

Relationship between Major Stock Market Indices and Economic Growth in Selected Market Economies. A Study of Emerging Economies

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ABSTRACT

The study empirically probed the relationship between major stock market indices and economic growth in selected market economies of emerging markets. The specific objective of this study is to validate if the stage of economic development in emerging economies has any impact on the stock market size and economic growth and whether the stock market liquidity has any effect on economic growth in emerging economies. Variables used in the analysis were subjected to two types of unit root test; Im, Persaran and shin test and Levin, lin and chu test to determine whether they are stationary series or non-stationary series. Two panel regression analysis were carried out (fixed and Random- effect) and Hausman test was used to decide which of the result to abide by. It was observed that in emerging economies, stock market size measured in terms of Market Capitalization Ratio (MCR) was found to have significant positive effect on economic growth. While interest rate exerted positive impact on economic growth in other economics, it was the reverse in emerging economies. Furthermore, stock market liquidity measured in terms of Value Traded Ration (VTR) and Turnover Ratio (TOR) were found to have mixed impact on economic growth of emerging economies. It was only in emerging economies that the interest rates channel had significant impact on the relationship between stock liquidity and economic growth. It is therefore imperative for the government to factor in the stage of economic development when formulating polities that are meant to stimulate economic growth through stock market size and stock market liquidity.

Key Words: Emerging Market Economies, Random effect model, Fixed effect model, Hausman test, Frontier markets.

INTRODUCTION

The term “emerging market economies” (EMEs) was coined in 1981 by Anthoine W. Van Agmael of the International Finance Corporation (IFC). EME builds a transparent and efficient domestic capital market and also pays specific attention to its exchange rate regime and ensures a stable currency, (Das, 2010). Most emerging markets are characterized by a young population and a growing middle class. Emerging markets represent attractive markets and low cost manufacturing bases. The ten Big Emerging Economies (BEMs) would be the largest growing economies on the globe. These economies identified as Big Emerging Economies are China, Brazil, Indonesia, India, South Korea, Mexico, Argentina, South Africa, Poland and Turkey. EMEs account for the bulk of global financial integration among the developing economies and after the advanced industrial economies. Equity Markets in Emerging economies have surged very fast especially in the last decade. The total market capitalization of Emerging market countries has increased approximately over the past fifteen (15) years from less than US, \$ 2 trillion in 1995 to about US\$ 5 trillion in 2005 to approximately US\$13 trillion by the end of 2011. (Ernst & Young, 2012). The emerging economies with their fast growing economic pattern have jotted the world economies especially the developed economies as economic forecasters project that China for example will overtake the United State of America as the World’s largest economy within a few years, (Das 2006).

Thus, the link between stock market and economic growth becomes the field of research more and more explored. Mauro, (2000) Concluded that stock market is a stable predetermining factor of economic growth in emerging economics. According to Mala and White (2006), the level to which stock market contribute to economic growth depends on its level of development. Financial markets, especially stock markets have grown considerably in developed emerging and developing counties over the last two decades. Classens et al (2004, cited in Koirala, 2009) stated that several factors have aided in their growth such as improved macro-economic fundamentals like monetary stability and higher economic growth.

Thus, following liberalization commitments by emerging economies, the stock market globally has shown unprecedented expansion of which the emerging economies according to Yartey (2008), have accounted for a large amount of this expansion. As shown in Riman et al (2008), Enisan and Olufisoye (2009) and Boubakari, and Jin (2010) empirical evidence has shown that there is an association between stock market development and economic growth. However, the nature and economic significance of the relationship between stock market development and growth vary according to a country's level of economic development with a larger impact in less developed economies, (Filler, Hanouset and Campos, 1999). This thus follows that the correlation between stock market development and economic growth is country based. The link between stock market performance and economic growth often has generated strong controversy among analysts based on their study of developed, emerging and developing markets, (Samuel, 1996; Demiguc - Kunt and Levine, 1996; Akinifesi 1987; Levin and Zervos 1996, Osinubi 1998, Obadan, 1998; Onosode 1998; Emenuga 1998.)

There is a boom in the developed stock markets with a substantial part of the growth accounted for by the emerging markets. The proponents of positive relationships between stock market development and economic growth hinged their argument on the fact that stock markets aid economic growth and development through the mobilization and allocation of savings, risk diversification, liquidity creating ability and corporate governance among others. One side of the debate says that stock markets promote long-run growth and the second view casts doubts on the contribution of stock markets to long-run growth.

Equity markets of the emerging economies have experienced even more rapid growth, thus taking a larger share of the global boom. It is estimated that the world's stock market capitalization grew from \$4.7 trillion in the mid 1980's to \$15.2 trillion in the 1990s. (Demiguc – Kunt and Levine, 1996); Arestis and Demetriade, (2001). The total value of shares traded on developing countries stock markets rose over twenty-five fold between 1983 and 1992 (Sing 1977). The total value of shares traded on emerging markets on the other hand jump from less than 3% of the total \$1.6 trillion world total in 1985 to 17% of the \$9.6 trillion shares traded in all world exchanges in 1994 (Demirguc Kunt and Levine, 1996). This has attracted the attention of academics and policy makers.

Following from the above disagreements and varied findings, this work carried out an empirical evidence of the stock growth nexus in emerging economies.

Statement of the problems

Studies like (spares 1991; pardy, 1992; Jovanovic 1993; Levine and Zervos (1998), King and Levin; Haris (1997), Luintel and Khan, 1999; Filler et al, 1999; Beck and Levin, 2001; Seetana, 2010, Ikiki and Nzomoi, 2013; Osammonyi and Kasimu, 2013; Hagui, 2013; Kagochi et al, 2013; Rahman and Selahuddin, 2010; Lui and Sinclair, 2008; etc) on the effect of stock market development and economic growth are replete in the macroeconomic literature. However, most of the works were done in developed economies that differ significantly from Nigeria context. Even the result of these studies present divergent views and conclusions on the effect of stock market development on economic growth.

Most of the studies done in Nigeria did not adopt robust methodologies in the analysis of data. Also, the result of most works done in Nigeria such as Ogun and Iyoha, 2005; Nyong 1997; Ewan and Onyiuke – Okereke, 2009; Ogboi and Oladipo, 2012, Abu, 2009; Ezeoha et al. 2009; Eweh et al, Kolapo and Adaramola 2012; Osinubi and Amaghionyeodiwe, 2003; Chinwuba and Amos, 2001, on the effect of stock market development and economic growth present conflicting conclusions. Moreover the method of analysis is equally not robust enough to interrogate research data.

These growing concerns and controversies on the role of stock markets on economic development and growth have opened up many windows of research. Another gap in earlier studies on the subject is that there is a comprehensive work on the analysis of stock market development on economic growth that considers the three sectors of the market; developed, emerging and developing. Those studies seen in the literature mainly covered only developed, economies.

Objectives of the study

1. To ascertain whether being an emerging economy has any relationship with stock market size and economic growth.
2. To determine being an emerging economy has any relationship with stock market liquidity and economic growth.

Research Hypotheses

1. Ho1: There is no significant relationship between stock market size and economic growth of emerging economies.
2. Ho2: There is no significant relationship between stock market liquidity and economic growth of emerging economies.

Scope of the Study

The study looked at four emerging economies classified by Financial Times and Stock Exchange Global Equity indices and Morgan Stanley Capital International (MSCI). The emerging economies are China, India, Brazil, South Africa. The study employed yearly data spanning from 1988 – 2011.

Stock market development can be categorized using three main characteristics: Traditional, Institutional and Asset pricing (Demiguc – Kunt and Levine 1996)

Traditional Characteristics: These characteristics are concerned with basic growth measures of stock market. These measures include number of listed companies and market capitalization.

Institutional Characteristics: These measures are the regulatory and legal role that may influence the functioning of the market, information disclosure and transparency requirements. Also,

Asset Pricing Characteristic measures: This focus on the efficiency of the market.

The Traditional stock market characteristics are mostly used in the measurement of the relationship between stock market development and economic growth. They include: Stock market size, liquidity, concentration and volatility. This work concentrated on size and liquidity of the market for the economies of emerging markets. A common index often used as a measure of stock market size is the market capitalization which is measured as the total value of all listed shares. Market capitalization ratio equals the value of listed shares divided by Gross Domestic Product (GDP). To measure the effect of market size on growth, the market capitalization ratio (MCR) which equals the value of listed shares divided by GDP which is taken as the indicator of market size for stock market development.

Liquidity: Liquidity is used to refer here as the ability of investors to buy and sell securities easily. It is an important indicator of stock market development. The two main indices often used in the performance and rating the stock market are (a) the total value traded ratio and (b) turnover ratio. Total value traded ratio equals total Value of Shares traded on the stock market exchange divided by GDP. The total value traded ratio measures the organized trading of a firm's equity as a share of national output and therefore should positively reflect liquidity on an economy – wide basis.

Turn-over ratio: This is the value of total shares divided by capitalization. Though, not a direct measure of theoretical definitions of liquidity, high turnover is often used as an indicator of low transaction costs. A small liquid market will have a high turnover ratio but a small total value traded ratio.

Review of Empirical Literature

The explanations to how stock market can improve growth of an economy through their liquidity function are most renowned. Bencivenga, Smith and Starr (1996) and Levine (1991) argue that stock market liquidity is more important for growth.

The first group of researchers to study on economic growth and financial market in general is Bagehot (1873), Schumpeter (1912), Robinson (1952), Cameron (1967), Gold Smith (1969) and McKinnon (1973). Mohtadi and Agawal examines the relationship between stock market development and economic growth for 21 emerging markets over 21 years using a dynamic panel method. Results show that indirectly, market size capitalization ratio affect investments which in turn affect growth. Ujunwa, A and Salami, P. (2010) examine the impact of stock market development on long-run economic growth in Nigeria using time serial data for 21-year period; 1986 – 2006. Result showed that stock market size and turn over ratios are positive in explaining economic growth. Ake and Ognaligui (2010), studied the Douala Stock Exchange and economic growth and found that there is a systematic evidenced that the market capitalization affects positively the GDP. Nowbutsing (2009), study the impact of stock market development on growth in mauritius between 1989 – 2006 using size as a stock market development indices

and find that stock market development positively affects economic growth in Mauritius in the short run and long run. Abu (2009) examined whether stock market development raised economic growth in Nigeria by employing the error correction approach. The econometric results indicate that stock market development (market capitalization – GDP ratio) increases economic growth. Ewah et al (2009), appraise the impact of capital market efficiency on economic growth in Nigeria using time series data on market capitalization between 1961 – 2004 using multiple regression and ordinary least squares estimation techniques. The results show that the capital market in Nigeria has the potential to induce growth but has not contributed meaningfully to the economic growth in Nigeria because of low market capitalization.

Maosheng and Wiguo (2002) studied the Chinese Stock Market and find that the expansion of China's stock market had weak effect on economic growth and that the relationship between stock market liquidity and economic growth was insignificant. Again the study of Jianghai et al (2000), on Chinese stock market believed that the stock market development has significantly positive correlation with savings which indicated that stock market did stimulate economic growth. Levine and Zervos (1998) provide empirical evidence that stock market liquidity and banking development are both positively and robustly correlated with future economic growth.

Also, Bencivenga et al (1996) and Levine (1991) argue that stock market liquidity is more important for growth although many profitable investments require a long-run commitment of capital. Levine and Zervos (1998) using cross country data for 47 countries from 1976 – 1993 find that stock market liquidity is positively and significantly correlated with current and future rates of economic growth. Nzotta (2002) claim a link between stock market liquidity and economic growth. Bencivenga et al (1996) and Levine (1991) have argued that stock market liquidity, the ability to trade equity easily plays a key role in economic growth. The turnover ratio is related to the size of the market and the value traded ratio to the size of the economy. According to Abu – Sharia and Junanka, (2003) liquidity is an important attribute of stock markets because in theory, liquid markets improve the allocation of capital and enhance prospects for long term economic growth. Levine and Renett (1992), suggested that stock market liquidity plays major role in economic growth.

Levin (2003) shed some empirical light on the ambiguous predictions about the relationship between stock market liquidity and economic growth. The study presents cross-country evidence on the association between one measure of stock market liquidity - The total value of stock transactions divided by GDP and average economic growth rates over the period 1976 – 1993.

Yartey and Adjasi studied critical issues and challenges of stock market development in sub-Saharan Africa and found inconclusive evidence on the impact of stock markets on economic growth in African countries but acknowledged that the stock market value traded seems to be positively and significantly associated with growth. Also Demiguc Kunt and Maksimovic (1996) present firm level evidence from thirty countries consistent with the hypothesis that firms with access to liquid stock markets grow at rates faster than they could have grown without this access. Levine and Renelt (1992), Suggested that stock market liquidity plays a major role in Economic growth.

METHODOLOGY

Model Specification:

The study is based on the null hypothesis that there is no significant relationship between stock market development and economic growth in selected emerging economies. This hypothesis may be written as follows:

$$H_0: \text{Growth} \neq \text{stock} \quad - \quad - \quad - \quad - \quad (1)$$

Where growth is the time series of real capita GDP for a given relevant period and stock is a proxy for stock market development over the same period.

Specification of model.

The study developed a unique model to capture the proposed relationships posed in the hypotheses.

The first model addressed issues on the relationship between economic growth and stock market size. The models in emerging economy are:

$$GDPre = \alpha_0 + \alpha_1 MCR + \alpha_2 INT + e_t$$

Where:

$$GDPre = \text{Annual Growth Domestic Product in emerging economy}$$

$$MCR = \text{Market Capitalization Ratio}$$

INT	=	Interest rate
α_0	=	Constant
α_1	=	Co efficient of Independent Variables
e_t	=	Error term

The indices for stock market liquidity included in the study are Value Traded Ratio (VTR) and Turnover Ratio (TOR). The models also include interest rate to capture the interest rate effect on investment in the emerging economy.

The second model is as shown, thus:

$$GDPR_t = \beta + \beta_1 VTR + \beta_2 TOR + \beta_3 INT + U_t$$

Where

GDPR _t	=	Annual Growth Domestic Product in emerging economy
VTR	=	Value Traded Ratio
TOR	=	Turn Over Ratio
INT	=	Interest Rate
U_t	=	error term

Model Estimation:

Model estimations began with the summary statistics of the employed variables which provided information about the mean, median, standard deviations, minimum and maximum of all the employed variables.

Table 1: Summary Statistics of the Employed Variables

		GDPR	MCR	VTR	TOR	INT
Emerging Market	Mean	5.480	75.027	41.601	82.005	20.811
	Median	5.16	41.98	28.50	66.43	13.83
	S/D	3.938	70.945	43.184	66.106	19.260
	Min.	-4.3	0.53	0.216	5.262	5.31
	Max.	14.2	291.28	222.999	328.616	86.36

On market capitalization ratio, the mean value was 75.027. The gap between the median and mean value was wide. This was reflected in the standard deviation statistics, where the SD value was 70.945. The mean value of VTR was 41.601 in emerging economies. The interest rate was 20.811.

Panel Unit Root (Stationarity) Test Results for The Selected Variables.

The Im, persaran and shin w-stat test and the Levin, Lin and Chu t* test were used in the stationarity test for selected results.

VARIABLES		Im, Persaran & Shin W – Stat	Levine Lin & Chu t*	Conclusion
Emerging	GDPR	LEVEL	-3.400***	1(0)
		Level	-0.191	1(1)
	MCR	I st Difference	10.692***	
		Level	1.739	1(1)
	VTR	I st Difference	-7.193***	
		Level	-0.957	1(1)
	TOR	I st Difference	-6.286***	
		Level	0.703	1(1)
	INT	I st Difference	-5.103***	
			-5.116***	

Source: Researchers' Computation

Note: xxx denotes significant at 1%, ** denotes significant at 5%, * denotes significant at 10%

The variables used in the analysis are subjected to two types of unit root tests, Im, Persaran and shin text and Levin, Lin and Chu test to determine whether they are stationary series or non-stationary series, the two tests employed to ascertain if they reinforce one another which is expected to boost the confidence in their reliability. The null hypothesis that is tested in both unit root tests is the presence of unit root. The result shows that GDPR was

stationary at level while other variables were stationary after the first difference, implying they were integrated of order one.

Fixed and Random Effects Estimation:

Two panel regression analysis were carried out; the Fixed and Random-Effect and the Hausman test was used to decide which of the result to abide by. The result of the relationships between economic growth and stock market size in emerging economies is as shown.

Explanatory Variables	Fixed Effects	Random Effects
Constant	5.223*** (0.001)	6.365*** (0.000)
MCR	0.019*** (0.004)	0.014** (0.027)
INT	-0.052 ** (0.042)	-2.161** (0.034)
Adj. R – Squared	0.718	0.13
F – Statistic	38.206 ** (0.000)	6.571*** (0.002)
No of Countries	4	4
No of Observations	74	74
Hausman Test		
Test Summary	Chi-Sq Statistic	Prob.
Gross – Section random	7.705**	0.021

The significance of the coefficient of Hausman test implied that as regards the relationship between economic growth and stock market size in emerging economies, the causes of changes in GDP was free from time invariant characteristics and as such fixed effect model estimates were expected to be stable than that of the random effect. The F-statistic was significant at the 5% level implying that the overall model specification was statistically significant. Adjusted R-Squared result suggested that only 71.8% of the total variation in GDP of emerging economies were captured by the explanatory variables. The estimated coefficients of both MCR and INT were statistically significant but on average, one unit increase in INT would result in 0.52 reduction in GDP. The conclusion that emerged on the effect of stock market size in emerging economies on GDP was that during the period of this study, MCR affected GDP positively and on the other hand INT had inverse relationship with GDP. Secondly, the panel regression result of the relationships between stock market liquidity and economic growth in emerging economies is shown below:

Explanatory Variables	Fixed Effects	Random Effects
Constant	6.818*** (0.000)	5.095*** (0.000)
VTR	0.013* (0.077)	0.005*** (0.435)
TOR	-0.002 (0.703)	0.026*** (0.000)
INT	-0.076* (0.08)	-0.070*** (0.000)
Adj. R – Squared	0.698	0.404
F – Statistic	27.982*** (0.000)	16.82*** (0.000)
No of Countries	4	4
No of Observations	71	71
Hausman Test		
Test Summary	Chi-Sq Statistic	Prob.
Gross – Section random	68.272 ***	0.000

Hausman test suggest that fixed effect was more appropriate relative to the random effect model. The fixed effect model was significant at the 1% level and about 69.8% of the total variations in GDP were accounted for by VTR,

TOR and INT in emerging economies. The estimated coefficients of VTR were statistically significant; on average, one unit increase in VTR would result in about one-hundredth increase in GDP. The result also revealed that a unit increase in INT would result in about 0.076 reductions in GDP.

DISCUSSIONS

The findings support the assertion from mauoro (2000) which posited that stock market is a stable predetermining factor of economic growth in emerging economies. Emerging economies were growing faster than other economies. The result also shows that there is a positive and significant relation between stock market capitalization and economic growth in emerging economies. Also interest rate has a negative but significant relationship in emerging economies. Interest rate risk is higher in Emerging economies than in other economies. Also stock market size variable largely explains economic growth in emerging markets which indicated that emerging economies enjoy a significant contribution from stock market size. Interest rate risk is higher in emerging economies than in other economies.

Moreover, it was only in emerging economies that the interest rates channel had significant impact on the relationship between stock market liquidity and economic growth, which indicated that emerging economies are highly sensitive to interest rate changes due to high need for productive capital. The stock market liquidity measured in terms of value traded ratio (VTR) and Turnover ratio (TOR) were found to have mixed impact on economic growth of emerging economies. Unlike the other economies, interest rate has inverse relationship with GDP in emerging economies which might be due to lack of capital for development and productive activities in emerging economies.

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Exam Ethics and Economic Sustainability Nexus: The Case of Nigeria

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ABSTRACT

Economic sustainability involves the optimal use of resources which requires the adoption of an efficient and effective economic infrastructure programme. Economic infrastructure in itself connotes a complex of structures, physical and institutional designed for the sustainability of a given system. At the heart of all economic infrastructure programme is the application of time tested knowledge. The acquisition and application of such knowledge requires individuals with integrity whose knowledge capability have been tested through standard examinations. However, the increasing incidence of unethical practices in relation to examinations in Nigeria makes the application of acquired knowledge unreliable and casts doubt on the quality of education in the country and the reliability of Nigerian certificates. Moreover, the ranking of Nigeria as number one on the world's exam malpractice index in 2012 and the fact that an average of ₦25billion per annum is generated from exam malpractice is a serious cause for concern with implications for sustainable economic development. It is capable of distorting macroeconomic stability and contributing to the social ills of unemployment if left unaddressed. The objective of the research is to highlight the economic implications of unethical practices relating to examinations in Nigeria. Using analytic reasoning, the research found that unethical behaviours relating to exams in Nigeria is capable of adversely affecting the financial system, distorting macroeconomic stability and contributing to unemployment. The research recommends that the craze for certificate acquisition must be de-emphasized and recognition be given to proven time-tested knowledge. There is also the need for all to abide by exam ethics and for the government to support the acquisition and application of standard knowledge through advance learning.

Key words: Exam ethics, Economic sustainability, Exam malpractice, Examination and Economic infrastructure.

INTRODUCTION

Ethics help to define the procedure for any given process or action. It connotes the moral principles guiding an event or a course of action. It defines how we do what we do. The objective of any economic infrastructure programme is to improve the productive potential of an economy by strengthening and supporting the growth of local industries and providing further opportunities for growth in the system through investment in enabling strategic infrastructure. The success of any economic infrastructure programme will depend greatly on the philosophical ethics applied to achieve stated objectives of the economic infrastructure programme. Generally, infrastructure refers to the basic physical systems or amenities of a business or nation which includes transportation, communication, sewage, water and electric systems among others that are necessary for the efficient functioning and sustenance of the system. It refers to the internal facilities of a country that make economic activities possible, such as communication, transportation, and distribution networks, financial institutions and markets, as well as energy supply systems (<http://www.businessdictionary.com/definition/html>).

However, at the heart of every economic infrastructure is the application of quality time-tested knowledge and acquired standard skill. Such standard knowledge and skill must be obtained in line with the ethics of knowledge acquisition and international best practice. This is very important in view of the fact that tertiary education is the most efficient and effective way of developing the high technical capacity for economic growth and sustainable development. To test the reliability of such knowledge, individuals who have acquired such knowledge are subjected to tests through examinations – written, oral or practical. The objective of such test is to certify that the individuals with such knowledge can reliably apply their knowledge and skill in such a way that the economy is sustainable. In Nigeria however, examinations are marred with unethical practices. Exam rackets rakes in ₦25billion per annum and Nigeria ranks top on the world's exam malpractice index (EMI) noted the Director General (DG) of the National Orientation Agency (NOA) in July, 2012.

Examination is an important tool in assessment. It is by far the best way to tell the efficacy and reliability of someone or something on any matter. Thus it occupies a strategic place in our lives as individuals, our institutions and society at large. While examination could take many forms ranging from oral to written and sometimes practical, the objective is to ascertain if the object under examination can be used for the intended purpose, reliably stand the test of time or live up to required expectation. The functioning of the economic system is based on tested and proven theories that explain the behavior of individuals, firms and industries. The educational system provides the avenue for developing these theories and producing individuals who would use these theories or develop new ones and formulate policies that are in line with international best practice and apply them for the development and sustainability of the economy. However, the rot in the educational system ranging from incessant strikes, mismanagement of funds, cultism and above all examination malpractice, casts a gloomy outlook to the sustainability of the entire economic system. To that end there is an urgent and important need to address the issue of exam ethics in Nigerian institutions. The objective of this research therefore is to (1) bring to the fore the significance of ethics in exams (2) reveal the extent to which ethics in exams in Nigeria had depreciated (3) reveal the various types of unethical behaviors in exams (4) proffer possible best solutions to such unethical activities. The paper has five sections. Section one introduces the topic while section two reviews relevant literatures. Section three discusses the methodology and section four deals with the discussions while section five discusses the conclusions and recommendations.

Literature Review

To begin with ethics, also known as moral philosophy, is a branch of philosophy that involves systematizing, defending and recommending concepts of right and wrong conduct (Wikipedia.com). The term comes from the Greek word *ethos*, which means "character". Ethics refers to the rules of conduct recognized in respect to a particular class of human actions or a particular group or culture, e.g medical ethics; Christian ethics, school ethics and so on. Ethics, according to Collins Concise Dictionary of 21st Century (2001), is amoral principle or a set of moral values held by an individual or group. Succinctly put, ethics is a set of principles that govern good human conduct. Alutu & Aluede (2005) assert that ethics can simply be defined as laid down guidelines, principles, codes of conduct, rules and regulations guiding the behaviour of a group or an organization. According to De Russey (2003) professional ethics begins from college campus and therefore governing boards should establish clear standards for ethical behaviors and ensure compliance with those standards as well as develop procedures to encourage honest scholarship and academic integrity. In his words faulty organizational structures encourage irresponsible actions. Thus he relates poor organizational structure to the cause of unethical behaviors in examinations. However, the free online dictionary defined examination is an assessment intended to measure the test taker's knowledge, skill, physical fitness, intelligent quotient, aptitude or classification in any or several topics. Such examination may take the form of oral questionings, writing on paper, answering questions using a computer or being confined in an area requiring the examinee to perform a set of physical tasks.

Examinations could vary in style, content, rigor and requirements. For instance, there are closed and open examinations. In a closed book examination, the examinee is often required to rely upon his/her memory to respond to specific questions while in an open book examination, the examinee may use one or more supplementary tools such as a reference book or calculator when responding to the questions. In either case examination involves testing ones' ability or knowledge on a given subject with a view to ascertaining his proficiency and reliability in the use or application of such knowledge in a related area. Adeyemi and Akindele (2002) defined examination as the process, which comes after a period of learning, and it is an organized assessment of an individual's performance, on the basis of his or her institutional procedural exposure. In his words Nsude (1998) noted that examinations are tools intended for the evaluation of the progress made by an individual, in the course of acquiring skills or knowledge over a period. Barnard and Lanwerys (1967) defined examination as "a test of knowledge acquired or more generally a means of assessing intellectual capacity or ability. For his part, Good (1973) defined examination, as the process by which the ability or achievement of the students in any subject is tested. Thus examination provides the basis for verifying the value and effectiveness not just of a teaching method but also of a candidate's ability. It serves to measures the student's level of achievement during the period of study. The New Webster's Dictionary of the English Language (1992) defines examination as a formal, written, spoken or practical test especially at school or college in order to examine how much an individual know about a subject or what he can do.

On the other hand, the Examination Malpractice Act of Nigeria (1999), explains examination malpractice as any act of omission or commission by a person who in anticipation of, before, during or after any examination fraudulently secure any unfair advantage for himself or any other person in such a manner that contravenes the rules and

regulations to the extent of undermining the validity, reliability, authenticity of the examination and ultimately the integrity of the certificate issued. Examination malpractice is also defined as a deliberate act of wrong doing, contrary to official rules, and is designed to place a candidate at an unfair advantage or disadvantage; it is a careless, illegal or unacceptable behaviour by a candidate in a formal test of his knowledge or ability in a particular subject (Philemon, 2007). It could also be said to be an act of omission or commission which compromises the validity and integrity of any examination (Okwu, 2006). Examination malpractice is counter-practice that is against ethics of examination, it is an act of disrespect to all rules and regulations guiding the good conduct of any examination or any evaluation process (Badejo and Gandonu 2012). According to Obimba (2002) examination malpractice is a corrupt practice and irregular behaviour exhibited by the candidates or any person charged with conduct of examination in or outside the examination hall before, during or after examination. Further, Wilayat (2009) defined examination malpractice as an intentional and planned unlawful activity to place a candidate at an unfair advantage or disadvantage. From Wilayat's definition we note that exam malpractice is not only seen from an advantageous position but even when an examiner deliberately put an examinee in a disadvantaged position to negatively affect his results that is also an exam malpractice act. Onuka and Amusan (2008) defines examination malpractice as any dishonest, unlawful or unauthorized act or deed performed by a candidate on his own or in collaboration with others like fellow students, guardians, parents, teachers, head teachers, examination officials, supervisors, invigilators, printers, security officers and any person or group of people before, during or after examination in order to get undeserved and unfair marks or grades. Awanbor (2004) Examination malpractice is the utilization of unusual ways and approaches to achieve a score or set of scores that is generally beyond the mental capability or the state of preparedness of a student for that examination. Also Salami (1994), posited that examination malpractice is an improper and dishonest act associated with examination with the intention of obtaining undeserved and unfair advantage. In his words, Sooze (2004) defined examination malpractices as all those illegal and prohibited means which students utilize to pass examinations.

Therefore, we can define exam malpractice as any illegal behaviour by candidates before, during or after the examination which directly or indirectly falsify the ability of the students with a view to attaining success cheaply. Exam malpractice can be carried outside or inside an examination hall and usually involves all indecent and unbecoming acts that violate the ethics of exam. Highlighting the importance of ethical behaviours in institutions of learning Denga & Denga (1998) noted that education is a fulcrum on which all other developmental facets are hinged. This means that our institutions of learning should provide individuals with the intellectual capacity for developing the requisite professionalism that is critical to sustainable development. Achieving this requires that ethics of learning are strictly followed. Thus exam ethics defines the 'rules of engagement' for knowledge acquisition. Exam ethics are designed to prevent exam malpractice in relation to examinations. We can therefore define exam ethics as those rules of conduct recognized as acceptable in respect to individuals both the examiner and the examinee before, during and after examinations.

Since we are relating exam ethics to economic sustainability, it becomes necessary to define what economic sustainability is. Economic sustainability relates to all decisions and activities that involve the optimal utilization of resources available to a nation such that in the very long term nobody is worse off and the economy is on a steady growth path. It has also been defined as the use of various strategies for employing existing resources optimally so that a responsible and beneficial balance can be achieved over the longer term. Thus it is the term used to refer to the various strategies that make it possible to use available resources to their best advantage. The idea is to promote the use of those resources in a way that is both efficient and responsible, and likely to provide long-term benefits. It is about ensuring that organizations or economies are "built to last" and are able to function efficiently over a long period of time. It does not imply being self-sustaining but being able to sustain the economy in the light of the inevitable interdependence nature of every economy. Owing to these definitions, it follows that for an economy to continue on a steady growth path that is to be sustainable, resources (human, natural and otherwise) must be used optimally for long term benefit.

In the case of human resources, its optimal use will require continuous training and acquisition of relevant standard knowledge. The acquisition of such relevant standard knowledge is guaranteed through education and examination. Afterwards, examinations are required to provide proof of knowledge acquisition and the reliability of its application. Where such examinations are marred by unethical behaviors before, during and after exams, the optimal use of human resources for economic sustainability apparently becomes hardly achievable. Who should abide by exam ethics? Since exam ethics are rules of conduct for examinations and since examiners and examinees are to be present during examinations, both must abide by the rule of conduct as prescribed by the institution. While different

institutions may have slightly differing rules for most institutions there are basic examination rules that are generally acceptable. Exam ethic should begin from the lecture halls as the lecturer (examiner) delivers his lectures and prepares the students for upcoming exams and the wider society. This implies that lecturers must be of good conduct in terms of speech, dressing, time-keeping and above all must be up-to-date in their field of study. Being updated creates a psychological feeling of pride, confidence and relevance in the lecturers who are eventual examiners. The lecturer must instill in the student the highest degree of confidence through effective tutoring and mentoring. To that end, intimidations, verbal abuse as well as dullness or what I may term “arm chair” teaching during lectures must be avoided and condemned. Lecturers must refrain from the usual cliché that “students are generally not serious individuals”. Instead, they make their students serious by being effective in their deliveries in class.

Examinations are revealers that unearth as it were the skill, intelligence, aptitude, brilliance or otherwise of an individual. Thus prior to the examination students must be clearly and effectively thought. However, beyond revealing one’s level of skill or intelligence, it serves a number of purposes. According to Nweze, Tina (2012) the following are the importance of examination(s): (i) It inculcates the spirit of hard work and the zeal to study in the candidates. (ii) It affords the authorities the opportunity to ascertain whether or not knowledge has been successfully imparted. (iii) It makes candidates active participants in teaching cum learning process. (iv) A teaching method’s viability is obtained through examinations (v) Learning problems and other difficulties encountered by students can be discovered through examination. (vi) Helps in the identification of students with special skills for placement purposes. (vii) Examination is a source of data and information for administrative decisions. (viii) Examination ensures effectiveness on the part of teachers and students in the educational system. (ix) Examination result is useful in the selection of candidates for employment or educational advancement (placement). (x) Examination serves as a means of control by the government. (xi) Examination serves as a means of officially documenting of academic and other capabilities of students. (xii) Examination results can be used for research purposes. (xiii) Examination results could also be used for guidance and counseling purposes. A close look at point number two (ii) suggests that examinations are the foremost means for ascertaining whether knowledge has been successfully imparted for onward application on key areas to ensure sustainability. Also point number six (iv) and eight (8) reveals that flaunting examination ethics could lead to employment misplacement. By misplaced employment here we mean employing or placing employees in positions and offices which requires an intellectual capacity beyond theirs. Such misplacement could be avoided if exam ethics on the part of the examiners and examinees are strictly abided by.

Conceptual Framework

The link between exam ethics and economic sustainability is captured in the words of Denge & Denge (1998) where they noted that education is the fulcrum on which all other developmental facets are hinged. Put differently, development is contingent on education. Thus by means of education knowledge is acquired, certified and applied. The application of knowledge is putting knowledge to test. Thus Barnard and Lanwerys (1967) defined examination as “a test of knowledge acquired or more generally a means of assessing intellectual capacity or ability. If acquired knowledge must be applied to foster development, then such knowledge must be subjected to test and the test process must not be compromised. This implies that the rules guiding the test process must be strictly adhered to so that the integrity of knowledge certification and application is not in doubt. If an exam or a test whether oral, written or practical is the true test of knowledge then exam ethics must be enforced and upheld and the result of applying such certified knowledge will be positive. Thus, so long as exam ethics are upheld, acquired knowledge can be truly certified and its application will give the expected outcome which will engender growth and development.

METHODOLOGY

The method of analysis will have two approaches, an inferential approach and an analytic approach. The inferential approach requires making inferences from already established statements or reports while the analytic approach requires the analysis and interpretation of data either primary or secondary. In this research, inferences will be made from statements of facts and primary data will be analyzed using percentages to complement the inferential analysis. The data is obtained from a survey of 150 students in a tertiary institution established in 2011 in Nigeria. The choice of 150 students was due to the entire size of the student population which was about 600 as at February 2015. Thus 150 (1/4) is a sample size representative of the population. The responses of the respondents are presented below under four headings namely, copying, gift giving, dating and parental influence.

COPYING TACTICS

QUESTIONS	YES	NO
1. Would you like a particular lecturer to always invigilate your exams?	132	18
2. Would you like to sit close to your colleagues during exams?	140	10
3. Would you like an open exam?	135	15
4. Would you accept help from an external source during exams?	141	09
	XX	XX
TOTAL	548	52

Percentage of those using copying tactics equals: $548/600 * 100 = 91.33\%$

GIFT GIVING TACTICS

QUESTIONS	YES	NO
1. Would you love to give a gift to your lecturer?	88	62
2. Would you expect your gift to influence your grades?	84	66
TOTAL	172	128

Percentage of those using gift giving tactics equals: $172/300 * 100 = 57.33\%$

DATING TACTICS

QUESTION	YES	NO
Can you date your lecturer?	19	131

Percentage of those using dating tactics: $19/150 * 100 = 12.67\%$

PARENTAL INFLUENCE TACTICS

QUESTIONS	YES	NO
1. Would you like your parents to meet with your lecturer?	39	111
2. Would you invite your lecturer to a family event?	40	110
TOTAL	79	221

Percentage of those using parental tactics: $79/300 * 100 = 26.33\%$

DISCUSSIONS

We begin the discussion with the inferential approach making inferences from established statements of fact and elucidating its implications. We recall with dismay the report of a one-time Director General of the National Orientation Agency (NOA) in Nigeria in 2012 that an average of ₦25billion is generated annually from exam racketeering. This money changes hands in the economy without accruing to the government. What are the economic implications of such funds that are unaccounted for? Firstly, the ₦25billion generated per annum illegally does not accrue to the government and so does not form part of the nation's Gross Domestic Product (GDP). Hence, it is not available to the government for productive expenditures in infrastructure development and in assisting small and medium enterprises, in order to create the much needed job opportunities. Secondly, ₦25billion is the minimum capital base requirement for commercial banks to commence financial operations in Nigeria. If such an amount is legally made available to commence business in the banking sector, the positive ripple effect in the economy will be great in terms of employment generation, credit facilities for investors and a boost of the entire financial system. Conversely if such an amount is withdrawn from a financial institution, this might result to a situation of illiquidity and an eventual closure of such an institution. The negative consequences of bank closure are better imagined than experienced as Nigeria has gone through that in the past. Apart from further exacerbating the unemployment problem, it will cast a dark shadow on the financial system with distortive effect on macroeconomic stability. Thirdly, although such ill-gotten wealth does not accrue to the government, it is spent within the economy, this distorts the macroeconomic projections and expectations of the monetary authority. Lastly, because such money is not earned through the appropriate channels, government is not able to deduct income tax from it and so government

loses tax revenue. In addition, with regards to the valuation of certificates from Nigeria, it casts doubt on its reliability and makes it difficult for its holders to compete favourably for jobs, especially at the international level. The implication of being less competitive in the labour market, is a backlog of unemployed individuals and an unproductive economy. The essence of highlighting these implications is to expose the invisible destructive effects of exam racketeering on the economy. Also by demonstrating its link to the economy we are discouraging the rising trend of exam malpractice with a view to facilitating smooth conduct of exams and above all to ultimately ensure that the results of examinations reflect the true ability and capacity of the examined. Hence, such tested knowledge can equally be applied in the system with great reliability for sustainable economic growth and development.

From the pilot survey of 150 students conducted in a tertiary institution in the south eastern Nigeria, it was revealed that 137 (about 91.33%) of the respondents have a high tendency to be involved in one form of unethical behavior or the other before, during or after their exams. These unethical behaviors ranges from using written notes (micro chips), copying from others, using a blue tooth, impersonation, gift giving to lecturers, direct cash payment, using parental or public office influence to grant favours to lecturers or examiners and sometimes a willingness to offer oneself in the case of females. In all, copying either from someone or from external materials seems to be most common as about 91% are involved in it. Also 57.33% are willing to falsify their intellectual capacity through gift giving in kind or cash while about 13% can date their lecturers with a view to falsifying their intellectual abilities. In addition, 26% are willing to use parental influence to affect their intellectual abilities. What is noteworthy here is that the students surveyed are from a new generation university that is yet to graduate its first set of grandaunts. This goes to suggest that unethical behaviors in examinations are not just widespread among Nigerian students but deep-rooted. It seems that the students have imbibed the ideology, long before they entered tertiary institutions, that unless they get involved in unethical exam behaviors, they may not get the required grades for a pass. Owing to this, some students have developed a non-challant and complacent attitude towards reading and study, hoping to sort themselves out before, during or after exams. This is outrageous and calls for immediate action on the part of the education authority and the governing councils in institutions to address such a malignant mentality by punishing culprits and rewarding hard work. However, this awful attitude in students can be nipped in the bud from home by parents and in the lecture halls by lecturers. Parents and especially lecturers can imbibe a principle in the bible recorded at Luke chapter 6 verse 40 which states that “a pupil is not above his teacher but everyone who is perfectly instructed will be like his teacher”. Yes, by means of perfect instructions students will not only be equipped to confidently face exams but will know that the result of hard work is dignifying and that unethical behaviors are degrading and inimical.

CONCLUSION AND RECOMMENDATIONS

In conclusion, this research highlights the socio-economic implications of allowing unethical examination behaviors to continue in the Nigerian educational system. Apart from casting doubts on the reliability of Nigerian certificates, it has the capacity to negatively affect the financial system, government fiscal and monetary projections, distorting macroeconomic stability and contributing to the social ills associated with unemployment. There is therefore, a compelling need for this cankerworm that is rapidly destroying our citadel of learning to be addressed. This will require an all-encompassing approach involving the parents/guardians, examiners, examinees and education authorities. As noted in the introduction, economic sustainability depends largely on economic infrastructure and at the heart of all economic infrastructure programme is the application of reliable time-tested knowledge critical to solving modern socio-economic problems. Thus, unethical behaviors in examinations are inimical to sustainable development and remain highly unacceptable. Conclusively, exam ethics- acceptable code of conduct- before, during and after exams remains pivotal to the sustainability of an economy. Education is an economic tool for development and is at the heart of any economic sustainability programme. It behooves all education marshals (all those directly involved in examination procedures) to protect the essence of acquiring education for the lasting benefit of the nation. As highlighted, exam malpractice or exam racketeering or unethical behaviours in relation to exams negates the economic sustainability efforts of any society.

Therefore, abiding by exam ethics is integral to sustainable economic development and nation building. We therefore recommend as follows:

For a developing economy like Nigeria, while the acquisition of certificates are essential, the idea that certificates are what we need for growing and sustaining the economy must be de-emphasized. Emphasis must be laid on knowledge acquisition, sharing and application for the development and sustainability of the economy.

Also, knowledge disseminators who are themselves examiners must continuously update their knowledge in their respective fields to pride themselves as it were and not resort to unethical behavior wittingly or unwittingly thereby avoiding the falsification of the intellectual ability of any student. To that end, the increased vigor with which the Tertiary Education Tax Fund is encouraging research and advance- knowledge acquisition is highly commendable but its activities must be done with the highest level of transparency in individual institutions and in line with the overall national objective.

Again there must be a continuous effort at re-orienting students from the grass root on the long run negative implications of unethical activities relating to examinations not just on the part of the culprit but also on the economy as a whole as well as the need for students to imbibe the culture of dignity of labour through hard work and feeling of self-worth.

Also, examinations must be conducted under very strict supervision without affecting the psychology of the examinees.

Further to these, Parents/Guardians must avoid heaping undue pressure on their children/wards to graduate with a first class or better still a second class upper division in their final grades at all cost. This competitive spirit is a disservice both to the student and the nation.

In addition, appropriate sanctions as prescribed by the law must be administered on defaulters such that others are deterred from engaging in such destructive acts and in such a way as to make defaulters advocates of exam ethics. This could be achieved through appropriate and effective counseling.

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BIO-DATA

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