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RESEARCH ARTICLE

IS STOCK MARKET LIBERALIZATION RESPONSIBLE FOR DEVELOPMENT OF STOCK MARKET IN SOUTH AFRICA?

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ABSTRACT

In response to the call for liberalization as the panacea to growth, South Africa liberalizes her stock market in the early 80s. The present paper investigates the influence of liberalizing the stock market on the development of stock market in South Africa. Using time series data that spans 1984 to 2013 the paper employs Ordinary Least Square method of estimation, results indicate that liberalizing the stock market in South Africa leads to development of the stock market. Findings show that stock market liberalization, liquidity of the market all exerts positive influence on stock market development. It is therefore recommends that other countries in the SSA should liberalize their stock market in order to further develop their stock markets.

INTRODUCTION

The financial sector of an economy is virtually the nerve-centre of a nation. It is the pivot on which the wheel of the economy revolves round. This might be responsible for why both McKinnon (1973) and Shaw (1973) recommend that the developing countries should liberalize their economies to shore up the growth of their countries.

In separate papers the authors advocate that the developing countries should liberalize their economies in order to attract the much needed savings that is in shortfall in these countries. The postulation is that the financial repression attitudes of the policy makers in the developing countries are obstacles to development in these countries. It is argued that the problem of the less developed economies is not that of investment demand but the supply of funds to actualise these investments.

On this basis the governments are advised to liberalize the credit market in order for these markets to attract the necessary funds for development. Market determined deposit interest rate would then raise the deposit rate. Increase in supply of savings would make it possible to implement the investment projects that were hitherto not implemented.

This leads to increase in average efficiency of investment. Over the years liberalization has been expanded to include the entire financial sector. Liberalization entails different forms like: exchange rate deregulation; liberalization of interest rates, banking sector deregulation, liberalization of the capital account and the stock market liberalization.

Out of all these liberalizations, the one that is of upmost interest to this paper is the liberalization of the stock exchange in South Africa.The Exchange in South Africa has been performing outstandingly well above some emerging markets since the 1990s (Sigh, 1999; Yartey, 2008). The stock market was liberalized in 1995 which falls within the period of high performance rate of in the stock markets. The issue being addressed in the present paper is that is there any link between the liberalization of stock market and the development of the stock market in South Africa? In doing this the influence of liberalizing the stock market on stock market development would be empirically tested. The paper is thus structured: the next section is on the brief history of stock market development in South Africa. This would be followed by concept of development of stock market in section three. Section four details onthe literature review. Section Five is on Theoretical framework. Section Six discusses the data and methodology. Section seven is on results and interpretation while the final section concludes.

Brief History of Stock Market Development in South Africa

South Africa is one of the fewcountries in sub-Saharan African (SSA) countries with well-developed stock market.The liberalization of South Africa stock exchange has started well ahead of other countries in the SSA. In 1995, the Stock Exchanges Control Act was enacted for the purpose of

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reforming ways in which stock were traded in South Africa. The act permits foreigners to participate in South African stock markets (Yartey,2008). The success story of South Africa stock markets is the result of strong quality institutions that have been in place in that country. Market capitalisation of South Africa was the tenth largest in the world in 1995. This value was greater than most emerging markets performanceduring that period.

South Africa market capitalisation was more than that of Italy then (Singh, 1999). Quite recently the South African stock exchange has been making outstanding impact among the exchanges in the emerging markets.Computing the average indices of stock market development such as market capitalization scaled by Gross Domestic Product (GDP) and turnover ratio from 2001 to 2013, the country has higher values over those of Malaysia and Thailand regarding these two indices. Average market capitalization for this period for South Africa is 186.84 percent; Malaysia is 138.77 percent; and Thailand has 62.76 percent. For turnover ratio South Africa's value for the same period is 90.17 percent; Malaysia is 31.74 percent and Thailand is 80.62 percent (World Development Indicators, 2015).

Concept of Stock Market development

The development of stock market can be viewed from the measuring indices of stock market. The different indices of measuring the development of the exchange are: market capitalization, stock value traded, turnover ratio, stock market concentration and stock prices volatility (Demirguc-Kunt & Levine, 1996). Market capitalization on a country basis is the multiplication of a company's outstanding shares by the share prices of that firm. On an aggregate level however, it is the number of listed securities divided by the country's GDP (El-Wassal, 2005). It measures the size of the market.

Capitalization of stock measures the size of the market. Stock value traded is another means of evaluating the development of stock market. Stock value measures the values of trading in the exchange in relation to GDP. It measures the extent of liquidity of the stock market. Another way of measuring the liquidity of the market is through the turnover ratio. Turnover measures the stock value traded scaled by market capitalization. Stock value traded measures trading extent of trading in relation to the entire economy while turnover ratio measures trading regarding the stock exchange (Balogun, Dahalan & Hassan, 2016).

Concentration measures the extents to which stock capitalization are under the control of the largest firms in the economy. That is the degree to which the ten biggest firms dominate trading and capitalization of the market.Volatility of stock shows the variations in stock price (Levine &Zevos, 1998).Greater liquidity entails that stocks are actively traded on with low transaction cost. Low stock concentration involves diffusion in share capitalization. Volatility may be desirable because it reflects the true value of companies at different times, excessive volatility is however not meritorious as it discourages prospective investors (El-Wassal,2013).A developed stock market is supposed to be large in size commanding greater amount of liquidity with diffusion in share ownership with a considerable level of volatility (Balogun *et al.*, 2016).

Literature Review

Using a time-series data from 1970 to 2007 in determining the relationship between capital market and growth in Nigeria, Okpara (2010) found that capital market indicators like market capitalization, value of shares traded all have significant impact on GDP growth. Additionally, the result showed that market capitalization and value of shares all affect GDP in a unidirectional way from financial development to growth. In addition to this, obiakor and okwu (2011) examined the effect of development of capital market on Nigeria's economic growth from 1981 to 2008 using time-series data. The indices of stock market used are market capitalization, values of shares traded. Other independent variables are gross capital formation and foreign private investment.

Findings show that market capitalization has negative significant relationship with growth while stock values traded has positive significant influence on growth. In the sample of 11 emerging markets economies examined by Henry (2000), the average growth rate of real private investment in the three years immediately after stock market liberalization exceeds the sample average by 22 percent. The paper revealed that the developing countries in the sample exhibit high growth rates of private investment after liberalization of their stock markets. Kaminsky and Schmukler (2003) in their analysis of 28 developed and emerging countries looked at the effects of financial liberalization both in the short and long-run considering financial circles. The paper finds that financial liberalization has little or no impact on stock market boom and busts. However, evidence from emerging economies with larger boom and busts in the immediate aftermath of financial liberalization is a reflection of large financial circles following liberalization.

Singh (1999) in his analysis of African stock market performance finds that outside South Africa, all other African stock markets perform poorly in the 1990s in terms of market capitalization, price-earnings ratios, and numbers of listed companies. Based on this, the paper recommends that African countries will be better off developing their banking sectors than stock markets. Demirguc-Kunt and Levine, (1996) in deriving a wider conceptual interpretation of stock market development collated data on different indicators of market for forty-four developing countries from 1986 to 1993 and compare the results among countries.Yartey (2008) investigated the determinants of stock market development in some emerging countries. Institutional qualities, strong financial development among other factors are responsible for stock market development.

The conclusion from the paper is that there are great cross-country differences for individual indicator for each country. El-Wassal (2005) in its analysis of 40 emerging countries for the period 1980 to 2000 looked at the relationship between the development of the market as proxy by market capitalization and other explanatory variables of growth, stock market liquidity, financial liberalization and country risk. The result shows that all the explanatory variables were significant except the country risk.

Theoretical Framework

The paper employs the method of El-Wassal (2013) which model for the stock market development. Stock market capitalization is the dependent variable in the existing models. Stock market capitalization is determined by real GDP which measures the level of macroeconomic stability, quality institutions, and level of financial development among other determinants. For the purpose of the present paper however stock market development is being influenced by the liberalization of stock market, quality of institution and the liquidity of the stock market as measured in turnover ratio. The theoretical expectation is that all these variables are expected to have significant positive influence on the development of stock market as measured market capitalization.

Adopting the existing model of El-Wassal (2013)

$$S_{it} = \sim_{i} + \quad S_{it-1} + \text{¢}M_{it} + \text{¨}L_{it} + \text{£}_{it} \qquad (1)$$

Following the El-Wassal (2005) model, the estimating Equation for this research is thus:

$$lMktcap_t = \sim_0 + \;_1 lStoklib_t + \;_2 lSturn_t + \;_3 lInstitu_t + \text{«}_t \qquad (2)$$

where *lMktcap* is the proxy for market capitalization, it represent the dependent variable for this model . *Stoklib* is the representative for index of stock market liberalization. *Sturn* is the turnover ratio that measures the liquidity of the stock market. *linstitu* represents the log of institutional quality variable. All the variables are logged in order to put the variables on equal scaling.

DATA AND METHODOLOGY

Going by the previous discussion on the concept of stock market development, the present research employs the theoretical framework of Yartey (2008) where the model of stock market development was developed. In the existing model, stock market capitalization is proxy for the development of the stock market and it is the dependent variable in the model. For the present analysis, the stock market is determined by stock market liberalization, this is in line with Henry (2000) who examined the effect of liberalizing the stock market on growth for 22 emerging economies. Stock market is also determined by real GDP and quality of institutions in conformity with El-Wassal (2005).

The paper employs times series data that spans 1984 to 2013. Data on market capitalization, real GDP and turnover ratio are derived from the World Development Indicators, 2015. Institutional qualities data is derived from International Country Risk Group (ICRG). The research adopts the chronology of Kaminsky & Schmukler (2006) in computing the stock market liberalization index. The different dates of liberalization of stock markets by different countries are obtainable from the International Monetary Fund's Annual Report on Exchange Arrangements and Exchange Restrictions IMF (AREAR). For full liberalization of stock market, foreigners are allowed to invest in domestic equity without restrictions. Dividends, interest, and capital can be repatriated within two years of initial investment. '3' points are allotted for full liberalization of stock market.

Partial liberalization of stock market entails that foreigners are allowed participation up to 49 per cent of domestic companies' equities. Restrictions for foreign participation in certain sectors might be imposed. There might be chances for indirect means of participation in stock market like country fund. Interest, capital and dividend can be repatriated not before two years and not after five years of initial investment.

The point for partial stock market liberalization is '2'. No liberalization of stock market is a situation of full control where foreigners are not allowed to participate in the domestic equity markets. For full restriction, the value awarded is'1'. This approach is widely used in the literature by such author as Brafu-Insaidoo and Biekpe (2013).

Tables 1a and 1b present the estimated results of the Equation (2) of stock market development model. Table 1a reflects the initial result while Table 1b shows the result after correcting for heteroskedasticity

Table 1a Estimate Results of Stock Market Development Model

Dependent Variable lMktcap			
Variable	**Coefficient**	**Standard Error**	**t-statistics**
lstoklib	26.78	14.33	1.89*
lsturn	1.72	0.58	2.98***
linstitu	5.78	3.19	1.81*
R-squared	0.48		
Adjusted R-sq.	0.44		

Table 1b Heteroskedasticity adjusted with White corrected Standard Error

Variable	Coefficient	Standard Error	t-statistics
lstoklib	26.78	8.01	3.34***
lsturn	1.72	0.50	3.42***
linstitu	5.78	1.64	3.51***

*** and ** are significant levels at one and five percent respectively, * indicates ten percent level of significant

INTERPRETATION OF RESULTS

Considering the fact that the initial estimates result has heteroskedasticity problem and is corrected in Table 1b with White corrected standard error, the standard error in Table 1b has reduced thereby increasing the level of significance for the estimated result in 1b. The result indicates that liberalizing the stock market in South Africa would enhance the development of the stock market in that country. One percent increase in the index of stock market liberalization would lead to over 100 percent increase in the development of stock market.

In addition to that, increasing the liquidity of the stock market by one percent would lead to 172 percent increase in the level of stock market development in South Africa. The significance level of both the index of stock market liberalization and institutional quality increased after correcting for heteroskedasticity.

CONCLUSION

The conclusion that can be drawn from the results in Table 1a and 1b is that liberalization of the stock market and good quality institutions are part of the factors that are responsible for high performance of South African stock market among the other countries in the SSA. Furthermore the result is in conformity with theoretical postulations on liberalization which state that liberalizing the stock market would encourage more foreigners to invest in the domestic stock markets thereby promoting the development of the domestic stock markets. The results is also in tandem with Henry (2000) who finds that stock market liberalization enhance the growth of real investmentfor some 11 emerging economies. On this basis it is thus recommended that the remaining SSA countries should intensify efforts at liberalizing their stock markets.

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