STOCK MARKET DEVELOPMENT AND ECONOMIC GROWTH: AFRICAN

EMERGING MARKET COUNTRIES AND POLICY IMPLICATIONS FOR

TANZANIA

By

MWAMBENE, Tuntufye

THESIS

Submitted to

KDI School of Public Policy and Management

in partial fulfillment of the requirements

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ABSTRACT

STOCK MARKET DEVELOPMENT AND ECONOMIC GROWTH: AFRICAN EMERGING MARKET COUNTRIES AND POLICY IMPLICATIONS FOR TANZANIA

By

Tuntufye Mwambene

The paper studies the relationship between levels of stock market development and economic growth in emerging market African countries. In this study I used panel data (cross-sectional time-series) from 1991 to 2011 for 15 African emerging market countries. Fixed effects regression model is applied to determine whether stock market development level is significantly and positively correlated with the levels of economic growth. The paper finds out that in the short-run there is a significant and positive correlation between stock market development indicators and economic growth in African emerging market countries. Only stock market liquidity is found to be significant and positively correlated with long-run economic growth. This paper has many policy implications for emerging market countries in Africa. Stock market development can be used as a means to reduce income inequality by distributing ownership of State Owned Enterprises among individuals through equity shares; African countries can promote stock markets to enable companies to expand so as to contribute to the national revenue and improve standard of living through quality products and job creation.

Dedicated to my children Kaleb and Keren

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

Introduction

1.1   Rationale for Development of Stock Markets

Africa has become one of the World's fastest growth emerging economies. Recent statistics show that seven out of the World's 10 fastest –growing economies are to be found in Sub-Saharan Africa. Historically banks have been known to be the major catalysts of this economic growth as it has been the case for Africa today; however, studies show that as the economy develops, customized financial arrangements play a greater role for many projects rather than standardized contracts and intangible assets replace capital inputs which are easily collateralized which means that Africa needs to develop stock market which can perform a better job than the traditional banks in this new stage of growth. Development of stock markets in emerging market countries would not only benefit the developing countries but the world at large. Investors from the developed world consider investing in the emerging markets as an opportunity for portfolio diversification and reducing portfolio risk.

On the other hand efforts to promote stock market development in emerging market countries are based on the macroeconomic rationale that stock markets can accelerate economic growth, create jobs, and reduce poverty. At the microeconomic level stock markets help companies to raise capital in a cost effective manner through Initial Public Offerings (IPOs) and post -IPO funds, thereby enabling big or small companies to grow, and enabling industries to flourish. Moreover, the listing of firms on stock markets improves companies' operations, management and corporate governance because companies are obliged to adhere to standards, rules and regulations and are subject to public and media scrutiny. Another motive for development of a stock market is that there is a shift in global economy whereby

emerging market economies are expected to play a bigger role in driving the growth; therefore, developed stock markets are imperative in the emerging economies in order to accommodate this unprecedented growth. The focus of stock market development efforts are targeted at regulatory environment, capacity building, and safe and robust securities markets in those countries. To amplify this claim, the chairman of Emerging Market Countries, Mr. Vedat Akgiray in a November 2012 media release said;

> Since the distribution of global economic wealth is continuously changing in favor of today's rapidly growing emerging markets, as the future candidates for being developed economies, "proper" securities regulation in today's emerging markets is tantamount to "proper" regulation of tomorrow's developed markets. Therefore, emerging markets within IOSCO and the global financial system are much more important than they were in the past.[1]

There is a great diversity among emerging market countries in terms of economies, financial systems, regulatory regimes, trading procedures, and so forth; rendering it difficult to come up with one simple definition for emerging stock market. However, according to (McLindon, 1996) the definition of emerging stock market is that considered by the International Finance Corporation (IFC) as "all the economies that the World Bank classifies as "developing" are emerging markets." McLindon argues that the IFC is one of the leading institutions to promote and develop emerging market stock markets through advisory work with governments, collecting and disseminating data and creating funds through which investors can participate. A stock market is a market for equity instruments; it includes primary market for selling of new tradable shares and secondary market where shares already

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[1] http://www.iosco.org/.

owned by investors are traded among individuals and institutions.

Tanzania is one of the emerging market African countries aspiring to transform the economic growth through a responsive stock market. According to the synthesis report on the study of feasibility and implementation of appropriate market segments for the capital market in Tanzania it is argued that "an increase in the number of firms and investors participating in stock exchanges generates liquidity which has a proven positive relationship with economic growth." The report indicates that lack of substantial growth in low- income countries such as Tanzania is frequently attributed partly to insufficient savings. Therefore, stock market can be a major means for low –income countries to increase savings and facilitate mobilization of savings. McLindon(1996) noted that "a lack of good ways to save encourages capital flight. Bank accounts typically fail to pay attractive interest rates to savers. Land and real estate weather inflation well, but the market tends to be illiquid and beyond the reach of all but the affluent."[2]

According to Yartey (2008) stock market development has been central to the domestic financial liberalization programs of most emerging markets. It mobilizes domestic and international savings and allocates these savings efficiently to the most productive use in the economy. The World Bank, IMF and other multilateral financial institutions have focused on market liberalization in their efforts to reform economies in developing countries. These international financial organizations have played a great role in promoting and providing both technical assistance and funds for establishment of capital markets[3] in the emerging markets countries. For example, under the Financial Sector Support Program (FSP), the World Bank

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[2] Michael P. McLindond. 1996. Privatization and Capital Market Development: Strategies to Promote
  Economic Growth. Westport, Connecticut. London.

[3] Capital market involves both bond and stock market, stock market is a component of capital market.
  IOSCO – International Organization of Securities Commissions.

has funded both capacity building and regulatory framework activities of the financial sector in Tanzania, capital market development being at the heart of the program. Despite the enormous effort to promote capital market development at the national and international levels, capital market development in Tanzania is still at the infancy stage.

One of the factors which cause the sluggish growth of the stock market in low income countries like Tanzania is attributed by a low participation of corporate firms which are unwilling to register in the stock market, thereby undermining the supply side of the stock market. For example, while elsewhere stock markets have provided capital for corporations' expansion, such hasn't been the case in Tanzania. Many Tanzanian corporate firms avoid registering in the stock market because they do not want to adhere to disclosure requirements and public scrutiny which can expose them to the revenue authorities for proper taxation. However, there is an opposing view regarding unwillingness of corporate firms to go public and register in the stock market: the main reasons for reluctance being high underwriting and listing costs and unawareness of the incentives and opportunities provided.

African emerging market countries face the same disease of financial illiteracy. Financial illiteracy for both individual and corporate firms causes a low rate of participation in the stock market; this has a great impact on the demand side of the stock market. For example, many Tanzanians, because of not understanding how they can benefit from the stock market do not use it as a way of earning money and a means of saving for future retirement. So far there is no national strategy to improve financial literacy among many individuals and corporate firms who can participate in the stock market and make it more viable and liquid. However, some believe that low income and savings prevent individuals from investing in the stock markets which leads to low participation.

Another school of thought believes that there is no need to develop stock markets in emerging market economies because of the associated risks; when a stock market becomes developed it is linked to international capital markets; therefore, it can relay spillover effects of financial crisis from other part of the world. For example, sudden withdrawal of capital by foreign investors can have a great impact on liquidity of the stock market. To mitigate these risks, emerging market economies realized that there is a need for strong macroeconomic policies and sound financial systems. They are taking steps to protect themselves against adverse effects of financial crises by improving "reserves, diversifying their financing sources, relying more on domestic currency and longer-term funding, and developing domestic [capital] markets."[4]

Strong support for development of stock markets, however, is drawn from the long time investigation of the causality between stock market development and economic growth in emerging economies. Most of the findings indicate that there is a strong relationship between stock market development indicators and economic growth indicators. For example Arav argues that "there is no advanced economy that has achieved a remarkable economic development without the establishment and development of capital market. Thus, an emerging economy, which aspires to emulate the achievements of advanced economies must establish and develop its capital markets" (Arav, 2010). In most cases economic growth is measured by indicators such as GDP per capita, GNI per capita, gross saving rate, capital accumulation and productivity, whereas stock market development indicators commonly used include market capitalization ratio, total value of shares traded, total new issues, and turnover ratio. Even though not all researchers arrive at similar findings, however, most agree in principle that there is co- integration between economic growth and stock market

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[4] http://www.imf.org/external/np/speeches/2001/020501.htm.

development.

Still, there is no conclusive evidence of whether stock markets drive economic growth or economic growth drives growth in a country's stock market. However, stock markets appear to play a great role in economic growth; for example, they have been known to perform a complementary role with financial institutions by acting as source of capital for corporate firms, providing a boost to domestic savings, and a channel for foreign funds. It is argued that stock markets improve effectiveness in corporate governance, support domestic resource mobilization, and the long- term supply of capital. Global financial crises which threaten to cut funding, and overwhelmingly debts in developing countries all in one way or another force the attention of stock market development as an even more indispensable option.

In this study I show that there is a positive link in Africa emerging market countries between stock market development and economic growth levels. Government policies play a significant role to promote the development of stock market in the early stages of growth. Large and liquid stock market is a necessary condition for the stock market to have contribution in economic growth. Improving financial literacy and promoting saving culture in countries like Tanzania with underdeveloped stock market can contribute to liquid stock market which is a "sine qua non" for economic growth.

CHAPTER 2

Literature Review

Financial system has been known for long time to provide important services to the economies. Schumpeter in 1911 noted that mobilizing savings, evaluating projects, managing risk, monitoring managers, and facilitating transactions which are crucial services provided by financial system are necessary conditions for technological and economic development. However, there are two views regarding financial system structure; the bank-based view and the market –based view. The bank –based view considers stock market as not important in promoting economic growth. The argument is that while stock markets can play a greater role in information collection for investment opportunities, they also make this information public which can be accessed by all market participants. A free-rider problem can be created; investors are discouraged to spend resources in identifying innovative projects that foster growth; banks therefore, can do a better job in this regard as banks privatize the information they acquire and form long –run relationship with firms. The private nature of information acquired by banks creates incentives for them to research firms, managers, and market conditions with positive ramifications on resource allocation and growth.[5]

Another view in favor of bank-based financial system is that stock markets do not effectively monitor managers because of asymmetric information; managers have more inside information than outsiders making it difficult to outbid them by takeover mechanism. On top of that, stock market may facilitate hostile takeovers and the mechanism of takeovers leads managers to emphasize short-term outcomes at the expense of long –term investments, with negative consequences on macroeconomic performance. In addition, in liquid markets,

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[5] Professor Shu-Chin Lin's lecture notes; Finance and Development. 2013.

investors can inexpensively sell their shares, so that they have fewer incentives to exert rigorous corporate control.[6]

Furthermore, some scholars argue that the increased trend in policy -making that emphasize market –based system across emerging and transition economies is misguided. According to them stock markets require requisite institutional and legal infrastructure and is more appropriate in well developed economies where there are large firms as opposed to small firms which are most common in emerging and transition economies, therefore, there is more economic value in strengthening the banking sector rather the stock market (Tadesse,2002).

On other hand, stock markets are assumed to reduce the downside risk and cost of investing in long -term projects, reduce cost of information through market- efficient mechanisms, ensure that managers maximize the value of the firm due to possibility of takeover threats, and increase the quantity and quality of investments in the domestic economy. Moreover, proponents of theories of stock markets and economic growth argue that well functioning stock markets lead to efficient allocation of resources and a higher level of capital productivity and economic growth. In support of this Caponale et al. found that a well developed stock market can foster economic growth in the long -run. Their findings suggest that "well functioning stock markets [can] promote economic development by fuelling the engine of growth through faster capital accumulation and tuning it through better resource allocation" (Guglielmo etal, 2004).

The role of stock markets also has gained support from international financial institutions as it can be seen in the Capital Markets Practice of the World Bank and

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[6] Professor Shu-Chin Lin's lecture notes; Finance and Development. 2013.

International Finance Corporation, which states that, "Capital markets are critical to accelerate economic growth, create jobs, and reduce poverty."[7] The Practice goes on to say that, "Equity market development facilitates privatization, strengthens firms' balance sheets, enhances market discipline for State Owned Enterprises (SOEs), and provides financing for infrastructure and Small and Medium Enterprises (SMEs)." [8] The World Bank and International Finance Corporation have rigorously implemented this proposition by funding various researches and providing technical assistance for development of capital markets in some emerging economy countries.

Stock market development as the main agent of promoting economic growth is also popular among various researchers who strived to provide country and cross- sectional empirical data and theoretical evidence on this elusive and debatable proposition. Their generalizations, however, not free from limitations, indicate that stock market development is a "sine qua non" for economic development. Stock market development is judged by the level of market capitalization and liquidity. "Steady growth in market capitalization is an indicator of the depth and development of a stock market. Growth of market capitalization deepens the market and tends to make it less volatile" (McLindon, 1996). Market capitalization can grow because of state owned enterprises being privatized, new listing of companies, new shares by private companies, share price increase due to economic growth, enhanced management and corporate governance which has impact on share prices, and listed companies issuing more equity through right issues and new offerings. Moreover, "an active stock exchange makes shares liquid and hence provides confidence to individuals that they will be able to sell their shares when the need arises" (McLindon, 1996). The value of market trading is one important indicator of liquidity. Now the question remains, in what

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[7] http://worldbank.org/capitalmarkets..
[8] Ibid n.p.

ways African's stock market development can be promoted in order to contribute to economic growth.

"There is a close if –imperfect- relationship between the effectiveness of an economy's capital markets and its level of real development" (Bencivenga, Smith, and Starr, 1996). In his work, McLindon summarizes the benefits of stock markets that accrue to economic growth, financial sector, enterprises, and investors; he noted that when compared with other financial assets, equity provides a higher return to investors when held over a period of time. A higher return on equity is one way to motive accumulations of savings which are channeled into productive investment essential for economic growth. Stock markets are efficient and transparent way to scrutinize and value enterprises; they also are means of financing for small and startup firms.

Among the researchers who also have rigorously worked on the stock markets and economic growth are Levine and Zervos; they used data on 47 countries from 1976 through 1993 to investigate and provide empirical evidence on the major theoretical debates regarding the linkages between stock markets and long-run economic growth. They empirically investigated current and future correlation between stock market development measures and economic growth indicators. Levine and Zervos confirm that "there is a strong, positive connection between stock market liquidity and faster rates of growth, productivity improvements and capital accumulation" (Levine and Zervos, 1998). They further argue that, market liquidity "is a robust predictor of real per capita gross domestic product growth, physical capital growth, and productivity growth" (Levine and Zervos, 1998). I agree with them that market liquidity can be a predictor of economic growth because it indicates the activeness of the stock market, meaning that shares can be easily sold and purchased.

Dailami and Atkin investigated stock markets' performance in the developing countries. "With foreign capital funds dwindling, governments in many developing countries –with increased [World] Bank support – are looking to develop capital markets to provide risk capital for the corporate sector" (Dailami and Atkin, 1990). They emphasize that in the debt crisis regime, equity financing can preferably suit more than debts especially for risky projects with long gestation periods. Dailami and Atkin, (1990) using data from Korea and India, their study reveals that high return on equity capital (23 percent in Korea and 21 percent in India) is one of the motives for individuals and corporations to invest in shares. However, tax implications, cost of underwriting, dilution of shareholding, and regulatory framework, are important issues to consider before deciding whether to go public or not. This study is very important because it considers other factors that affect the demand and supply of the stock markets.

A stock market can be a way of improving efficiency in investments because of the public scrutiny on the corporate firms' operations, also it can be an effective way of domestic resource mobilization thereby enhancing long –term capital supply. Also, stock markets attract foreign portfolio capital that increases the supply of investable resources in developing countries. However, these roles don't go without disadvantages; agency cost and weakened competitiveness can arise as a result of threats from takeover and mergers.

Arav provides some empirical statistics of emerging economies' stock markets development. For example, the Chinese equity market grew from Yuan 3.71 trillion in 2004 to approximately Yuan 4.09 trillion in 2006, and the capitalization of East Asian markets was estimated at USD 1240 billion in 1997, and increased to USD 7.7 trillion within ten years. Therefore, due to overwhelmingly good performance, there is a rush for many developing countries to establish stock markets and other financial institutions. a "liberalizing economy

and financial markets are necessary but not sufficient conditions for capital markets to play a significant role in economic development" (Arav,2010),   only if transparency, rule of law, recognition and protection of private property and a conducive environment for the private sector are the main agents of economic growth. The author uses disappointing examples of Mexico and Argentina to warn that financial liberalization should not be pursued blindly, but must be preceded by sound economic and financial institutions.   According to Arav, capital markets complement banks by making funds available for investors undertaking long –term and unprofitable projects like agriculture, education and other social development projects.

A study by Yartey and Adjasi found that listed corporations in Ghana, Mauritius, South Africa, and Zimbabwe rely less on external sources to finance asset growth. Yartey and Adjasi (2007) continue to argue that the stock market has played a great role in financing the growth of large African corporations. Bolbo et al. (2005) found that, capital market development has contributed to the economic growth of Egypt. Mohtadi and Agarwal,(1998) examined the relationship between stock market development and economic growth for 21 emerging markets and found that stock market performance indicators and economic growth boost private sector behavior. Bahadar and Neupane (2006) confirmed that the stock market plays a significant role in Nepalese economic growth. Liu and Hsu found a positive impact on economic growth due to stock market development in Taiwan, Korea and Japan (Liu and Hsu, 2006).   Arav argues that "countries with developed banking systems and liquid stock markets grew faster than countries with less liquid markets and less sophisticated banking systems" (Arav,2010). The study by Shahbaz et al. (2008) suggested that there is a long –run relationship between stock market development and economic growth in Pakistan.

Beckaert et al. (2005) indicate that equity market liberalization leads to a 1 % increase in annual real economic growth. The study by Nowbutsing and Odit analyze the

relationship between stock market development and economic growth in Mauritius over the period of 1986 and 2006. Nowbutsing and Odit (2009) found that in Mauritius stock market development is an indicator of the health of the economy hence is an important ingredient for growth. Yartey (2008) argue that "apart from their role in domestic financial liberalization, the stock markets have also been very important in recent years as a major channel for foreign capital flows to emerging economies."

CHAPTER 3

Research Method

3.1   Research Design

In this part I describe a master plan that specifies the methods and procedures for collecting and analyzing the needed information, in other words the plan that describes how, when, and where data are to be collected and analyzed. This study focuses on the role of stock markets in economic growth for emerging market countries and policy implications for Tanzania. The research design is exploratory which means that the intention is to gain some ideas about the relationship between stock market development and economic growth. The research will not provide conclusive evidence about the causality between the stock market development and economic growth.

Survey method is employed to collect information about the level of individual Tanzanians' participation in the stock market for such reasons as saving, investing and sourcing capital. This method will provide quick, inexpensive, efficient, and accurate information about Tanzanians' attitudes and awareness towards participation in the stock market. The results shed some light on the level of financial literacy and barriers to participation in the stock market.

3.2   Data and Methodology

The study covers a period of 21 years from1991 to 2011. Panel data (also known as longitudinal or cross -sectional time -series data) for 15 African emerging market countries are used. The African countries involved includes: Egypt, Ghana, Cote D'Ivoire, Tanzania, Zimbabwe, Uganda, South Africa, Namibia, Kenya, Malawi, Zambia, Swaziland, Botswana, and Mauritius. The data for these countries are directly extracted from the World Bank

national accounts data. In panel dataset the behavior of country's economic growth and stock market development indicators are observed over time. Quantitative technique is applied to analyze information; this approach addresses research objectives through empirical assessments that involve numerical measurement and analysis. The objective in this study is to assess the impact of stock market development on economic growth. The Ordinary Least Square Linear Regression is used to do estimation.

This study applies the model initially developed by Levine and Zervos, however, to suit my environment I focus on few explanatory and control variables. Levine and Zervos (1998) used stock market liquidity, size, volatility, and integration with world capital market to proxy stock market development. In their model they use both stock market and financial development indicators to predict long –term economic growth. In order to find a true relationship of stock market liquidity and real per capita gross domestic product (GDP) growth, physical capital growth, and productivity growth, Levine and Zervos controlled for initial income, initial investment in education, political stability, fiscal policy, openness to trade, macroeconomic stability, and the forward looking nature of stock prices. In this study only stock market development indicators are used as explanatory variables after controlling for inflation, initial income, and initial investment in education.   For that matter three stock market variables are incorporated in my model to proxy the level of stock market development; market capitalization ratio (MKTCAP) which measures the stock market size, turnover ratio (TR) and total value of stock traded (TVT) which together measure the stock market liquidity. This study takes the literal meaning of stock market development indicators as defined in the World Bank database. These indicators are defined and explained as follows;

Market capitalization (also known as market value) is the share price times the number of shares outstanding. Turnover ratio is the total value of shares traded

during the period divided by the average market capitalization for the period. Stocks traded refer to the total value of shares traded during the period. This indicator complements the market capitalization ratio by showing whether market size is matched by trading.[9]

Levine and Zervos in their model examined the relationship between stock market and financial development on one side and long -run real per capita GDP growth and other two growth channels on other side. Capital stock growth and savings are the two other growth channels considered in their model. In this study I focus only on GDP per capita and two channels through which stock market development is linked with growth; Gross Savings (% of GDP), and Gross Capital Formation (% of GDP). The World Bank database also defines growth indicators as follows;

GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. Gross savings are calculated as gross national income less total consumption, plus net transfers. Gross capital formation (formerly gross domestic investment) consists of outlays on additions to the fixed assets of the economy plus net changes in the level of inventories.[10]

I understand that economic growth is a result of combination of many economic and political factors which at the moment cannot all be incorporated in this model. After controlling for inflation, secondary education enrollment rate, trade, and general government expenditure I tested the following hypothesis:

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[9] http://data.worldbank.org/indicator.
[10] Ibid.

H1: Stock market development is significantly and positively correlated with economic growth, gross capital formation, and gross savings.

Fixed effects regression model is used for economic purpose to generate empirical results showing relationship between stock market development and economic growth. The econometric model used is represented in the equation as follows:

$G_{jt}= \beta_0 + \beta_{1i}SMKTdev_{it}+ \beta_{2i}X_{it} + \varepsilon_i+ \delta_t +\mu_{it}$ …………………………….(1)

Where;

G_{it}=Economic growth (GDP per capita); i=country; t=time (years); $\beta 0$=Intercept not explained by independent variables; β_1= coefficient of independent variable; SMKTdev=Stock market development; β_2= coefficient of other explanatory variables; X_{it}=other explanatory variables; $\varepsilon_{i\,=}$ n-country –specific intercepts (country specific dummies); δ_t= time specific dummies; μ_{it}= error terms.

It is theoretically known that stock market development can influence growth by raising the rate of savings and allocating savings to higher –return investment projects and hence higher level of economic development. Stock markets also facilitate mobilization and pooling of savings, therefore, in the model the study expect gross savings to be linked to stock market Thus I check whether there is correlation between gross capital formation and gross savings on one side and stock market on the other side using the same regression equation except for the per capita GDP which is replaced by gross capital formation and gross savings in each equation respectively.

However, in panel data (cross- sectional time-series data) each country has its own individual characteristics that may or may not influence predictor variables; I need to control

for time –invariant characteristics within the country that may impact or bias the predictor or outcome variables. Also there might be variation across countries which are random and uncorrelated with the independent variables in the model. Therefore, Hausman test provides guidance on deciding whether to use fixed effects GLS regression or random effects GLS regression model. The equation for the fixed effects and random effect model respectively becomes;

$$G_{jt}= \beta_0 + \beta_1 SMKTdev_{it} + \beta_2 X_{it} + \alpha_i + \mu_{it}; \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \text{(2)}$$

Where

$\alpha_{i=}$ (i = 1…15) is the unknown intercept for each country (n-country –specific intercepts)

$$G_{jt}= \beta SMKTdev_{it} + \beta_2 X_{it} + \alpha + \mu_{it} + \varepsilon_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \text{(3)}$$

μ_{it}= between countries error;

ε_{it} = within country error.

Despite the results from Husman test which indicates that random effect regression is more appropriate, in this study, equation (1) is applied to generate empirical results reported in chapter four.

3.3   Research Population/Sample

Research population refers to the total number of units from which data can be collected such as individuals, households, organizations, departments, geographical areas or objects. These units must meet certain criteria for inclusion in the study. The criteria for inclusion in this study are:

◇ Emerging market African countries;

◇ Individual Tanzanians who have access to the internet;

◇ Employed Tanzanians;

The study sample refers to a proportion of a population. A sample of 15 African emerging market countries which have established stock market is used. A sample of 120 email addresses for individual employees was chosen from organizations internal communication list. This was done by collaborating with one employee from each ten target organizations. Convenience sampling technique was employed. This method is useful because it helps to obtain those people or units that are most conveniently available. A structured questionnaire of twenty nine questions was sent to respondents and results were collected after three weeks.

CHAPTER 4

Empirical Statistics

4.1   Descriptive Statistics and Panel Data model

Table I shows descriptive statistics of stock market development and economic growth indicators. In the table we see that 15 African countries have registered average GDP per capita growth of 1.8 percent for period from 1991 to 2011. The low average GDP per capita growth is because of one country which experienced hyperinflation hence had negative growth affecting the overall average. Excluding this country, on average is above 2 percent for the period 1991 to 2011.The table also shows that among these African countries some were able to register a GDP per capita growth of 12.4 percent per annum. This shows a promising emerging market region where stock market has to play a significant role in sustaining this growth.

Figure 1 shows individual country GDP per capita growth trend over the past 21 years. In most countries the GDP growth is within small margin with standard deviation of 3.6 except for only one country (Zimbabwe) which its growth was significantly hampered by hyperinflation in the 2000s.

Table I: Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
mktcap	265	36.91036	57.61086	.6016936	487.8241
tvt	270	7.303997	21.30141	0	148.7733
tr	255	9.399142	13.18559	0	64.26131
gdp per c	270	1.797157	3.56495	-17.95155	12.42626
gk	249	20.19313	5.917646	1.525176	36.66661
gs	220	19.7292	8.9653	-3.697248	45.48079

mktcap=market capitalization ratio (% of GDP), tvt=total value, stock traded (% of GDP), tr= turnover ratio, gdp per c=Gross Domestic Product per capita growth, gk= gross capital formation (%of GDP), gs =gross savings (% of GDP).

Figure 1: 15 African Countries GDP per capita Growth from 1991-2011.
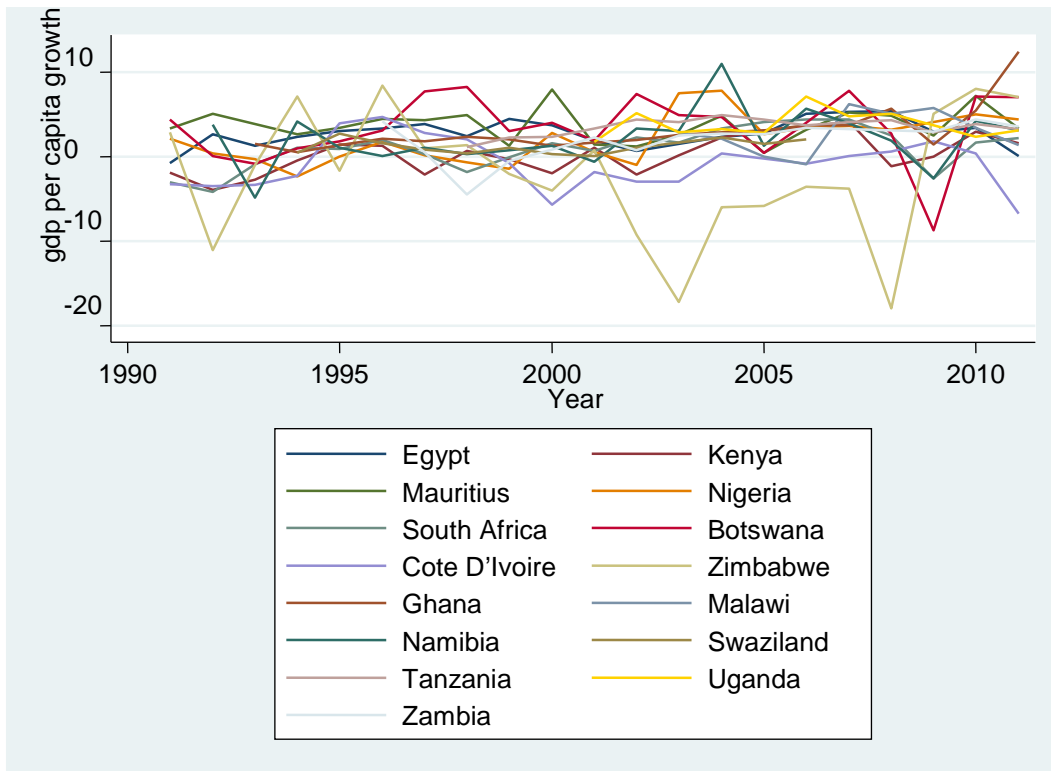
4.2   Empirical Results

In this study we examine the relationship between stock market development and economic growth by looking at coefficient of determination (r square), t-statistic,   p-values, and explanatory variables 'coefficients. The coefficient of determination shows the degree to which each dependent variable (GDP per capita, Gross Saving Ratio, Gross Capital Formation) is explained by independent variables (market capitalization ratio, total traded stock, and turnover ratio);   p- value indicates the significant level whereby small p-value (<0.05) supports the hypothesis that economic growth is statistically significant correlated with stock market development. The coefficients (regression weights or slopes) in the regression analysis indicate both the direction and by what amount are the movement in the

dependent variable caused by independent variable; positive coefficient means positive contribution and the vice versa is true for negative coefficients

Table II shows results of simple fixed effects panel data where stock market capitalization ratio, total value of stocks traded, and turnover ratio (proxy of stock market development) are statistically significant and positive correlated with GDP per capita (current, US $).In order to avoid collinearity problem among stock market development indicators, each indicator is regressed against economic growth separately at a time. Stock market development has no impact on gross capital formation and gross savings except stock market capitalization ratio which is statistically significant negatively correlated with gross capital formation.

Table II: Simple Fixed Effects Regression
Panel Data: 1991-2011

Dependent Variable	MKTCAP	TVT	TR
GYP	4.5993**	21.7643**	28.9856**
	(1.5597)	(3.8908)	(6.5267)
	[0.003]	[0.000]	[0.000]
R^2	0.03	0.11	0.08
Obs	265	270	255
GK	-0.0179**	0.0187**	0.0253**
	(0.0065)	(0.0173)	(0.0284)
	[0.006]	[0.280]	[0.375]
R^2	0.03	0.01	0.01
Obs	244	249	234

GS	-0.0189**	-0.0190**	-0.0610**
	(0.0175)	(0.0248)	(0.0420)
	[0.282]	[0.444]	[0.148]
R^2	0.01	0.01	0.01
Obs	215	220	205

(Standard error in parentheses)[P-values in brackets]

GYP =GDP per capita, GK =gross capital formation, GS = gross savings
MKTCAP= market capitalization ratio (% of GDP), TVT= total value of stock traded (% of GDP), TR=turnover ratio (%).
** =p-value at significant level of 0.05. Countries= Botswana, Cote D'Ivoire, Egypt, Ghana, Kenya, Mauritius, Malawi, Namibia, Nigeria, South Africa, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe.

Table III indicates that when stock market indicators each is entered together with other explanatory variables, secondary school enrollment rate, trade (% of GDP), inflation (consumer price index), and general government expenditure (% of GDP) there are some changes meaning that other explanatory variables such as school enrollment rates has a significant impact on economic growth. Only market capitalization ratio and total value of stock traded become statistically significant and positive correlated with the level of GDP per capita in current US dollar. On average keeping other things constant, an increase of 1 percent in market capitalization ratio and total value of shares traded can cause an increase of 7.23 and 10.75 GDP per capita in current US dollars respectively.

Table III Fixed Effects Regression
GDP per capita and Stock Market Development and other Explanatory Variables
Panel Data: 1991-2011

Dependent Variable	MKTCAP	TVT	TR
GYP	7.2278**	10.7469**	8.6182**
	(2.8193)	(3.7958)	(7.8033)
	[0.012]	[0.005]	[0.272]
R^2	0.45	0.46	0.43
Obs	131	133	126

(Standard error in parentheses)[P-values in brackets]

GYP =GDP per capita, GK =gross capital formation, GS = gross savings
MKTCAP= market capitalization ratio (% of GDP), TVT= total value of stock traded (% of GDP), TR=turnover ratio (%).
** =p-value at significant level of 0.05. Countries= Botswana, Cote D'Ivoire, Egypt, Ghana, Kenya, Mauritius, Malawi, Namibia, Nigeria, South Africa, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe.

Other explanatory variables=Secondary school enrollment rate, Inflation, Trade (export plus import as % of GDP), General government expenditure (% of GDP).

Table IV Fixed Effects Regression
GDP per capita and Stock Market Development;
Panel Data with Country and Time Dummies: 1991-2011

Dependent Variable	MKTCAP	TVT	TR
GYP	2.5945**	7.1663**	-3.6721**
	(2.7026)	(3.2982)	(7.0939)
	[0.340]	[0.032]	[0.606]
R^2	0.92	0.93	0.92
Obs	131	133	126

(Standard error in parentheses)[P-values in brackets]

GYP =GDP per capita, GK =gross capital formation, GS = gross savings
MKTCAP= market capitalization ratio (% of GDP), TVT= total value of stock traded (% of GDP), TR=turnover ratio (%).
** =p-value at significant level of 0.05. Countries= Botswana, Cote D'Ivoire, Egypt, Ghana, Kenya, Mauritius, Malawi, Namibia, Nigeria, South Africa, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe.
Other explanatory variables=Secondary school enrollment rate, Inflation, Trade (export plus import as % of GDP), General government expenditure (% of GDP).

Table IV above indicates the regression results after incorporating both country and time dummies in the model. The inclusion of dummy variables in the model has significant impacts on coefficients, r -square, and p-value. Only total value of shares traded becomes statistically significant and positive correlated with economic growth. Market capitalization ratio is positive correlated with economic growth but not statistically significant.

In Table V panel data are grouped into four periods by taking average of five years from 1991 to 2011. The advantage of taking the average is to smooth business cycles in the annual data so that to examine if there is a long –run relationship between stock market development and economic growth. Both total value of shares traded and turnover ratio are statistically significant and positive correlated with the levels of economic growth. On average keeping other things constant, an increase of 1 percent in total value of shares traded and turnover ratio can have an impact of increasing 17.14 and 22.97 of GDP per capita in the long-run respectively.

Table V Fixed Effects Robust Regression
GDP per capita and Stock Market Development;
5 Years Averages Panel Data: 1991-2011

| Dependent Variable | (Std. Err. adjusted for 14 clusters in country1) | | |
| | Robust | | |
	MKTCAP	TVT	TR
GYP	15.3823**	17.1398**	22.9763**
	(11.7023)	(3.3601)	(6.4770)
	[0.211]	[0.000]	[0.004]
R^2	0.46	0.45	042
Obs	47	47	47

(Standard error in parentheses)[P-values in brackets]

GYP =GDP per capita, GK =gross capital formation, GS = gross savings
MKTCAP= market capitalization ratio (% of GDP), TVT= total value of stock traded (% of GDP), TR=turnover

ratio (%).
** =p-value at significant level of 0.05. Countries= Botswana, Cote D'Ivoire, Egypt, Ghana, Kenya, Mauritius, Malawi, Namibia, Nigeria, South Africa, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe.

Other explanatory variables=Secondary school enrollment rate, Inflation, Trade (export plus import as % of GDP), General government expenditure (% of GDP).

The specifications in this paper assume that stock market development is exogenous which in reality it is not the case. The study needs to be extended so that to show the interactive effects between stock market development and economic growth. Therefore, it is difficult to conclude that stock market development has a direct impact on economic growth without further study to better understand the relationship between the two.

CHAPTER 5

Stock Market Development in Tanzania
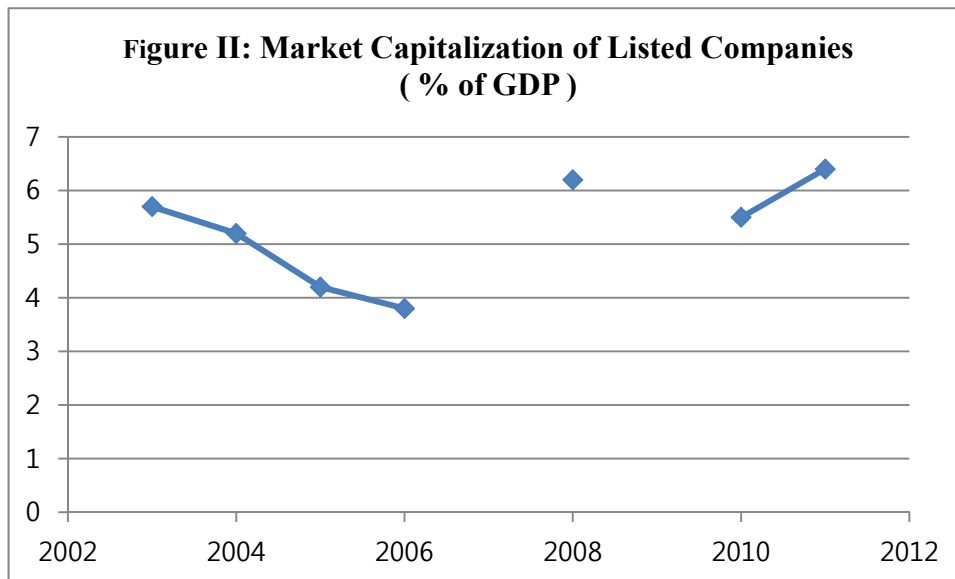
5.1   The Dar es Stock Exchange (DSE)

The Dar es Salaam Stock Exchange (DSE) is a body corporate incorporated in 1996 under the Companies Act, 2002 as company limited by guarantee without a share capital. It is the only stock exchange available in Tanzania. The mission of establishing the DSE is "to provide a responsive securities market which mobilizes savings and channels them into productive sectors, encourages a savings culture that contributes to the country's economic growth and facilitates wider access to resources."[11] Theoretically the DSE was designed to perform all functions like any other efficient stock market.

In the DSE Hand Book, it is clearly shown that the main functions of the stock exchange in Tanzania are: to provide a market for listed securities; to facilitate price discovery; facilitator of transparency; to facilitate sourcing of capital for enterprises; facilitates privatization and wider ownership of resources; creation of wealth through investing in securities.

However, statistics from various sources do not show a significant progress in the development of stock market so as to perform the above mentioned functions. Figure II to IV below show the trend of stock market development indicators for the period from 2003 to 2011. In all the three figures, there is no clear pattern of stock market indicators development meaning that the stock market is either stagnant or is growing at a very low rate.

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[11] http://www.dse.co.tz.

Tanzania stock market development indicators for the period 2003-2011

Figure II: Market Capitalization of Listed Companies (% of GDP)

Source: http://data.worldbank.org/indicator/CM.MKT.LCAP.GD.ZS/countries?display

Figure III: Stocks Traded, Total Value (% of GDP)

Source: http://data.worldbank.org/indicator/CM.MKT.LCAP.GD.ZS/countries?display

Figure IV: Stocks Traded, Turnover Ratio (%)
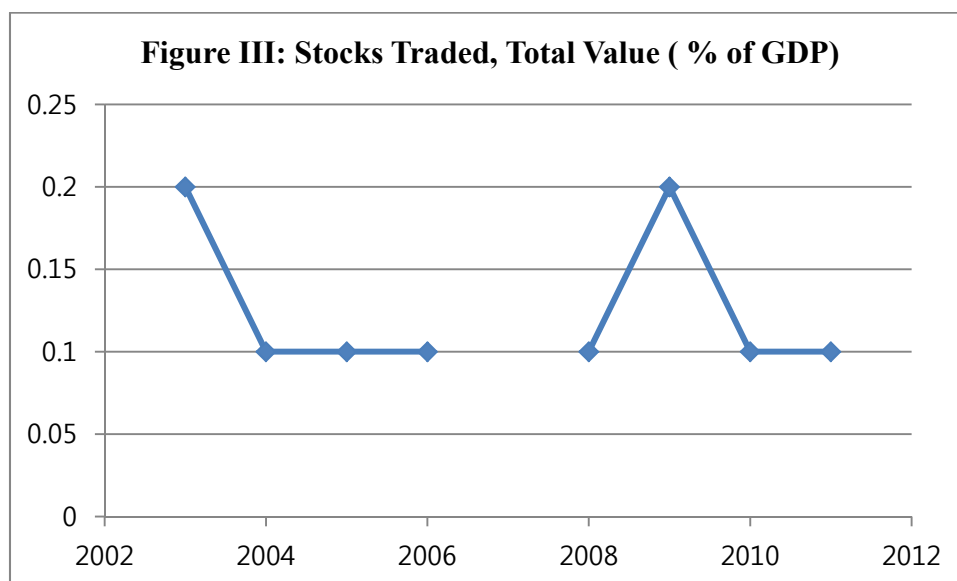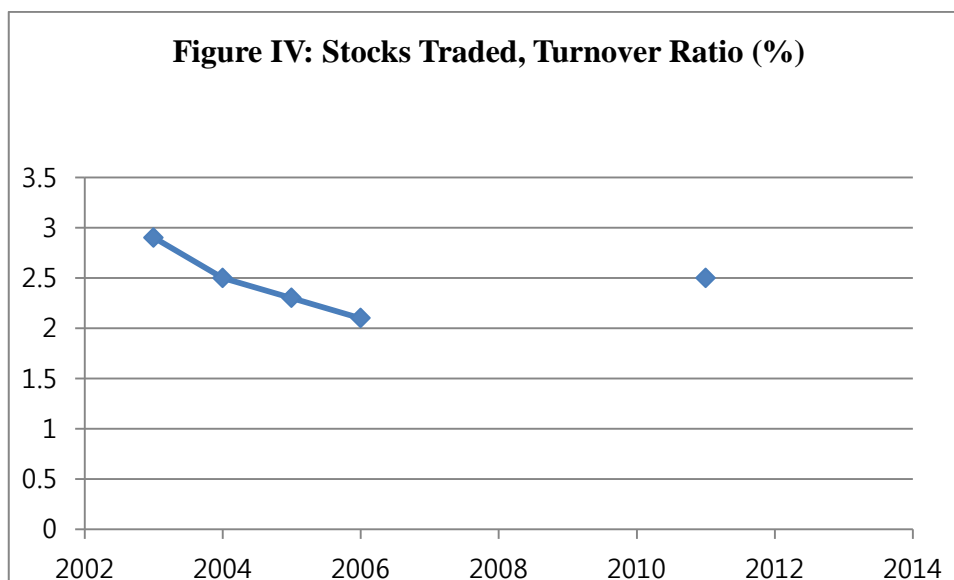
5.2 Individuals' Participation in the Stock Market in Tanzania.

Despite the fast growth of stock market development in other African emerging market countries, Tanzania's stock market development is sluggish; very few Tanzanians participate in the stock market which affects the demand side of the market. To understand the level of participation and the reasons why most Tanzanians are not investing in stocks, I devised a questionnaire and conducted a survey which tested the level of financial knowledge and the relation to investing in the stock market. I designed questions that aimed at measuring the ability to save on daily basis, having short and long-term financial plan, ways of controlling expenses, ways of spreading money among different assets so that to reduce risks, and simple numeracy knowledge about interest and time value of money. I studied the relation of the level of financial knowledge as measured by correct answers to the questions and the ability to invest and hold stocks. I find that in Tanzania, the decision by individuals to participate and invest in stocks for saving and making money reasons does not depend on the level of financial knowledge. However, those who are financial illiterate are unlikely to participate and invest in stocks.

Most respondents to the survey understand the meaning of stock market, are able to save on daily basis, understand that when investors spread money among different assets he/she reduces risks, can distinguish between owning stocks and bonds, and have simple numeric knowledge on computation of interest and time value of money. However, very few respondents have participated in the stock market and hold stocks for saving reason and making money. Most respondents invest in other assets; the common assets mentioned are real estate, lands, buildings, government bonds, informal lending of money, and doing business. Other investment assets apart from stocks are mentioned to have higher return than stocks. Among the other investment assets, government bonds and appreciation of lands are considered to offer higher return when are held for a period of 12 months as compared to stocks.

The study has a major policy implication for development of stock market in Tanzania. Low participation of individuals hinders the stock market to perform its primary objective of mobilizing savings and channeling them into productive sectors. It is very difficult for companies to raise capital through IPOs and right issues in the Dar es Salaam Stock Exchange. For example in recent years, one airline company called PrecisionAir which is the only private local operating airline company and a key to economy in Tanzania failed to raise capital in stock market through IPOs due to low subscription hence curtailing its expansion to the large extent.

Since stock market is important to the economic growth, the government of Tanzania can promote the level of individual participation in the stock market by widening stock market awareness and devising various equity ownership schemes. There is economic rationale to promote stock market so as to improve economic development and advance the standard of living through growth of companies which can produce goods, create jobs and

contribute to the national revenue. In order to encourage a wide participation in the stock market, the government can facilitate the establishment of security saving program in which individual investors and laborers can deposit with the securities companies in small amounts for investment in the stock market.

The wide participation of individual investors can increase stock demand and contribute to the laborer's wealth accumulation and awareness of equity culture. In addition, the government can adopt the Employee Stock Ownership Schemes. Under these schemes employees with help of their employers can acquire shares in their employer's stock.

5.3   Survey Results

I use data collected from survey powered by qualtrics software. The survey link was emailed to participants through internet. The survey was in field from August 14 to September 16, 2013. A total of 70 out of 120 respondents completed the questionnaire which implies to response rate of 58%. The participants age varies from 26 to 64 years; 79% of respondents are male, 21% are female; and 58% have masters degree as their highest level of education attained.

The wording of the questions in the survey to measure the level of financial knowledge and participation in the stock market were as structured in this survey link https://kdischool.asia.qualtrics.com/SE/?SID=SV_cvV3C7atdZfn2w5 In response to various questions, the results shows that 76% of the respondents are able to save on regular basis; 41% use written records to keep an eye on their expenses. 95% know what stock market is all about, however, 89% said use other assets apart from stocks for saving which means only 11% of the respondents buy stocks for investment purposes. 85% know that when investor buys a

stock of a company he/she partly owns the company and 95% know that when an investor spreads his money among different assets the risk of losing money decreases.

The survey results imply that the decision of investing in stocks does not depend on individuals' level of financial knowledge, but depends on other factors such as perception of returns among various investment assets. Other assets apart from stocks are considered to offer higher rate of return than stocks. The results show that people are able to save some money but this money is not channeled into productive sectors as it tied up in other investment assets like land and buildings.

CHAPTER 6

Conclusion and Policy Implications

6.1   Conclusion

In this paper through empirical investigation we see that there is a positive association between stock market development and economic growth. On average keeping other things constant, Table IV above shows that an increase of 1 percent in total value of shares traded can boost an economic growth of 7.2 GDP per capita in US dollars in the short-run. In the long-run, Table V shows that on average keeping other things constant, an increase of 1 percent in total value of shares traded and turnover ratio can cause an increase of GDP per capita in current US dollars of 17.1 and 23 respectively.

Even though market capitalization (market size) is not statistically significant but shows a positive correlation with level of economic growth in both short-run and long-run as indicated by positive coefficients in each case. This means that both market size and liquidity are important to influence economic growth. This is consistent with other views which argue that a large and liquid stock market can perform better the five primary functions of financial system that is; producing information, monitoring investments and exerting corporate governance, facilitating trading, mobilizing and pooling savings, and easing exchange of goods

6.2   Policy Implications

Despite the profusion of research on stock market and economic growth and policy implications for developing countries, there has been little attempt to describe how to boost stock market liquidity by enabling   wide participation of individuals and corporate firms in the stock market. Dailami and Atkin (1990) noted that "policy recommendations in support of

capital market development have been part of several recent financial sector loans by the World Bank to Jamaica, Kenya and Pakistan." Among the policy implications pointed out in this research include the argument that, it only makes sense to encourage development of stock market in developing countries when there is sound regulatory system that boosts efficiency of the market in order to encourage foreign investors. Another important issue is that good corporate governance is a challenge in developing countries, therefore, how can stock market effect the changes in good governance is one of the key policy questions addressed in the research.

Creating a sound environment and awareness of investors is a necessary but not sufficient condition to enable wide participation of individuals and corporate firms in the stock market in developing countries. Understanding money and finances and be able to make sound investment decision is a core problem facing individuals and corporate firms in developing countries and thus hindering their participation in the stock market. Sound investment decision based on financial literacy affects quality of life, opportunities pursued, financial security, and economic health at large. The policy question addressed in this study is how to improve financial literacy and financial well being of individuals and corporate firms in developing countries. Having national financial literacy strategy can enlighten people to have saving culture and acquire skills and confidence essential for making investment decisions to pursue opportunities available in the stock market.

Another important policy question is how stock market can contribute to government internal revenue by enabling companies to grow and thereby widening the tax base. Stock market enables companies to grow by supplying relatively low cost of capital, improving corporate governance and performance. Governments can benefit from high performing companies which report high taxable profits in transparent manner as pressurized

by stock market forces. In order to create high demand and supply and make stock market more liquid the government can promote development of stock market by adopting various policies aimed at encouraging wide participation of investors. For example, promoting employees stock ownership schemes and promoting a mass listing of domestic companies are important policies considered in this study.

Similar to the above policy issue, after economic liberalization and privatization in developing countries, the challenge is how to enable majority of people participate in the ownership of privatized state owned enterprises. This is the important role of stock market to enable people benefit from the success of the companies. Privatization policy can be beneficial to people if it goes in line with stock market development. If governments have privatized state owned enterprises without developing stock market, should reconsider spreading the ownership of these SOEs by floating shares in the stock market so that majority of people can benefit from the policy.

As a matter of fact stock market development does not appear to one of the priority policy option in many African countries. Studies show that stock markets act as complement to banks during the development process therefore, focus on legal, regulatory, and policy foundations that allow both banks and stock markets to flourish can benefit the economy to the large extent. Developing countries should not focus on one sector at the expense of the other, rather should improve legal system that encourage development of both stock market and financial intermediaries

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