the ecotourism. The third factor is the fast increase of the privately produced outdoor recreation. And the last factor, beside the increasing interest in protecting the resources, is that entry price and the revenue generated can permit the expansion of the park system and reservations quantitatively and qualitatively.<sup>13</sup> But, as can be seen for example in the conference paper presented by Aldo Leopold, this does not mean that all the opposition to the entrance price has disappeared. These different positions regarding the entrance fee, in practice, led to the application of entrance fees which are too low for social efficiency if congestion is included and possibly too low to protect ecosystems. Even though fees create a revenue, the another justification of the entrance fees is to ration the use of scarce asset and to make sure that people who visit the parks are those who value more the experience than the people who do not visit.

### **Revenue and prices**

In reality a major rationale for the entry fees is to raise revenue, therefore it becomes important to analyze the connection between revenue and the charged fees. Given the demand function, there are certain revenue for each price. Then, given the elasticity of the demand, an increase of the price by one quantity can lead to increase or decrease in the total revenue. The maximum revenue arrives when the demand elasticity is unitary. Above that the demand becomes elastic, so price increases reduce the revenue and below that the demand becomes inelastic so price decreases also reduce the

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<sup>13</sup> In 1995 Congress of USA enacted the Recreation Fee Demonstration Program, which allowed some federal agencies, such as the National Park Service, to charge entrance fee. In 2004 this was reauthorized by the Federal Lands Recreation Enhancement Act (REA), which extended for another 10 years the authorization for entrance fees. The types of entrance fees used, for example, included the entrance fee used by the National Park Service (NPS) and Fish and Wildlife service (FWS).

revenue. According to this fact, the prices which lead to maximize the revenue of the visitation of public parks are those corresponding to the point where the demand elasticity is unitary. The figures seen in table.2 show the results of a research which undertook to investigate the demand for visitation at three national parks in Costa Rica and the results of fixing different entrance prices.<sup>14</sup>

Table.2. Entrance fees of national parks in Costa Rica (all monetary values are in dollars)

<b>Parks</b>			
	<b>Volcán Irazú</b>	<b>Volcan Poás</b>	<b>Manuel Antonio</b>
Current fee	12.28	9.85	9.56
Length average of visit (days)	1	1	1.45
Willingness to pay for a visit	21.75	21.60	24.90
Fee that visitors think would be acceptable	6.48	6.77	7.37
Demand elasticity	-1.05	-2.87	-0.96
Current total revenue (1994-1995)	427,307	669,940	431,371
Entry fee of maximizing revenue	7.06	9.28	13.59
Expected total revenue if revenue maximizing entry fee has been applied	1,372,844	675,447	518,187

One interesting result of the table is that the demand elasticity is not equal for the three parks, and the current fees in the first and third park are quite different comparing with the fees of maximizing revenue.

*Source:* Lisa C. Chase, David R. Lee, William D. Schulze, and Deborah J. Anderson, "Ecotourism Demand and Differential Pricing of National Park Access in Costa Rica", *Land Economics*, 74 (4), November 1998, pp. 466-482.

It should be emphasized that maximizing total revenue is not necessarily recommended as a good strategy for national parks, forests and another reservations, since, social efficiency requires the maximization of the net benefit, so the prices which maximize the net benefit may not be those which maximize the total revenue. One important reason of such difference, is that the environmental costs should be included when determining social efficiency. They can or can not affect revenues in a consistent way. That is, if willingness to pay of the visitors includes the environmental quality of the sites so the environmental degradation affects the demand, then the environmental costs could be totally deducted from the revenue.

Nevertheless, visitors may not necessarily be aware of the ecological disruption, therefore willingness to pay may not be an accurate reflection of the environmental status of the park or the reservation.

Another important aspect to take into account when fixing the access fees, is that parks and reservations generally exist as system, since states have numerous parks and they like to manage in coordinated way, as does the central government with its network of national parks, forests and

<sup>14</sup> About national parks of Costa Rica see (<http://www.gemlab.ukans.edu/cr>).

monuments. In similar situations may be it is not proper to price each one independently in an attempt to maximize its own total revenue. Prices at the different reservations should be fixed in coordinated way, given the interrelationship among their demands.

### **Priceselection**

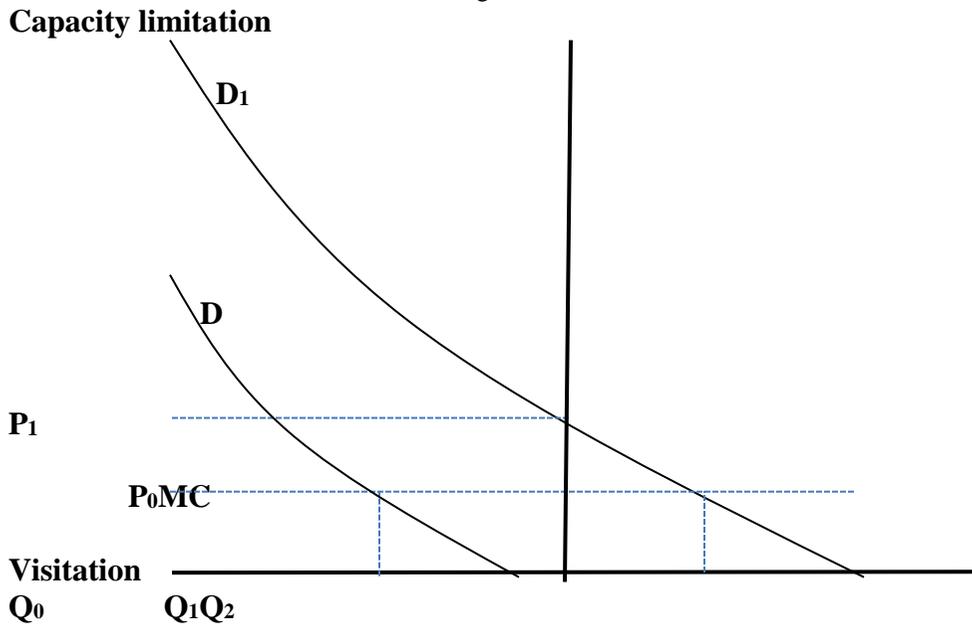
It is obvious that the real world is more sophisticated in comparison with the simple models, since not all visitors have equal preferences and consequently their willingness to pay. So, this leads to the question of, for efficiency and/or equity criteria, when is more convenient the application of equal price and when the different prices. For the answer, first, we should consider the fact that the willingness to pay is higher during the weekend than during the weekdays. Then, different visitors of the same park engage in different activities, and not all parks are equal in environmental value or in their closeness to the urban area. Therefore, to answer the previous question about the preference between equal price and different prices, we can develop some understandable simple principles to help for considering the issue. The first principle is that if the individual demands have different elasticity of demand and the marginal cost, MC, is constant, and there are no congestion, the overall social efficiency requires simply the achievement of the condition  $MC = \text{marginal willingness to pay}$  of each visitor. This is obtained by setting  $P = MC$ . In this case the social net benefit and/or the aggregate social surplus is maximized. Now, if the MC of serving the different groups is different, achieve the social efficiency requires different prices for the different groups. That is,  $P = MC$  for each subgroup, so, charging higher price for the group of higher MC. An possible example of this case of different MC is that rock climbers need higher costs than picnickers given the necessity for closer supervision, medical attention, etc.

Certain parks have limited capacity, such as campsites or visitation levels where congestion problems start appear. As seen in figure 3, to expose the case we suppose the simple example of one park with constant MC, a number of camping sites indicated as  $Q_1$  and two demands,  $D$  for weekday visitors and  $D_1$  for weekend visitors.  $D_1$  is bigger than  $D$  given the more availability of time on weekends. In this case efficiency needs two prices.  $P_0 = MC$  for  $D$ , which leads to an average of weekday visitation of  $Q_0$ , and  $P_1 > MC$  for  $D_1$ , which leads to  $Q_0$  average weekends visitation. For  $D_1$  can not apply  $P_0$ , because it leads to the demand of  $Q_2$  which is higher than the park capacity. Also,  $P_1$  guarantee that the visitors will be those who value most the visit.<sup>15</sup>

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<sup>15</sup> For information about outdoor recreation see (<http://www.gorp.com>).

Figure 3.



### Ecotourism and natural resources

Here we refer to the ecotourism which in our modern time is growing increasingly. Such tourism is that where the visits are linked in certain manner to the natural or environmental resources. Now, even the ecotourism includes also national component, but possibly it has more reference to international tourism, especially that from the industrial countries to the developing countries whose endowments are uniquely the natural resources. In certain locals the ecotourism is seen by the people as essential factor for pushing the economic progress, since as stimulus it can lead to increase the value of the natural assets which before were out of the markets and in this way encourage people to put more interest on their conservation. Now, if the tourism increase the value of the natural resources there will be less reasons to deforest them and/or converting them to agricultural land or pasture.

Now, regarding the ecotourism, if fees such as that for wildlife tour or park entrance are used to increase the revenue or to protect the resources from the overuse, then knowing the demand function is also necessary. This need, which faced all along the private firms in the tourism sector and they have supposedly got the necessary knowledge to continue in the market, nevertheless, such obligation is comparatively recent for the public sector, since in the last case, historically the access right has been decided by politicians and who at the same time was the in charged of the pricing. The problema is not simple, because the countries try to reserve many resources

which are significantly different in term of types of resources, clientele and objective.<sup>16</sup>

But, besides the positive aspects of converting the resources areas in sources of income through the ecotourism, it is necessary to highlight one possible inconvenient. That is, opening up resources to touristic impact, particularly the resources which are ecologically sensitive, could reduce them quantitatively and/qualitatively in the long run. A great wish to get revenues could lead to excessive visitation comparing with the long run sustainable ecotourism.<sup>17</sup> Nevertheless, most ecotourism activity is conected with the biological resources, so the question which comes up is about the efficient stock of the resource when usedas ecotourism resource. In reality all levels of tourism affects the quantity and/or the quality of the resource. The appropriate quantity and quality of a natural resource submitted to ecotourism will be different from what it would be if there were no tourism. The difference will depends on the trade-off between the value of the biological impact and the economic value of the ecotourism. Adding to that, many ecotourism plans have been undertaken as stimulo economic progress, which if succeed might become less resource dependent. This should raise the possibility that the efficiente stock of the ecotourism resource isnot fixed, at least so far. Since, comparatively, economic progress may call for high use in the short run and less in the long run.

Apart from theprevious aspects, it is important have in consideration the institutional elements involved in the management of the ecotourism. One very important is the balance thatis necessary to be established between the private and the public sectors. In Spain, as many another countries central or regional governments are directly intervene in the management of the access to national parks, wildlife refuges, etc. In certain cases, such as wildlife in Africa, private companies have established to manage the ecotourism activities in the market setting. In some cases units oflocal government function en certain senses as privatecompanies inoperating local ecotourism. This is the case of what is known as Campfire (Communal Areas Management Program for Indigenous Resources) in Africa allows local communities, acting collectively, to benefit by selling access to local wildlife resources to the operators of safari.

In any particular case, the preferable institutional arrangment should depends on the characteristics of such case. That is, the resource implicated and the political and economic conditions of the countries. Nontheless, certain general criteria may be possible. When the Ecotourism is based on

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<sup>16</sup> A good exposition of these differences in term of Categories, Objectives and Criteria for Protected Areas can be seen in International Union for the Conservation of Nature (IUCN); J. Mackinnon et al., and Gardner Brown.

<sup>17</sup> About the sustainable ecotourism see Erlet Cater and Gwen Lowman.

market principles, the supply should be directed at the demand of the ecotourists. Not all resources that are valuable in certain biological terms are valuable for the tourists. In similar cases, it is important that economically significant resources not be favoured to the detriment of less significant, but ecologically important, resources. When decisions are left to the private sector, this problem is known as negative externality or negative costs. On the contrary, when decisions are taken in the public sector, that is, by public agencies that are responsible for the ecotourism resources, may be made according to the narrow political interests of those in power, at the expense of other values which could be important for the whole society. From the other side, one more important institutional element is the distribution of the resource rent. In this sense, if the ecotourism is undertaken for the economic progress, it obviously makes a difference who receives the generated rents. If the state receives them, they are used for objectives that politicians and state planners think to be necessary. If the local individuals receive them, they may be spent on different products. Besides, in many ecotourism plans the reason is to provide stimulus to conserve the resources in consideration. If this succeeds, the rent should be received, at least in large part, by those of the local population who have the power of conserving the specific resource. Therefore, one very effective policy to protect the public ecotourism reservations from the deforestation or poaching by the local people, is possibly giving them one part or another of the generated rent.<sup>18</sup>

## Conclusion

Given the quick growth during the last decades of outdoor recreation together with the corresponding private markets and the increasing concern about the environment and the depletion of the natural resources, the aim of this article is to analyze the important economic aspects of the outdoor recreation which are resource intensive. The reason of such study is to understand the necessary condition for the efficient management of the outdoor recreation activities.

Now, for the efficient management of the outdoor recreation, it is indispensable the understanding of their demand, since the information about the demand is valuable as much for the private companies of the related market as for the public agencies.

Regarding the efficient level of visitation, such as in the park case, this is not results the same when the resource is managed by private sector instead of public one. So, when the objective of using the resource is

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<sup>18</sup>Regarding the information about national parks, visitation, forecasts and impacts on local communities, see National Park Service, Public Use Statistics Office (<http://www.aqd.nps.gov./stats>). For information about ecotourism see (<http://www.ecotourism.org>). And about Ecotourism Management, see Lindberg, Kreg.

satisfying the social efficiency, understand the difference between the private and public management results important for the pricing policies. However, when congestion externality is presented, the socially efficient level requires higher entrance fee and consequently less quantity of visitors. To limit the access, in addition to the application of a positive entrance fee, there are also nonprice based options available for the managing agencies. Eventhough, recently, the consideration of a new concerns is justfying the more preference of the price based entrance. That is, besides the creation of the revenue, the another justification of the entrance fees is optimizing the use of the scarce asset and to make sure that people who visit the parks are those who appriciate them more than the others.

Even the revenue maximizes when the elasticity of the demand is unitary, however, the entrance fees which maximize the revenue are not necessarily coincide with those which are socially efficient, because, the social efficient fees are only those which maximize the social net benefit. Such distinction is particularly important when the visits involves environmental degradation which, by turn,leads to a difference between the total revenue and the social net benefit.

To fix the recomendable entrance fees when there are different grupos of visitors with a different demands, the application of different prices is prefered above the equal price when the marginal coste is different among the different demandas and also, when certain demandas exceed the maximum visitation capacity of the corresponding area.

When the ecotourism used by the countries to help the economic growth, it could increse the value of corresponding natural resourses and in this way can help to improve their conservation. Now, when the application of fees for ecotourism are aimed to increse the revenue or to improve the conservation of natural resurces, the information about their demand result important. The efficient conservation management, also has to take in consideration various affecting intititional aspects.

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# STRATEGIC MANAGEMENT FOR CUSTOMER SATISFACTION WITHIN CONSTRUCTION PROJECTS (CASE STUDY OF ABDULLAH BUIDERS PROJECTS)

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Doi: 10.19044/el.p.v1no2a12 [URL:http://dx.doi.org/10.19044/el.p.v1no2a12](http://dx.doi.org/10.19044/el.p.v1no2a12)

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## Abstract

It has been evidently observed that Customer satisfaction has been a long lasting tool for success of the organization/company. In developed countries it has been taken on top priority before every project's initialing customer rate of return is evaluated and on contrary competition factor is also examined in order to provide every different facility with in construction project in the same region. In the region Sindh country Pakistan a company has endeavored its trusted name by providing practically customer satisfaction and sustaining on commitment made to customer by the slogan of can-do spirit. They have initiated and to somehow started this practice with in the region. However this research illustrates benefits of the strategic management for customer satisfaction by can-do spirit. Eventually there is a need to look around over the developing countries that how developing countries like Pakistan focusing over this issue and explore the potential role of strategic management which helps project manager to deliver successful project. The analysis outlines the incentives and barriers in implementing and delivering corporate social responsibility in with in construction projects. Research also seeks to recommend the application of strategic management for customer satisfaction to aid as a project management tool and deliver within construction projects of Pakistan on high priority.

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**Keywords:** Strategic management, Project Management, Customer Satisfaction, Pakistan

## **Introduction**

Customer satisfaction is one of the crucial elements in the construction industry, which is identified as the essential task in construction organization strategy. When good customer service is not in the organization then the dissatisfaction occurs of the client (customer) that leads client to the negative attitude towards the organization, uttering of bad reputation in the market for the organization. The construction organization to which i have access to and I know is Abdullah Group, this organization is well known construction organization where company has ensured and maintained its high standard in quality construction, timely delivery and customer satisfaction., the main stakeholder has given customers satisfaction one of the main criteria for well being of the organization as (Heng Li 2000) discussed that most construction organization is not responsive and flexible to the customer need in a strategic mode by finding their competitors they would thoroughly look upon the same strategies and operational initiatives.

## **Analysis of the business problem and Environment**

This organization is located in Pakistan which is developing country yet, there many problem encounters to the mode and strategic planning of the customer satisfaction issues, where tangible system of old concepts is until in its position, where as this organization has given and managed their value, image and concept to the top level of organizational structure of the surrounding. Abdullah builder's vision is *"To evaluate the correct value of your dreams by providing premium housing and commercial places to our clients at par with international standard so as to provide benchmark quality standard and luxurious life style"*. According to the vision, organization is trying and striving hard to provide one of the best lifestyle to the customers and fulfil the needs of the customers but due to the environmental, economical and political issues the company is not boosting its potential to the smaller economical value customers. Customers always try to find out three most important components in construction organization for their satisfaction, which are like a cycle. However these three main components also plays vital role in any project from start to end, eventually these three things also modifies strategically the planning, designing and execution of the project of any construction organization.



For exploration of the performance and success of construction projects the criteria of time, cost, and quality is been used (Chan 2002). The above cycle represents core ideas of the customer satisfaction, which are very important to every customer and which are essential to the organization reputation, customer always wants delivery on time, if the organization is capable of delivering project on time then customer will be satisfied. Cost is also one of the important issue or factor in construction organization, where the rates are changing day by day which affects the total cost of the project, in relation to the construction projects there a variance cost is kept for the cost variation but finally customer wants most economical project not at that time but for sustainability point of view as well. However quality is such a factor where customer wants no compromise throughout the project quality remains constant of the top level where no any changes may occur that's the main finding of the customer satisfaction. Most of the construction organizations provides time, and cost but they cannot maintain the quality of the qualitative standard, where customer is encountered with dissatisfaction as (McColl-Kennedy 2001) discussed that customer is the vital source of the organization but when bad quality service encounters then customer is engaged in the activity of exiting or complaining against the organization, initially customer diverts way from the organization but if potentially the customer complaints and needs are satisfied without delay then it can turn dissatisfied customer in to satisfied customer.

### **Company's Approach**

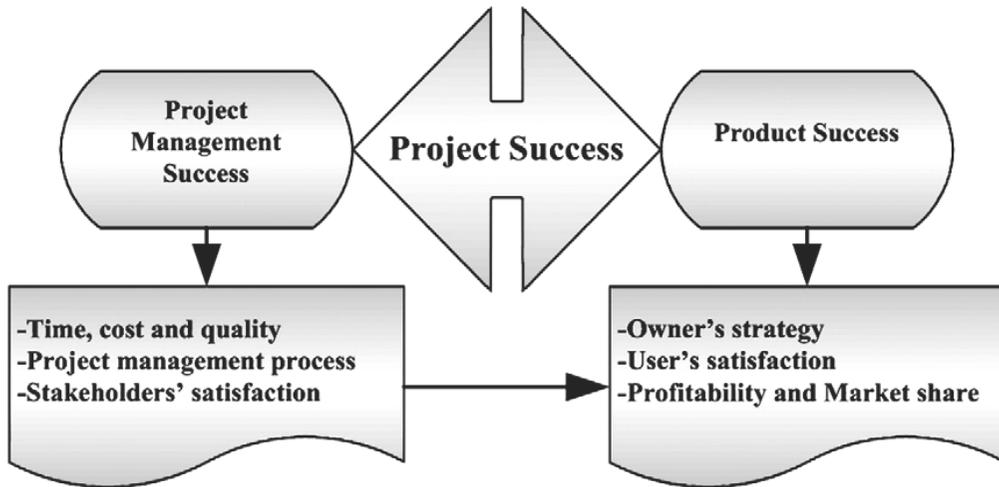
Abdullah group is strategically moving on the path of three dimensions which are discussed above, in which quality is one of the best

components in their visibility, however different problems have encountered in their way to customer satisfaction where the economic inflation is one of the biggest issues which has made trouble to give more comfort to their customers in the economic situation but as their strategies, goals, visions are strong enough so they come up with the solution by time framing of budget to their customers and satisfying their mission which is “*With passion, pride and speed, we actively communicate with our customers to deliver the dwelling and service that exceed their expectations. We consistently work to build communicate that accommodate every need and every lifestyle. With roots still firmly planted in Hyderabad. Abdullah Group retains the can-do, entrepreneurial spirit that characterizes life in Pakistan’s most remote regions*”. The Abdullah group is trying to evidently give a wonderful chance of optimizing luxury and comfort in the life their customer’s, their mission is to satisfy every need of customer to make their customer valuable for life time. They keep speedy strategies to their working environment, passion performance to their personalities working over the projects and provide pride to their customers. But to address these issues many problem are coming across in which political influences in also of the main importance, where every member of the assembly is trying to neglect these organization and make their own profit by advertising and pushing their own peoples up to the opposite of the well organized and structured groups of the area. There also been an environmental issue to the organization which has been a big hindrance to the company for CO<sub>2</sub> emission, waste management for life after the completion of the project.



The Abdullah group is providing almost to every project the facilities of a green solution to the social values of the customers such as parks, hospitals, restaurants, schools, sports and recreational area, gymnastic etc, etc. but main problem occurs where after the completion of the project no

one is found with any social responsibility in the society who may identify, manage and maintain these facilities provided, due to that a authorized social wings have captured these facilities and have dramatically pressed the rights of society to the surrounding under the soft hand of political parties. The organization is also dedicated to the corporate social responsibility in which education, health and welfare development are also key factors to be managed for the customer satisfaction, Their message of corporate social responsibility is *“Rotary is an international plate form which most of our employees caters to the Corporate Social Responsibility of Abdullah Group. It works towards the alleviation of poverty and primarily on education, health, and welfare development of the under-privilege of the society and also works towards the promoting environment-friendly practice in the country. Most of our senior management are prestigious members of the renowned organization who projects and identify relevant areas of concern which are then executed on the periodic basis”*. Towards the customer satisfaction Abdullah group is dedicated by their firm intention to evaluate the needs and wants of the customers but as the location of the company is in developing country where the technology and modern techniques are not introduced yet, where the organization is trying his level best to the approach the social values, social goals, and social facilities availability, there neither Action plan is introduced for sustainability, nor climate change bill or low carbon transition plans. (Burns 1986) identified (SIPA) simultaneous importance-performance analysis which evaluates the perceived price fairness, perceived product quality, and perceived service quality. However these three SIPA nominations can also give a satisfactory way to the customer satisfaction. If customer is not satisfied then it is failure of the project not the success of the project. (Baccarini 1999) has distinguished project success in to two factors as shown below first one is project management success where time cost and quality, the process of the project management and the stakeholders satisfaction is taken and on other hand product success is taken in which customers satisfaction, owners strategy and profitability and market shares are given.



(Heng Li 2000) argues that for mapping up organization's route to the competitive system an organization must follow up three things:

- *"It must quickly recognise changes in demand that could have an adverse impact on its operations (and conversely those that could yield positive impact)*
- *It must be flexible enough to respond to changes in customer needs and demands.*
- *It must understand its own capabilities relative to demand".*

(Nesan LJ, Holt GD 1999) developed impact for satisfaction of above goals that the organization needs to go on the way of changing their supplies and learning the ability to meet the demands of the customers. It is very important because it analysis outlines of the rational for its application in customer satisfaction approach. However customer satisfaction in such a complex industry is difficult but there have been plans applied in number of contexts as a means of ensuring that customer satisfaction objectives are planned, measured, and achievable in practice. (Love PED, Gunasekaran A. 1997) also observed that construction industry is increasingly structured complex and competitive industry which does not comply with one attitude of inter-organizational relations. but there different types of the workers involved in one industry from head to tail to justify the customer need it is very difficult to cope the demands of customers but fortunately the construction organizations are giving full flavour to the theories and answered a closer business relationships proposed (Wood DJ, Gray B. 1991). There must be strategic alliance for customer satisfaction and sustainability strive (Hampson K, Kwok T. 1996). Perhaps strategic alliance would be privilege for the organization to endeavour its depth of knowledge for the customers' demands and satisfaction and achieve long term advantage (Porter M. 1985).



The construction organization on the whole portrays a positive view of customer's satisfaction with their ethics, loyalty, integrity, and leadership. Organizations are trying to find out the a way out to develop new and emerging scenario for the positive feedback of the customers but are not looking beside that what are the root causes and facts in our organization that our customers are not satisfied. They are just trying to evaluate new ways for making more profit and more reasonable income but are not interested to look upon the customer needs and demands because they forgot that their economic and profit chart will be the outlet of the customer satisfaction. The more you satisfy the customer the more profit will be preserved.

### **Conclusion**

The importance of customer satisfaction to the world economy is self evident. Customer satisfaction is one of the most important task in any project. Modern days customer's projects have become increasingly demanding in terms of time, cost, and quality, therefore it has become imperative for the organization to have excellent grip over the needs and demands of the customers and have perfect planning skills to capture the customer for long-term. "Failing to customer satisfaction is failing to project". This one sentence summarizes the importance of customer satisfaction with in construction organization.

The reputation of organization in the eyes of customers has made this job easy for them to relate, encounter and alliance the relationship with organization and if any where customer is finding unsatisfactory status there customer try to exit and starts complaining against the construction organization. (Heng Li 2000) has perfectly said "*Construction organisations*

*can not employ yesterday's business philosophies today, if they wish to remain in business tomorrow."*

To summarize the benefits of customer satisfaction using different techniques, it can be claimed that more efficient layout of activities and resources can be made, beside achieving a good organization goal and tedious task of customer classification and satisfaction just a few step closer to the success of the organization.

Eventually by the strategies targets and initiatives of Abdullah group have presented and easy and approachable tool for managing customer facilitation and satisfaction called success plan and as it has been justified above that this tool has potential to achieve targets of Construction projects. By utilizing and managing this type of strategies, goals or objectives or tools we can make our construction industry more sustainable and we can move on the path of successful development.

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# **ETHICS AS A TOOL FOR SUSTAINING BUSINESS DEVELOPMENT AND PROMOTION: A PHILOSOPHICAL APPROACH**

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Doi: 10.19044/elp.v1no2a13 [URL:http://dx.doi.org/10.19044/elp.v1no2a13](http://dx.doi.org/10.19044/elp.v1no2a13)

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## **Abstract**

The paper examined the importance, relevance and the place of ethics in the society with particular attention on business development and promotion. It believed (the paper) that morality should be given a pride of place while transacting business. It is erroneous in believing that an entrepreneur could be successful without taking into cognizance the concept of morality. Morality, according to this paper, served as a morale booster for any business. No business can thrive without adequate consideration of the relevance of ethics. The paper opined that most of the world's business outfits collapsed because little or no attention was given to morality in the running and operations of those conglomerates. It was on this premise that the paper recommended to all entrepreneurs to always think about the moral standing of their businesses so as to avert any unforeseen contingencies. However, the method of critical analysis was employed in developing this paper. The paper concluded by emphasizing the role morality, which is the hallmark of ethics, played in shaping every business.

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**Keywords:** Ethics, Business, Development and Philosophical

## **Introduction**

Some of the questions people may ask: What has ethics to do with entrepreneurship? Put differently, they may ask what has ethics to do with business because to be an entrepreneur means to run a business at one's own financial risk? Has an entrepreneur anything to do with ethical considerations? After all, business is business. This also implies that ethics is ethics, that both business and ethics belong to two domains of human life which are distinct in themselves; that both have nothing in common; that both are strange bed fellows, and finally that there is no connection between ethics and entrepreneurship.

While these and other related questions are indeed, good questions, they are at the same time totally misconceived. These questions demonstrate the lack of understanding and appreciation of the role of ethics in human life, in human affairs and in all human endeavours. How ethics play this all important role in human endeavours of any kind including entrepreneurship will be closely examined.

### **What Ethics is**

Ethics has been variously defined by philosophers. This is not surprising as philosophy, the discipline of which ethics is a branch, suffers from the lack of univocal definition.

First, ethics can be viewed as a normative science of human conduct.<sup>1</sup> The branding of ethics as a normative science suggests at once that it differs from the physical sciences in their being descriptive. So, why and how is ethics a normative? Ethics is normative in the sense that it deals with the standard or principles of right and wrong behaviour. It attempts to explain, state and often times urge obedience to a rule. It is a science because it is principle governed endeavour and attempts a systematic study of human conduct. Its study represents an intellectual enterprise, a rational inquiry into human actions, and affairs in the hope of gaining knowledge.<sup>2</sup>

### **What is Business Ethics?**

Business ethics is one type of applied ethics. Business ethics can be defined as the application of the principles and methods of ethics to solving business problems. The basis of ethics is morality. Morality is seen as an instrument that can be used to examine and correct the pitfalls or wrongs in business.<sup>3</sup>

However, business ethics does not aim primarily to describe the nature of business or to give business advice to persons engaged in business, although discussion on this area, to a large extent, influences how business people resolve their problems. Business ethics is concerned with the moral questions that arise in and from the practice of business, and because of the general crisis in modern culture. Business ethics is viewed as a set of guiding principles or rules to practices in any kind of business. These rules serve as rules of conduct in business and business people are expected to conduct their actions in line with the standard. Examples are the rules kept by the standard organization of Nigeria, to which all manufacturing firms are expected to comply. This standard might be regarded as ethics in the sense of rules of conduct. Similarly, many businesses have created "Code of Conduct" which are lists of what they believe to be ethical behaviour.

Furthermore, business ethics can be understood from a philosophical standpoint as an ethical/philosophical inquiry into the conducts and

practices in business. It is a moral evaluation of practices in business. It addresses such issues as how moral obligations may conflict with profit-motive and how these conflicts may be resolved. As a branch of ethics, it thus requires an understanding of general ethical theories, and practices in business. Business ethics in this sense, aims at assisting business people deal with moral problems arising in the course of their duties. Business does not, however, operate in a vacuum. It is a sub-system of our social order and as such is not immune to the changing social ethics. Business ethics equally is not static but reflects changes and demands arising from new social ethics as it affects business.<sup>4</sup>

### **The Role Ethics Play in Business**

It is commonplace hearing people say ethics is of little relevance to business, or put succinctly that there is no morality in business, since all-motivating consideration in business is profit. It is said that “ethics is ethics and business is business”. The implication of this saying is that ethical issues do not matter in business. This view, though widely held, is fundamentally mistaken. In this vein, it has been argued that the business of business is serving society not just making money. Profit is and should be seen as reward for serving society well. It follows that profit is the means and the measure of our service and in no way is it an end in itself.

One functionalist view of the purpose of business is to serve the public interest. Some companies in America in the 20<sup>th</sup> century had permission to do business on the grounds that the existence of such firms promoted the public interest. Hence, from this point of view, the first and primary step in moral evaluation of business practices is to ascertain the function and purpose of business. Those business practices which are in accord with the function of business are good business practices. This ascertaining the purpose of business and the practices that confirm to good business practice is one of the primary problems of business ethics.<sup>5</sup>

In business ethics, there is equally the question of social responsibility. The argument here is that corporate officials have a social responsibility that goes beyond serving the interest of their stakeholders. Opposing this view is the idea that in a free market economy, there is only social responsibility of business namely; using its resources and engaging in activities aimed primarily at increased profits so long as it stays within the rules of the game. But the question is, if business does have a social responsibility, other than making profit, is this responsibility a business outfit has to perform?

Another issue in the area of social responsibility is the claim that business should contribute to the support of charitable activities. Two arguments are usually advanced

against this view namely: that if a corporation makes such contributions, it prevents an individual stakeholder from deciding himself how he should dispose of his funds. Secondly, if this is to happen then corporate tax must be abolished.<sup>6</sup>

### **Ethical Standards and Business Effectiveness**

How do ethical standards of a firm affect its effectiveness as an economic agent? Does honesty pay? Some people argue that ethics is far from the point of view of upholding one's personal standards, but that from the view of business effectiveness it makes no discernible difference. To back this view they point out that often firms which seem honest do not succeed in business, while firms that seem to disregard ethical issues may be quite profitable.

There is no denying of such observations. However, all that they tell us is that honesty, by itself, does not guarantee business success. But one should remember that brilliant strategy, consistent service to customers, or first class financial management, each by itself, does not guarantee business either. Business success is the product of the complex interaction of many factors. Any one factor can only contribute to it, not guarantee it.

The relevant question is whether consistent ethical behaviour, of itself, contributes positively to business success. It seems clear that it does so by fostering three key ingredients of that success.<sup>7</sup> Ethical behaviour contributes to the good reputation of a firm and to other parties being ready to trust it, and it promotes commitment to success of the firm.<sup>8</sup>

Besides, contributions to business success, these factors also have the highly desirable characteristic of not easily imitable and therefore can provide a sustainable competitive advantage. New products or services, organizational structures, compensation policies, exploitation of new markets, possession of valuable assets, are all factors that can provide a competitive advantage.

### **Instilling Ethical Standards in Organizations**

It is not rare for the top decision makers of business companies to want to ensure that their subordinates behave ethically whenever they act on behalf of the company. But it is one thing to wish that one's subordinate behaves ethically and quite another to achieve it.

There are many obstacles on the way to getting an organization to behave ethically. The basic one is that managers are primarily judged and rewarded according to the results they obtain, often short-term results. What happens when a manager feels that most expedient way to attain the results that are expected from him is unfair to some people such as employees, customers or the local community, or otherwise unethical?

In the first place, such a manager is likely to have a difficult time trying to articulate her case. Economic results like market share, sales, objectives or cost levels are clear and specific, and their relevance to the success of the company obvious. On the other hand, ethical standards tend to seem much more “wholly” and subjective, and therefore they are hard to defend. The manager will fear, and often reason. So, that if she pleads ethical qualms to her superior as a reason for having failed to attain the results expected of her, she will be perceived as offering lame excuses for non-performance. What is likely to happen? Experience shows that in many occasions ethical concerns will take a backseat to immediate economic imperatives, the manager will swallow her ethical qualms and endeavour to obtain the results demanded of her.

But did we not argue before that in the long term, the erosion of ethical standards in an organization will not only cause harm to others but is also likely to undermine the capacity of the organization to perform? We did, in fact, in many cases, it is precisely the fear for such long-term consequence for the organization, which will have prompted the concern of top management to preserve high ethical standards.

In a small company, if top management is competent and is sufficiently committed to ethical behaviour, no special efforts may be required to achieve this. Top managers convey through their words and example the standards they expect others to live up to, and they are always at hand to ensure that appropriate procedures are followed and to give more specific guidance whenever this may be needed.

In a large company, however, more formal efforts are needed to ensure consistent ethical behaviour throughout the organization. Something that can be done is to draw up an ethical code which spells out the main ethical norms to which the company is expected to adhere in its operations.<sup>8</sup>

### **Conflicts of Interest in a Business Organization**

Perhaps, a simple example will be of help in clarifying the concept of conflict of interest.

The service manager of a bank has to sell a one-year old Peugeot 505 car which is no longer needed by the bank. Part of this responsibility in this task is deciding the price that the bank will accept for the car as he needed a vehicle he decides to buy himself, in his personal capacity, the car that the bank is selling.

In this situation, there is clearly a conflict between the responsibility of the manager in his capacity as service manager of the bank (i.e. to get the highest price reasonably obtainable for the car), and his personal interest (to buy the car at the cheapest possible price).

While most of the situations, which arise in real life, are not as helpfully obvious as the example just considered. It is the presence of the conflict between personal interest and official responsibility which creates the ethical problem that is referred to as a conflict of interest.

A person placed in such a situation could take advantage of it to obtain a car at much lower price than would obtain in an arms-length situation. Very few people are likely to entertain doubts about the ethical quality of such an action, it constitutes a clear-cut case of abuse of fiduciary powers and a close equivalent to a situation of outright theft.

However, the mere fact that the manager finds himself in such a position already places him in a situation of potential conflict of interest; even if in fact he were to bend over backwards in order to avoid taking advantage of the situation and paid above market value of the car. As we will see, there are strong reasons to avoid being placed in such situation of potential conflict.<sup>9</sup>

### **The Responsibilities of a Business Organization: to Customers, Employees and Society (If Any)**

People often speak of the “responsibilities of the firm” or in a more common phrase, of the “social responsibilities of companies” . These expressions are often used very loosely and are given different meanings by different speakers. Therefore, it will be useful to engage in some preliminary clarifications.

Some people assert that business organizations have responsibilities which go beyond making profits. Often what they have in mind is that it is proper for companies to support worthy community initiatives like (universities, museums or hospitals) to reduce a minimum pollution, going voluntarily beyond the standard set by the law; to employ the physical handicapped; to refuse to invest in certain places in order to foster political objectives; and generally to use their resources or restrict their activities in ways which are not calculated to maximize their profits but which will contribute to the common good of the communities in which they operate. Other people reject outrightly the above position and argued that the only responsibilities of a business are to obey the law and make profits for its shareholders. Still others think that companies can legitimately concern themselves with some of the causes listed above but not with others.<sup>10</sup>

### **Summary**

The paper has examined the relevance of ethics to business. A business outfit cannot function effectively without taking into consideration the concept of morality. It sees ethics as a moral evaluation of practices in

business. The paper gives an introductory insight into the meaning of business, ethics and business ethics. It equally considers some of the fundamental principles needed in the administration of any business outfits. It further addresses such issues as how moral obligations may conflict with profit motive and how these conflicts may be resolved. Because it is an organized discipline, business ethics presents more coherent demands. As a branch of ethics, it thus requires understanding of general ethical theories, and practices in business. Business ethics in this sense aims to assist business people deal with moral problems arising in the course of their duties. This paper explains that business does not, however, operate in vacuum. It is a sub-system of social order as well as a large society. It also expatiates on how the ethical standards of a firm affect its effectiveness and how these standards could be instilled in workers in order to behave ethically whenever they are carrying out official responsibilities in their work.

To this end, the issue of social responsibilities of firm has been seen in this paper as not binding on firms because the main purpose of running a business outfit is to make profit and not to use the resources to develop communities where firms are situated.

### **Conclusion**

From the foregoing, we can see that without morality, human relationships in general and in business environment will become a make-shift of some kind. The relevance of ethics to business cannot be underestimated. If morality is removed from business, there will be problems namely: embezzlement, over-invoicing, untruthfulness, mistrust, non-obedience to higher authority, corruption of some sorts, falsification of official documents, forgery and perjury and a host of others, just to mention a few. The aftermath of this will lead to the eventual collapse of the business. It is worthy to note that most of the reasons for failure in businesses in Nigeria and overseas today are caused initially not by economic problem, but a moral one. Examples are the fraudulent acts that occurred in Cadbury ENRON Nigeria some years back (over-invoicing). However, the development of corporate governance is a reaction to unethical business practices in corporate organizations such as tampering with financial statements to give false impression of the financial health of organizations (companies) to the recipients of reports.

To this end, from a moral problem we now have economic problem. To ensure a smooth running of any business, morality should not be handled with levity.

### **Recommendations to Entrepreneur**

- i. An entrepreneur must take account of the fact that human beings are end in themselves. They should not be used as means to other ends, desirable or not.
- ii. An entrepreneur must not attempt to dehumanize or denude the humanity of others, in pursuit of pecuniary interests. Human beings deserve respect. Simply because they are human, not because they are wealthy or poor, manager or messenger.
- iii. An entrepreneur should do nothing to undermine the respect we all earn in virtue of our common humanity.
- iv. The dignity and integrity of others should be promoted, protected and ensured in business.
- v. An entrepreneur who cannot be trusted, especially by colleagues and the public in general cannot succeed.
- vi. An entrepreneur must endeavour to avoid breaking promises just for the fun of it. Doing so repeatedly can lead others to conclude that one is insincere, unreliable and unserious, and not worthy of the trust of others.
- vii. The Golden Rule applies in all human situations. What you do not want done to yourself, do not do unto others, is a universal principle. An entrepreneur who does not bother about the import of this principle may not be able to maintain credible, lasting and meaningful business relationships with business associates. Without this relationship, an entrepreneur has no chance of succeeding.<sup>11</sup>

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# **CHALLENGES FACED BY MIDDLE LEVEL MANAGERS IN THE DECISION MAKING PROCESS: A CASE OF G4S SECURITY SERVICES (K) LIMITED - NAIROBI REGION**

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Doi: 10.19044/elp.v1no2a14 [URL:http://dx.doi.org/10.19044/elp.v1no2a14](http://dx.doi.org/10.19044/elp.v1no2a14)

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## **Abstract**

The purpose of the study was to determine the factors that contribute to the Challenges of Middle Level Managers in the Decision Making Process A Case s of G4S Security Services (K) Limited, Nairobi region. The literature review examined the various historical and theoretical perspectives of the decision making process in organization in terms of; the traditional roles of managers and how they relate to their work dynamics; the organizations structure and it's impact on the decision making component. Lastly, the specific challenges faced by managers in the middle level hierarchy in the decision making process.

The methodology of the study was descriptive case study. A census method was used to collect the data in the study. Respondents assert that the hierarchical nature of the structure of the organization contributed largely to the exclusion of the middle level managers in the organizations decision making process. Managers' inputs in strategic planning is increasingly becoming necessary in the formulation of practical and directed strategies important at implementation stages as they understand what is significant at the operations level and so that they may own the process to reduce resistance to change in organizations.

Organizations should position themselves by empowering managers in decision making and strategic formulation to get a competitive advantage with the competition. It would therefore be recommended that the vital input component of middle level managers be incorporated into the management's decision making process in the organizations' formulation of policy and strategy.

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**Keywords:** Decision making, middle level managers, Nairobi

## **Introduction**

### **Decision Making**

Identifying and choosing solutions that lead to a desired end result (Dessler, 2008).

### **Development**

A learning exercise that is directed towards future needs rather than present needs and is concerned more with career enhancement and growth than immediate task (Dessler, 2008).

### **Training**

The learning exercise directed towards the acquisition of specific knowledge and skills for the purpose of occupation or task (Dessler, 2008).

### **Strategy**

Large scale, future-oriented plans for interacting with the competitive environment to achieve organizational objectives (Kreitner, 2007).

## **I.**

### **Introduction**

The chapter describes the research design adopted in the study, population and sample frame, sample size, research technique, data collection and analysis methods and research procedures. The function of the research design is to provide for the collection of relevant evidence with minimal expenditure of effort, time and money. The research design is to provide for the collection of relevant data in order to analyze/process to show the findings (Orodho, 2004). The population of the research consisted of 10 senior managers who conceptualize or make company policies, 50 junior level staff (supervisors) of different divisions and 45 middle level managers from G4S Security Services Nairobi.

### **Data Analysis Methods**

Data analysis is a process of gathering, modeling, and transforming data with the goal of highlighting useful information, suggesting conclusions, and supporting decision making. Data analysis has multiple facets and approaches, encompassing diverse techniques under a variety of names, in different business, science, and social science domains (Orodho, 2004). The data was analyzed using qualitative and quantitative statistical methods.

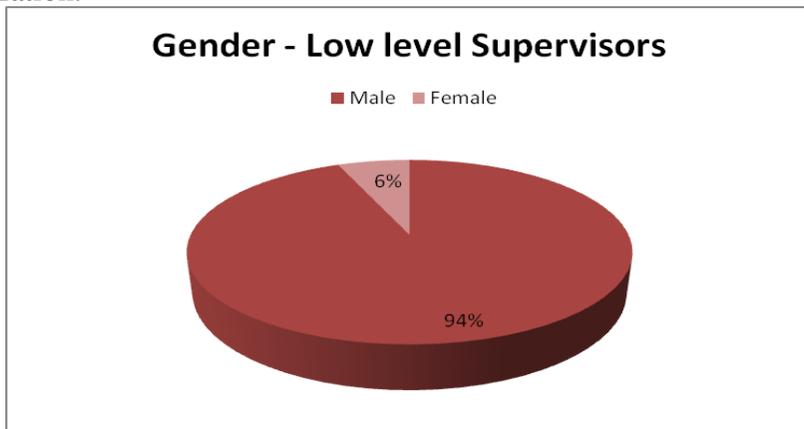
In summary, the chapter describes the methodology used in the research; The research design is descriptive case study; The population of the

study comprise of senior managers, middle level managers and supervisors at G4S Security Services Nairobi region and The statistical method used was non probability.

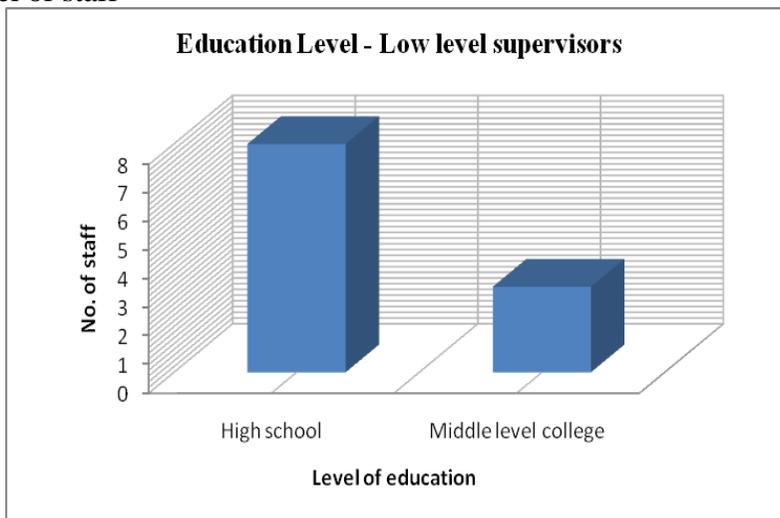
## Results and findings

### Introduction

The questionnaire covered the demographic information of the respondents, their gender, and age, highest level of education, job designation and length of service to the company. The information and data obtained was presented in form of frequency tables, bar charts and pie charts. The study targeted an estimated 10 senior managers, 45 junior managers and 50 Low level supervisors all who are staff and management of the G4S organization.



The gender of the low level supervisors indicated that the male were the majority representing 93.8% while the females represented only 6.2% of this level of staff



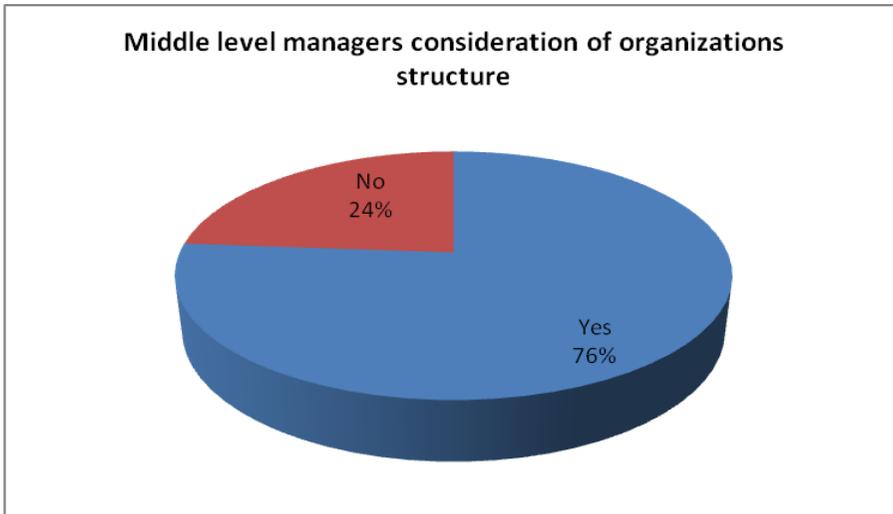
### Education Levels of low level supervisors

The results show that the highest level of education attained by the participating low level supervisors 72.7% have achieved a High or Secondary school education, followed by 27.3% who have gone up to middle level college education.

Table 4.3.5.1 Length of service - Low level supervisors

Low level supervisors		Frequency	Percent
Valid	1 - 4yrs	9	52.9
	5 - 9yrs	4	23.5
	10yrs and above	2	11.8
Low level Supervisors		Frequency	Percent
Valid	Male	15	88.2
	Female	1	5.9
	Total	16	94.1
Missing	System	1	5.9
Total		17	100.0

The gender of the low level supervisors indicated that the male were the majority representing 93.8% while the females represented only 6.2% of this level of staff.



Analyzing the organizational structure revealed that 76.2% of middle level managers agreed that it was good and served the company well while 23.8% did not agree.

Other results indicate as follows:

- The middle level managers provided the following reasons for their responses with 23.8% stating that this supports the fact that the

structure was good because the operations of the company run smoothly with the structure in place.

- Analyzing the organizational structure revealed that 80% of senior managers agreed that it was good and served the company well while 20% did not agree.
- The senior managers provided the following reasons for their responses with 33.3% stating that this supports the fact that the structure was good because the operations of the company run smoothly with the structure in place, with a similar 33.3% indicating that with the structure there were clearly defined reporting lines.
- Analyzing whether the low level supervisor were satisfied with their current job position revealed that 64.7% of them were satisfied with their position in the company currently whereas 35.3% were dissatisfied with their current positions.
- The low level supervisors provided the following reasons for their responses with 29.4% stating that they were contented with their positions while 23.5% were dissatisfied saying that their pay was too low hence are discontented with the position.
- Analyzing whether the middle level managers were satisfied with their current job position revealed 19% of them were satisfied with their position in the company currently whereas 81% were dissatisfied with their current positions.
- The low level supervisors provided the following reasons for their responses with 23.8% stating that they were dissatisfied with their positions because there was no promotion while another 23.8% were dissatisfied saying that their pay was too little hence are discontented with the position.
- An analysis of whether the middle level managers are assigned enough duties revealed that 23.8% agreed that they are all the time assigned enough duties while 66.7% stated that sometimes they are assigned enough duties and 9.5% said they are rarely assigned enough duties.
- The low level supervisors provided the following reasons for their responses with 23.5% stating that they sometimes lack the equipment they require to do their duties, 17.6% stated that supplies took too long to be availed thus delaying their duties, another 17.6% said that they use improper kit to perform their duties while a proportionate 17.6% stated that they never lack the items they need for their duties.
- The low level supervisors provided the following reasons for their responses with 76.5% stating that they communicate openly thus creating a conducive atmosphere for good communication, 11.8%

stated that the boss encourages and empowers with his communication while 5.9% said it is because he communicates company information and a comparable 5.9% said it is because s/he is a leader.

- To determine from the low level supervisors whether the boss delegates duties to them revealed that 82.4% of the respondents stated that duties are delegated to them all the time while 17.6% said that they are sometimes delegated duties.
- An analysis of the middle level managers training needs revealed 57.1% felt they needed training in management and 28.6% need training in customer care and services.
- Analyzing the job motivation of the low level supervisors revealed that 58.8% of the respondents stated that they are only sometimes motivated by their jobs, 35.3% said that the job motivates them all the time whereas 5.9% stated that the job rarely motivates them.
- Analyzing the job motivation of the middle level managers revealed that 66.7% of the respondents stated that they are only sometimes motivated by their jobs, 9.5% said that the job motivates them all the time whereas 23.8% stated that the job rarely motivates them.
- The senior managers provided the following reasons for their responses with 33.3% stating that good allowances would motivate them, another 33.3% stating that merit performance rewards would motivate them while 16.7% stating that an increase in salary would motivate them and a comparable 16.7% would be motivated with improved and better working conditions.
- An assessment of the senior managers to determine if they were team players revealed that 83.3% of the respondents indicated that they are team players while 16.7% indicated that they were not team players.
- The middle level managers' response on the activities that need to be done to enhance teamwork revealed that 33.3% advocated for equality and fairness at work which would enhance team building, 9.5% stated that avoiding the practice of tribalism and favoritism would enhance team work and a similar 9.5% advocated for regular team building meetings
- The low level supervisors provided the following responses as obstacles to their work 47.1% indicated that there were no obstacles to their work, 11.8% indicated that lack of resources to perform their duties was an obstacle to their work while others in equal measures of 5.9% indicated that the communication links were too large, they used defective equipment hindering the progress of their work, they had different opinions with their superiors thus hindering their work,

overcrowding at the working place and poor communication at work respectively hindered the work progress.

- The senior managers provided the following responses as obstacles to their work 33.3% indicated that inadequate resources were obstacles to their work; another 33.3% indicated that little salary was an obstacle to their work whereas 16.7% indicated that the impromptu transfers were an obstacle and another 16.7% complained of inadequate office space.
- Analysis shows that 67% of the senior managers consider their managers as multi-skilled as opposed to 33% who do not have the same opinion.

### **Conclusion**

The managers by necessity need also to be involved in the formulation and planning of the overall organizational strategy. This will ensure they understand the strategies and own the process hence are not alienated from the process thus making them have a feeling which may produce negative synergy in the organization leading to a conflict situation of staff segregating themselves into groupings of them versus us.

The organization's structure is influenced by several key components in the organization which direct the way it is run and managed. The hierarchical structure of G4S (K) where decisions and strategies are made from the top and communicated to the middle level management down the line explains why the middle level managers are not actively involved in the process. Since organizational structure determines largely the manner and extent to which roles, power and responsibilities are delegated, controlled and coordinated, the middle level managers in this kind of structure become mere implementers of policies set by the top management because the system has subordinated them - both by role and job description - as entities for communicating the organizational strategies down the chain of command.

The job description and the organizational role of the managers are very specific and has consequently compromised their participation in the decision making process as their roles are outlined and restricted to the implementation of organizational policies. G4S (K) as exhibited from the respondents adapts the hierarchical structure thus alienating middle level managers from active participation in the decision making process but rather are passive actors, communicators and implementers. The top management therefore ascribes no decisional responsibility to the middle level management and thus the reason for their exclusion from the decision making process.

## Recommendations

The managers' inputs in strategic planning is increasingly becoming necessary in the formulation of practical and directed strategies important at implementation stages as they understand what is significant at the operations level and so that they may own the process to reduce resistance to change in organizations.

The ever changing organizational operating environment has dictated the course of direction to take without which some firms either will face acquisitions, mergers or total closure. Organizations should position themselves by empowering their managers in decision making and strategic formulation to get a competitive advantage with the competition.

The vital input component of middle level managers be incorporated into the management's decision making process in the organizations formulation of policy and strategy.

There may be a need for further research to determine the extent to which organizations can build managerial capacity of middle level management staff in order to give them some leverage in terms of making/taking major or critical decisions in organizations as opposed to the current scenario as witnessed in G4S in Nairobi and around the country. Further research may be required to determine the relevant training needs of various cadre of staff in an organization that are in line with the changing global trends, modern life's demands and realities of the organizational and business management environment.

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## **JOB DISSATISFACTION AND TURNOVER: BANGLADESH PERSPECTIVE**

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Doi: 10.19044/elp.v1no2a15 [URL:http://dx.doi.org/10.19044/elp.v1no2a15](http://dx.doi.org/10.19044/elp.v1no2a15)

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### **Abstract**

The process of job turnover can be described as job dissatisfaction is the first step, followed by intention to leave, which finally, can result in actual turnover (Mobley et al. 1978; Bannister & Griffith 1986). This article aimed at identifying the empirical evidences of turnover in three different situations: i) being dissatisfied with the previous job, ii) availability of job in the market and iii) (search for) better alternative job as well as identifying the factors affect job dissatisfaction. In order to collect data for this study a comprehensive questionnaire was distributed to 150 employees of different private and public organization in Bangladesh who already leaved their previous job, of them 140 usable responses were received (drop-out rate: 6.67 percent). The results showed that the rates of turnover in three different situations are 33%, 25% and 52.5% respectively. The most important factors which affect job dissatisfaction are working environment & administration, supervisors & working hours and security of income (future) etc. A final conclusion of this study is that, the organizations experience excessive rate of job turnover should consider the said factors to retain their employees.

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**Keywords:** Job turnover, Turnover situations, Commitment, Job dissatisfaction

### **Introduction**

Employee turnover technically projects the rate of employees leaving a company and new employees filling up their positions. Employee turnover is not a good thing for any company as it directly hits the cost aspect. And yes, employee turnover is expensive (Jose 2013). Simply job turnover refers to the situation when employee quit his or her job. It is basically resulting from dissatisfaction about job or the lack of commitment. The process of job

turnover can be described as *job dissatisfaction* is the first step, followed by *intention to leave*, which finally, in some cases, can result in actual *turnover* (Mobley et al. 1978; Bannister & Griffith 1986). This process is, of course, of varying duration in time and does not necessarily have to follow a straight line. A person may move back and forth between *job dissatisfaction* and *intention to leave* or remain in this 'borderland' for longer periods (Tham 2006). The main focus of the study was, to show the rate of turnover in three different situations as: I) being dissatisfied with the previous job; II) availability of job in the market and III) search for better alternative job as well as to explore the factors responsible for job dissatisfaction.

### **Prior empirical works**

Dissatisfaction can only arise from the experience of bad surprises with the current job, good surprises with current opportunities, or unexpected binding constraints like becoming involuntarily laid off and unemployed (Garboua, Montmarquette, & Simonnet, 2001). Higgins, Duxbury, & Irving (1992) claimed that work-family interference undermines quality of occupational life because working conditions (long hours, work overload) behind this conflict also induce dissatisfaction. Frone et al. (1997) argued that by a different logic, inter-role conflict may create job dissatisfaction indirectly by diminishing the quality of private life, that is, heavy job obligations drain time, energy, and attention away from non-work roles, hampering compliance with those roles. According to Kossek & Ozeki (1998) the difficulties balancing occupational and home demands breed job dissatisfaction. Wadhwa, Verghese, & Wadhwa, (2011, p. 109) outlined,

When negative stress is high it reduces job satisfaction. When a job does not correspond with employee's personal life, or is the source of anxiety and confusion, it's stressful. Work conditions: Work places must be in normal conditions allowing employee to do their job properly. In work places where there is not sufficient conditions employee motivation level decreases and such a situation affects employee job satisfaction negatively. Supervisors: Managers are one of the main factors which affect job satisfaction. Managers interested in employees' work, assisting them in solution of their work related and personal life problems and also developing informal relations together with the formal ones are increasing employees' job satisfaction.

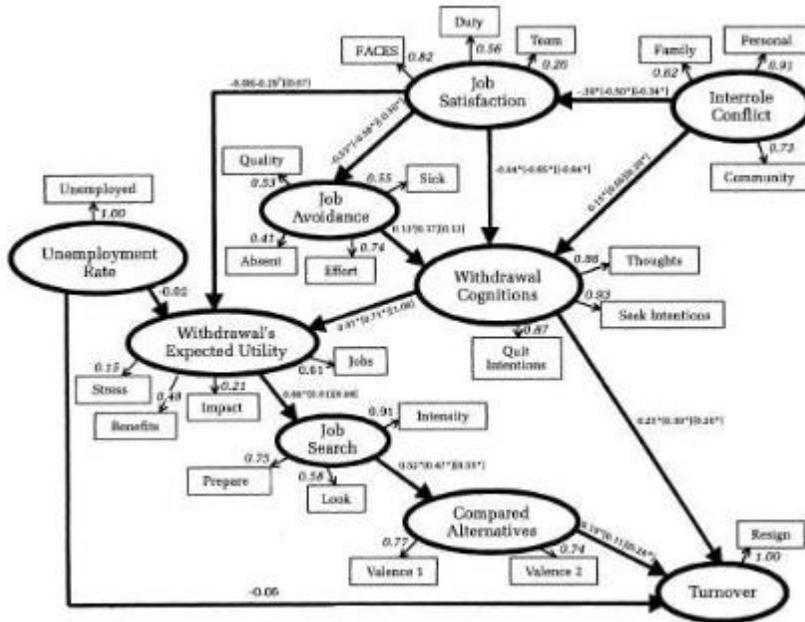
Do Monte, (2010) tested the effect of age on job dissatisfaction and found that older workers tend to have a lower dissatisfaction. Whereas Isles (2004) tried to identify the role of gender on job dissatisfaction and found that men are much more dissatisfied than the women. Robbins, (2003) said that the extrinsic factors, described as hygiene factors, leading to job

dissatisfaction include pay, physical working conditions, job security, company policies, quality of supervision and relationship with others. Absence of the extrinsic factors (like salary, fringe benefits, safety, level of support by administration, and job security, or a deficiency in the level of these factors is often associated with job dissatisfaction (Johnson & Johnson, 1999), and no doubt effect attitudes surrounding the work environment and staff morale and productivity (DeBruyne, 2001). Herzberg's motivator-hygiene also called two-factor theory is built around two sets of factors that can be used to describe or predict employee attitudes about work. Herzberg's hygiene continuum includes things like: company policy, salary, working conditions, and interpersonal relations that are hygiene factors and are often referred to as extrinsic rewards and relate to the job situation or environment. The theory suggests that absence of these factors can result in job dissatisfaction. His motivator continuum points to: achievement, recognition advancement, responsibility, and work itself as motivators that determine job satisfaction. These motivators are considered intrinsic rewards that deal directly with the relationship a person has with his or her job, and are more satisfying (DeBruyne. 2001).

The intrinsic factors appeared very infrequently when respondents described events that were dissatisfying. These factors can prevent or cause dissatisfaction. Herzberg terms these factors 'hygiene factors' or 'dissatisfiers,' in a later publication also 'maintenance factors' (Herzberg, 1966). Based on the Herzberg et al. (1959) model assumes motivators will be referred to more often in the context of job satisfaction and positive events and hygiene factors will be referred to more often in the context of dissatisfaction and negative events. Herzberg started the study job satisfaction in the 1950's in Pittsburg. The basis of Herzberg's work is in the Maslow's Hierarchy of Needs. He started with the idea that what causes the job satisfaction are the opposite of those things that cause job dissatisfaction. Hygiene factors, or dissatisfiers, are those that the employee expects to be in good condition. As motivators are those that in present cause satisfaction, on the other hand hygiene factors don't cause satisfaction but if they are lacking, it causes job dissatisfaction. Salanova, & Kirmanen, (2001) conducted a survey among the employees of Prisma Mikkeli and he found that the employees were not so satisfied with the money issue. Thus they argued that, in a long run this situation might cause job dissatisfaction and a decline in work motivation (Salanova, & Kirmanen, 2001) Job dissatisfaction also may increase for temporary jobs & less time spent for schooling of workers and tends to decrease with age (more), higher wages (Do Monte, 2010). Thus the variable tenure is a good predictor in determining job dissatisfaction and, in general, the more time the worker

spent on the same job, the lower is the probability to seek for another job (DoMonte, (2010).

Dissatisfaction with one's job may result in higher employee turnover (Chaulagain, & Khadka, 2012). Mobley's (1977) model suggests that thinking of quitting is the next logical step an employee experiences after dissatisfaction, but there are several other steps an employee might undergo before actually quitting. Those steps include: evaluation of expected utility of search and cost of quitting, intention to search for alternatives, search for alternatives, evaluation of alternatives, comparison of alternatives vs. present job, and intending on leaving (Mobley, 1977). In some study the relationship between job dissatisfaction and employee turnover is described as a process in which *job dissatisfaction* is the first step, followed by *intention to leave*, which finally, in some cases, can result in actual *turnover* (Mobley *et al.*, 1978; Bannister and Griffith, 1986). Griffith and Hom (1991) proposed that dissatisfaction may stimulate a general predisposition to withdraw, thus mobilizing more specific withdrawal intentions and employees are most apt to engage in the behavioral response of exit when experiencing dissatisfaction. Testing theories about how dissatisfaction progresses into withdrawal have dominated turnover research during the past 25 years (Hom, Caranikis-Walker, Prussia, & Griffith, 1992; Hom & Griffith, 1995). Such preoccupation with the "intermediate linkages" between job attitudes and resignations has clarified the termination process and identified new constructs mediating the dissatisfaction→quit sequence (Mobley, 1977). Moreover, intermediate-linkage models offer practical insights into how firms can short-circuit the dissatisfaction→departure route. It is thus imperative to garner more insight into the process by which dissatisfaction activates turnover. Hom & Griffith (1991) formulated a model which offered a more complete understanding of how dissatisfaction drives quits. Following figure 1 shows the model:



Source: Hom, & Griffeth, 1991 “A structural equations modeling test of a turnover theory: Cross-sectional and longitudinal analysis”. *Journal of Applied Psychology*, 76:350-366.  
 Figure 1: How Dissatisfaction Translates into Turnover: Expanded Hom-Griffeth Model

Delfgaauw (2007) argues that its relevance is based on assumption that dissatisfied workers are more likely to search a new job than satisfied workers. he points out three main reasons that workers may leave their current job and search for a new one: (i) discomfort with an organization’s specific job domain, like management; (ii) availability of a new job opportunity which yields higher expected utility than the current job; (iii) a feeling that some aspects of their current job can be improved upon. A substantial body of literature reports that job satisfaction is negatively associated with turnover intention. Following this line, Mathieu & Zajac (1990) and Hom & Grifeth (1995) argue that organizational commitments are negatively correlated with intention to quit, which, in turn is correlated with job satisfaction. And, Delfgaauw (2007) affirms that for some job domains, the conditions may vary sufficiently across jobs within an organization to make an internal job change a viable option. Therefore, job satisfaction/dissatisfaction in the labor market should be seen as an important variable for understanding the dynamics of employment. The more knowledge we have about job satisfaction, more we understand the issue of turnover. The importance of studying the dynamics of the labor market, especially the job quits, is based on the fact that workers who stay longer on one job position, the employee acquire more experience and skills in performing their tasks, achieving greater productivity. But if this individual

leaves his employment, the company will have to hire a substitute, paying at least the costs of hiring and training, and possibly seeing declines in productivity. The effects of such dissatisfaction are being felt in higher rates of absence, higher rates of turnover, lower levels of customer satisfaction and ultimately lower levels of productivity (Isles, 2004). March and Simon (1958) argued that voluntary employee departure results from two main factors. The first one is the perception about ease of movement from job to job that has evolved to mean perceived job alternatives. The second one is the desirability of movement that has evolved to mean job satisfaction. It is also supported in the work of Mobley (1977) that argues that staff turnover results from a particular combination of job dissatisfaction and perceived job alternatives. Do Monte, (2010) found in one of his study that the percentage dissatisfied workers who become unemployed is higher compared to those who remained employed or who have become economically inactive. So there is a positive relationship between job dissatisfaction and a future job turnover.

### **Objectives of the study**

The main objective of the study is to show the rate of turnover in three different situations as: I) being dissatisfied with the previous job; II) availability of job in the market and III) (search for) better alternative job. However, the most concrete directions covered in this study are:

1. To explore the factors responsible for job dissatisfaction.
2. To provide a demographic information about the rate of leaving jobs;
3. To identify the rate of leaving job on the basis of public and private jobs;

### **Materials and methods**

This research was based on a field work conducted in two largest cities of Bangladesh: Dhaka and Chittagong. For the convenience of our study, we selected 150 employees who have the experience of leaving one or more jobs. We conducted a questionnaire survey from August, 2013 to April, 2014. The questionnaire included three different situations in which turnover occurred in Bangladesh. It also contained a set of variables which frequently cause job dissatisfaction (Appendix 1). Both the primary and secondary data were used in the present study. Secondary data and information were collected from the existing literature in the said field.

The survey covered 150 employees of different organization who leave their previous jobs. Among the questionnaire 146 responses were received. Off them 6 unusable responses were found. Eliminating those 140 respondents was used for this study. Since the total number of people varies

to leave the job in different situation and in different organizations, we selected this sample size using convenient random sampling method. The areas of sampling were mainly Dhaka and Chittagong: two large cities in Bangladesh. A structured questionnaire with both closed and open ended questions was used for collecting primary data. For the closed ended questions we use five point Likert scale, where 1= strongly agree, 2 =agree, 3= neutral (neither agree nor disagree), 4= disagree, and 5= strongly disagree. Finally, Statistical Package for Social Science (SPSS), Microsoft Excel was used to analyze and interpret the data.

## Results and discussion

### Demographic figure of turnover

Analyzing the questionnaire after survey following rate of turnover are found for the male & female and for private & public jobs:

Table 1: Demographic figure of turnover:

Particulars	Percentages
Quit rate for the male	87.86%
Quit rate for the females	12.14%
Quit rate for the govt. job holders	3.57%
Quit rate for the private job holders	96.43%

From the above table we find that the rate of job turnover among the male (87.86%) is much more than that of for female (12.14%) this finding is supported by the findings of Isles N. (2004) and similarly the rate is very much high (96.43%) in case of private jobs comparing to the public jobs (3.57%).

### The rate of turnover in three different situations

Following rate of job turnover are found in three different situations. Table 2 shows it at a glance:

Situations	Rate of job turnover
Dissatisfied with previous job	33%
Availability of job in the market	25%
(Search for) better job (relative dissatisfaction <sup>1</sup> )	52.5%

\*Percentages will not add to 100 because many of the respondents experience more than one situation

### Factors responsible for job dissatisfaction

To identify the factors which are responsible for job dissatisfaction are explored through the factor analysis method:

The Theory of On-The-Job Search explains the behaviour of employed individuals who search for a better job while others do not. For more details see Lambert (1991) and Allen and Van Der Velden (2001).

## Communalities

Communalities show how much of the variance in the variables has been accounted for by the extracted factors. For instance in the following table (table 1), over 83% of the variance in very much challenging job, over 82% of the variance in traditional job, over 75% of the variance in poor management is accounted for while 40.7% of the variance in less job security is accounted for.

Table 1: Communalities

variables	Initial	Extraction
Low salary	1.000	.458
Low increment	1.000	.486
Less job security	1.000	.407
Excessive work pressure	1.000	.666
Excessive supervision	1.000	.679
Poor working environment	1.000	.574
Unhelpful colleagues	1.000	.432
Poor administration	1.000	.740
Poor management	1.000	.755
More working hours	1.000	.594
Rough and tough supervisors & bosses	1.000	.633
Absent of pension facility	1.000	.632
Absent of gratuity	1.000	.754
Absent of provident facilities	1.000	.746
Traditional job	1.000	.827
Very much challenging job	1.000	.838
Less scope of growth & development	1.000	.563
Inappropriate performance appraisal and recognition	1.000	.570

Extraction Method: Principal Component Analysis.

## Total Variance Explained

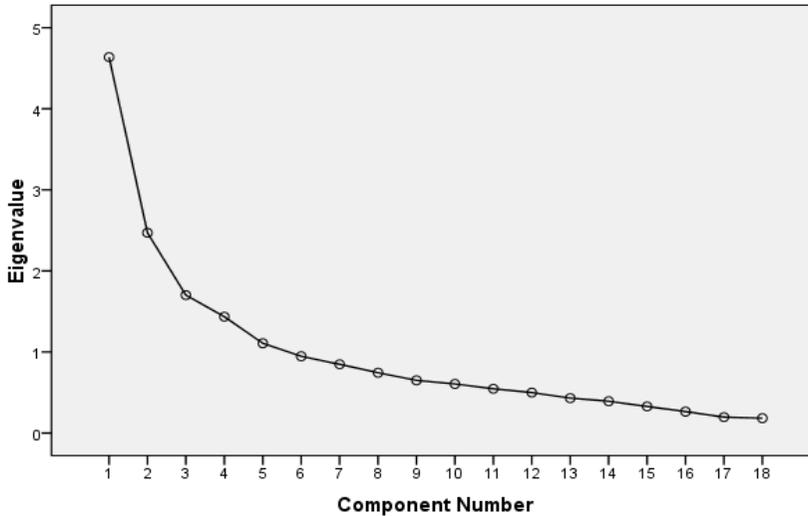
The next item shows all the factors extractable from the analysis along with their eigenvalues, the percent of variance attributable to each factor, and the cumulative variance of the factor and the previous factors. Notice that (**table 2, which has given in the appendix 1**) the first factor accounts for 25.760% of the variance, the second 13.728%, the third 9.455%, the fourth 7.977% and the fifth 6.154%. All the remaining factors are not significant

## Scree Plot

The scree plot is a graph of the eigenvalues against all the factors whereas the eigenvalue refers to the standardized variance associate with a particular factor. The graph is useful for determining how many factors to retain. The point of interest is where the curve starts to flatten. It can be seen that the curve begins to flatten between factors 3 and 4. On the following

graph (graph 1) we can see that factors 1 to 5 possess the eigenvalues more than 1 and the remaining factors (factor 6 to 18) have the eigenvalues of less than 1, so only five factors have been retained.

**Scree Plot**



Graph 1: the scree plot

### Rotated Component (Factor) Matrix

The idea of rotation is to reduce the number factors on which the variables under investigation have high loadings. Rotation does not actually change anything but makes the interpretation of the analysis easier. Looking at the table (table 3) below, we can see that poor working environment, poor administration and poor management are substantially loaded on Factor (Component) 1; excessive work pressure, excessive supervision, more working hours and rough and tough supervisors and bosses are substantially loaded on Factor 2; Absent of pension facility, Absent of gratuity and Absent of provident facilities are substantially loaded on Factor 3; traditional job and very much challenging job are substantially loaded on the factor 4; Low increment, Less scope of growth & development and Inappropriate performance appraisal and recognition are substantially loaded on Factor 5.

Table 3: Rotated Component Matrix<sup>a</sup>

variables	Component (Factor)				
	1	2	3	4	5
Low salary					
Low increment					.551
Less job security					
Excessive work pressure		.779			
Excessive supervision		.806			
Poor working environment	.686				

Unhelpful colleagues					
Poor administration	.830				
Poor management	.843				
More working hours		.750			
Rough and tough supervisors & bosses		.625			
Absent of pension facility			.762		
Absent of gratuity			.837		
Absent of provident facilities			.830		
Traditional job				.889	
Very much challenging job				-.895	
Less scope of growth & development					.627
Inappropriate performance appraisal and recognition					.732

Extraction Method: Principal Component Analysis.  
Rotation Method: Varimax with Kaiser Normalization.  
a. Rotation converged in 7 iterations.

### Composition of factors

From the above table we find the specific variables led to specific factor(s). With those we can construct the following table (table 4) which shows the factors composed with the variables used in this study as the causes of job dissatisfaction. **Factor 1** is named as **working environment & administration** which is composed with poor working environment, poor administration, poor management; similarly **factor 2**, named as **supervisors & working hours** composed with Excessive work pressure, Excessive supervision, More working hours and Rough & tough supervisors and bosses and other remaining factors are shown in the following table.

Table 4: Composition of factors

Factors	Factor name	Loaded variables
<b>Factor 1</b>	Working environment & Administration	Poor working environment Poor administration Poor management
<b>Factor 2</b>	Supervisors & Working hours	Excessive work pressure Excessive supervision More working hours Rough and tough supervisors and bosses
<b>Factor 3</b>	Security of Income(future)	Absent of pension facility Absent of gratuity Absent of provident fund facilities
<b>Factor 4</b>	Job Challenges	Traditional job Very much challenging job
<b>Factor 5</b>	Scope of Growth and Development	Low increment Less scope of growth and development Inappropriate performance appraisal and recognition

## **Conclusion**

The empirical evidences show that, most of the organizations are very much reluctant to offer the basic facilities to their employees and thus it results dissatisfaction or alternative dissatisfaction (the situation whereby the employees are not fully dissatisfied with their current jobs but leave those for the search of better alternative jobs) and which gradually leads to job turnover. The variables which cause job dissatisfaction are showed in the findings of the study. Knowledge that, working environment & administration, supervisors & working hours and security of income (future) etc. seem to be the greatest importance for the employers an opportunity to counteract job dissatisfaction and consequently staff turnover (Tham 2006). By adopting sound staff policies under which people feel rewarded, valued and well taken care of, it should, after all, be easier to prevent staff from leaving for reasons of poor management than for reasons of demanding, difficult and complicated tasks. So the organizations experience excessive rate of job turnover should be concentrated to consider those factors to retain their employees.

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### Appendix 1

Table 2: Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.637	25.760	25.760	2.638	14.654	14.654
2	2.471	13.728	39.488	2.625	14.582	29.236
3	1.702	9.455	48.943	2.590	14.387	43.623
4	1.436	7.977	56.920	1.867	10.372	53.995
5	1.108	6.154	63.075	1.634	9.079	63.075
6	.948	5.266	68.340			
7	.849	4.717	73.057			
8	.744	4.135	77.192			
9	.651	3.617	80.810			
10	.607	3.371	84.180			
11	.547	3.038	87.218			
12	.500	2.776	89.994			
13	.431	2.397	92.391			
14	.393	2.186	94.576			
15	.329	1.828	96.404			
16	.265	1.473	97.877			
17	.198	1.099	98.976			
18	.184	1.024	100.000			

Extraction Method: Principal Component Analysis.