

Stock Markets: A Catalyst for Economic Growth

Najeb M.H. Masoud^a,

^a *Development of Financial and Economic Growth, Developing Markets in MEANA*

Abstract

The stock market is a common feature of a current economy and it is reputed to achieve some necessary functions, which promote the growth and development of the economy. To achieve this objective, the endogenous growth literature and research, and recent theoretical studies have tried to provide a link between the literature of endogenous growth theory and financial markets. Providing evidence of stock market development will assist policy makers in designing reforms that do indeed promote the growth rate, enhancing stock market development as economic growth through to the banking system of financial sectors, and to the degree of investor's right; furthermore, allowing risk sharing encourages speculative and productive investment (see, e.g. Greenwood and Jovanovic (1990) and Bencivenga and Smith (1991)). The results of the previous study, which established positive links between the stock market and economic growth, suggests the pursuit of policies geared towards rapid development of the stock market.

Keyword: Stock market Development, Economic growth, New Endogenous growth theory

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1.Introduction

The relationship between financial development and economic growth in the endogenous growth models is contained within financial markets, savings, and investments and even the growth rate. In this case the argument was that the financial markets will increase savings, investments and, thereby, growth rate (Gurley and Shaw, 1955; Diamond 1984; Boyd and Prescott, 1986; Aghion *et al.* 2004). During the 1980s Singh and Hamid (1992) revealed that the share of net investment expenditures, equity funds rise as debt finance or internally generated funds in countries such as Korea and Thailand. Other researcher, e.g. Mayer (1987) shows this difference sharply with the corporate finance pattern in industrial countries which, in general, rely far more on internally generated funds. This evidence indicates that the savings function does not perform at all well.

Back to 1912 Schumpeter argued that the services provided by the financial sector for highest ratio use without considerable risk of loss through to moral hazard or transaction costs for innovation and development. He found a positive impact of development of countries' financial sectors on the level of growth rate of per-capita income. Gurley and Shaw (1955) were the first to study the relationship between financial market and rate of economic growth after Fisher (1930). They argued that the difference between developed and developing countries is the financial sector system which is accorded greater status in developed countries than is the case in developing countries. Levine (1997: 720) who indicates that: *"comparisons of financial structure and economic development using only these countries will tend to suggest that financial structure is unrelated to the level and growth rate of economic development"*. Gurley and Shaw found that financial markets contribute to economic development enhancing physical capital accumulation. Their study was supported by Friedman and Schwartz (1963). Although, prior to the 1970s, the relationship between financial market and real growth rate suffered due to the lack of evidential studies, the reason behind this may be that a model was not supplied to explain the mechanism of the financial market affected economic growth. Moreover, limited data analysis was available in the said period. This remained the case until economists began to introduce more models to analyse financial markets and economic growth behaviour. Robison (1952) argued that financial development follows economic growth and the engines of growth should be sought elsewhere. For instance, Goldsmith (1969), Mckinnon (1973) and Shaw (1973) found that development of financial markets has been significantly correlated within the level of rate of economic growth. However, several new studies (e.g. Burdekin and Redfern, 2009a, 2009b) find that the stock market and savings are negatively related.

Goldsmith (1969) argued that as real income and wealth increase then this, in turn, will lead to the size of financial markets growing as well. Goldsmith (1969: 400) pointed out that: *"accelerates economic growth and improves economic performance to the extent that it facilitates the migration of funds to the best user, i.e. to the place in the economic system where the funds will yield the highest social return"*. Shaw (1973) and Mckinnon (1973), were the first people to study the most important of financial development which examined the effects of government intervention on the development of the financial sector to achieve a higher rate of economic growth. These studies suggest that financial intermediation has a positive effect upon the steady-state growth model (see Greenwood and Jovanovic 1990 and Bencivenga and Smith 1991) and government intervention has a negative effect on the growth rate in the financial sector to achieve a higher rate of economic growth.

The rest of the paper is organised as follows: the next section describes a review of literature. Section 3 presents questions, how stock market affect economic growth can be identified are provided. Section 4 provides empirical results from previous study. Section 5 presents the description of the tips for policy makers used. Finally, in Section 6, the conclusions are provided.

2. Literature Review

The aim here is concerned with the relevant literature review related to the research problem of this study. It gives a general overview of the literature, assists in providing a framework for the theoretical and empirical study and discovers results from previous research pertinent to the relationship between financial development and economic growth in the endogenous growth models. It is contained within financial markets, savings, and investments and even the growth rate by providing shareholders with additional investment that may better meet their risk preferences and liquidity needs. Furthermore, a well-developed capital market, as share ownership, provides individuals with moderately liquid means of sharing risk in an investment project. Therefore, there is considerable evidence as to the crucial nature of these markets, which are playing the role to affects for the rest of the economic system. Indeed, Levine (1991) and Diamond (1996) linked economic growth rate within technological changes and level of income per capital distribution. In the absence of financial markets, where households face liquidity risk, investors who might invest in projects where they can liquidate their investments before development will lose part of their financial assets rather than investing in assets that are more productive than illiquid. Households, provided by financial market within less risky and more liquid investment. While, stock market who needs liquid assets could sell his shares to an other individual who needs it, to ported against liquidity risk.

Saint-Paul (1992) presents a model that provides financial market interaction within the technological choice of firms in that financial market which allow riskier but more productive activity and technological choice in turn will affect the viability of financial markets. Bencivenga *et al.* (1995, 1996) argued that the special feature of industrial development is the adoption of technological innovations for the requirement of long-scale illiquid capital investment. Financial markets and technology are instruments for risk sharing and liquidity provision. Schumpeter (1912) argued that technological innovation affect long-term economic growth rate by financial intermediaries, mobilising savings, managing risk, evaluating projects monitoring managers, and facilitating transactions (See also, Hicks 1969 and Levine 1997). When a stock market provides limited liquidity through to the choice of short-term investment projects which use lower technologies for less specialised and less productive outcomes. Bencivenga and Smith (1991) argued that financial markets promote growth to reduce capital liquidity risk, which leads to increasing funds available for productive capital. Bencivenga and Smith (1991:207) indicate “*differences in the extent of financial market across countries seem to depend primarily on legislation and government regulation*”. Also, Greenwood and Jovanovic (1990) argued that financial intermediaries influence technological choice to their risk sharing and pooling services by facilitating high yield investment and, thereby, growth using pooling idiosyncratic investment risks across a large number of investments. Fulgieri and Rovelli (1998), Levine (1991), Levine and Zervos (1998), Bencivengo *et al.* (1995) and others argued that greater liquidity of stock markets will provide shifts for long-term growth and higher return technologies process, but Bhide (1993) in his model, found negative aspects of stock market liquidity. Nevertheless, more recent research on the role of the stock market in the economy has argued from a different perspective. The emphasis is that, having developed stock, markets could enhance economic growth through to the productivity of investment but it is not the savings function. Also, financial markets can provide households with less

and more liquid to the investments. Levine (1997) provided that stock market liquidity is measured as the ratio of the value-trade transactions to GDP in 1976, using 35 countries during 1976-1993 period, by ranking of the ratios from lowest to highest. They found that the first group with most illiquid markets is Argentina, Australia, Austria, Belgium, Brazil, Canada, Chile, Columbia, and Denmark. The second group having illiquid markets featured Finland, France, Germany, Greece, Hong Kong, India, Indonesia, Israel, Italy, and Japan. The third group which liquid markets is: Jordan, Korea, Luxembourg, Malaysia, Mexico, the Netherlands, Nigeria, Norway, Philippines, and Portugal. The final group which has the largest value-traded ratio “very liquid stock market” is: Singapore, Spain, Sweden, Taiwan, Thailand, UK, US, Venezuela, and Zimbabwe.

Levine (1997) examined two channels (*capital accumulation and technology innovation*) which affect economic growth. He also examined five financial functions that affect saving and allocation decisions to influence economic growth rate, as Figure 1 demonstrates. He discovered that the theory suggests that financial instruments, markets and intuition increased effects of information and transaction costs and how financial systems reduce information and transaction costs influence saving rates, investment decisions and technological innovation for long-term growth rates. On the other hand, Romer (1990), Grossman and Helpman (1991), and Aghion *et al.* (2005) used second class growth models to focus the invention of new production process and goods. The result obtained from these models was that the function performed by the financial system affected steady-state growth by altering the rate of technological innovation.

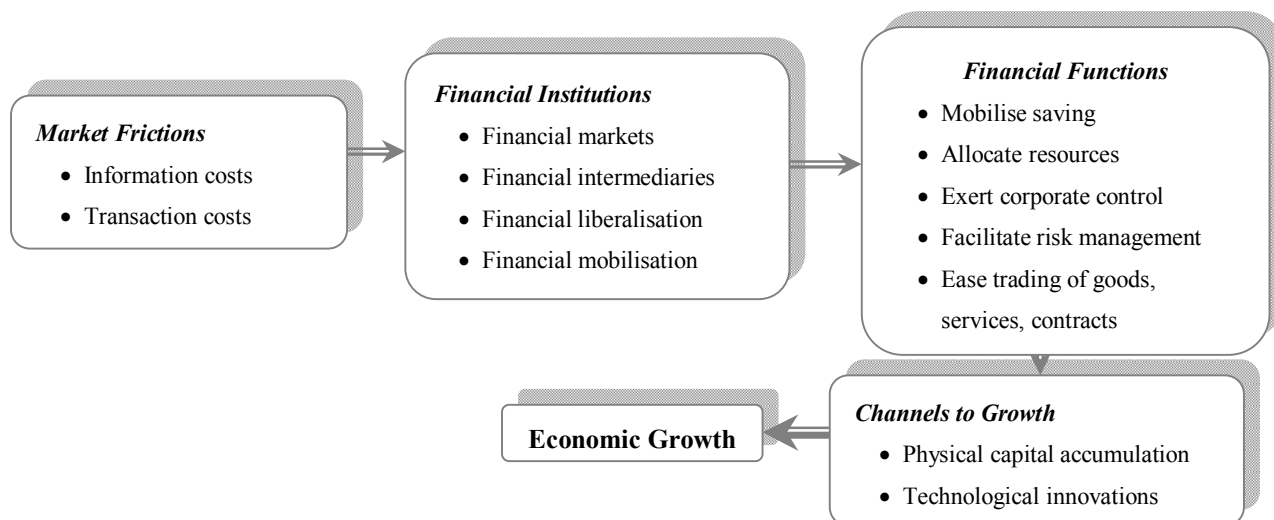


Figure 1. Theoretical Approaches to Finance and Growth

Source: Adapted from Levine (1997).

Patrick (1966) worked out a useful framework for the study of the causal relationship between financial development and economic growth rate in terms of two main hypotheses. More recent studies by Mckinnon (1988:390) disclose that “Although a higher rate of financial growth is positively correlated with successful real growth, Patrick’s (1966) problem remains unsolved: What is the cause and what is the effect? Is finance a leading sector in economic

development, or does it simply follow growth in real output which is generated elsewhere?”. They propose a difference between the “*supply-leading*” hypothesis and the “*demand-following*” hypothesis to the financial development through to the “*demand-following*” financial development which appears as a consequence of the development of the real financial sector. Gurley and Shaw (1967) and Goldsmith (1969) who supported this kind of hypothesis. This implies the continuous widening of markets and a growing product as differentiation, which makes necessary more efficient risk diversification and better control of transaction costs. This type of financial development, however, plays a more permissive role in the economic growth process. Also, the “*supply-leading*” environment refers to the creation of financial development and the supply of their assets, liabilities and for financial services and can have autonomous positive influence on the growth process as well. Supply-leading was supported by Mckinnon (1973), King and Levine (1993a, b), Neusser and Kugler (1998) and Levine *et al.* (2000). Its role is to mobilise the resources blocked in the traditional (*non-growth*) sector and transfer them to the new sector which is capable of prompting economic growth.

Patrick’s framework is of interest as it highlights the two-way causality which may exist between financial development and economic growth. In addition, Goldsmith (1969) argued that the correlation between financial development and growth reflects a two-way causal relationship. Moreover, Greenwood and Jovanovic (1990) suggest that economic growth renders the development of intermediation systems profitable and, at the same time, the establishment of intermediation systems helps accelerate both growth in the real financial sector and the structural transformation of the economy process. McAllister and McManus (1993) find that large financial intermediaries on the managers system would be better to control costs and that large firm may have approximately constant returns to scale.

3. Impact on Development

Do stock markets affect overall economic development? Although some analysts view stock markets in developing countries as “casinos” that have little positive impact on economic growth, recent evidence suggests that stock markets can give a big boost to economic development. The relationship between financial development and economic growth has received considerable attention in economic growth literature during past decades which can be traced back to the work of Mckinnon (1973), Shaw (1973) and others (see Kapur 1976; Galbis 1977; Fry 1980, 1982 and Mathieson 1980 among others). For comprehensive review see also World Bank (1989), Levine (1997) and Liu (1999). Levine (1992) argues that economic growth even influences the type of financial intermediation systems which the economy could afford. Therefore, when real per capita income is low, then the economy will select simple forms of financial intermediary whose main purpose will be to mobilise savings, diversify productivity risks and control liquidity risks. Furthermore, an increase in per capita income enables the economy to develop more sophisticated financial intermediaries, whose financing will be correspondingly more costly as they will be involved in monitoring investment projects and the identification of the most cost-effective innovations.

Saint-Paul (1992) has provided several models in which growth and financial development are jointly determined. In his model, financial markets entail real recourse costs that are fixed or less than proportional to the volume of funds intermediated as the economy grows. Individual incentive to contribute in financial markets increases as the benefits increase with the scale of funds invested, while costs rise less or even not at all. Other endogenous growth models, such as those of Berthemy and Varoudakis (1996), and Greenwood and Smith (1997), also suggest that there is a two-way causal relationship between financial development and economic growth. These theoretical analyses emphasise the role of financial markets in improving the allocation of resources and the costs to society of establishing sophisticated financial super-structure. The general idea is that on one hand, the financial markets and institutions facilitate the channelling of savings into productive investment opportunities whilst, on the other, wealthier economies have a greater demand for financial services and are more able to afford a costly financial system.

Harrison *et al.* (1999) presented a theoretical model of banking and growth, which generates feedback effect between financial development and economic growth rate. They contest that economic growth increases the average distance between borrowers to encourage regional specialisation and reduces the cost of intermediation. This, in turn, will increase investment and economic growth. Similarly, Deidda (2006:4) provides a theoretical model which suggests that financial and economic developments are jointly determined. They state that: *“In the case of positive growth the market for deposits expands. This raises profitability of the banking sector, which causes new banks to enter. The resulting inter-bank competition generated in this way increases the efficiency of the intermediaries operating in the credit market, since banks become more specialised. Via this basic mechanism financial intermediation could be endogenously developed at some critical level of economic development”*.

Dow and Gorton (1995) presented a model which argued that, if the primary role of the stock market is to signal information for assessment financing and monitoring, banks may be equally effective at efficient resource allocation. Also, King and Levine (1993a) were unable to proffer a distinction of the differences between the stock market and banks. As far as physical accumulation is concerned, both stock markets and banks provide sources of external financing for firms. Rajan (1992) states, “the firm’s choice of borrowing sources (bank and bond finances) and the choice of priority for its debt claims attempt to optimally circumscribe the powers of banks.” For the function of resource allocation, both stock market and banks create information to equal the allocation of resources. They differ only in the manner that information is transmitted in a stock market and contained in equity prices, whilst that in banks is collected by loan managers. Demirgüç-Kunt and Maksimovic (1996) argued that stock market development could affect a firm’s financial choices and investment decisions by using two classes: firstly, the incapacity of inventors and entrepreneurs to diversify their portfolio optimally in stock markets; secondly, the asymmetric information problems that occur because stock markets do not perform the information production function efficiently. Blackburn and Hung (1998), claim that financial institutions, on one hand, lower the agency costs that must be paid by privately informed firms to secure loans for undertaking research projects. They present a theoretical analysis of the two-way causal relationship between growth and financial development by focusing on the role of financial institutions as delegated

checking agencies which appear endogenously to provide the most efficient means of channelling savings into investment.

In a significant theoretical study presented by Boyd and Smith (1998) it is suggested that there is a two-way direction of causality between financial development and economic growth. Basically, they present a framework which could be incorporated into an endogenous growth model. They examined economy growth where investment projects are undertaken by a set of agents who require external financing and in which their financial decisions depend upon the amount of information that will be required by the investor to monitor management decision makers. Boyd and Smith also, propose that two kinds of technology are available to the investors: one which yields returns which is a publicly observable equity market. In similar support by Diamond and Dybvig (1983), Freeman (1986). For instance, Freeman (1986) assumed that yields on investment by there exists technology to increasing amounts of capital. They conclude that, as an economy moves along a growth path and accumulates capital, the relative price of capital falls as a result of monitoring costs which will increase as the economy grows. Accordingly, investors will tend to employ observable capital production technology more intensively as an economy grows. Therefore, as this happens, there will be an increased ratio of equity market activities as well as a fall in the debt or equity ratio. According to Boyd and Smith, analysis suggests that there is a relationship between stock market development and economic growth which is bi-directional.

Rajan and Zingales (1998) argued that the correlation between financial development and economic growth does not imply a causality relationship between two variables. They demonstrate that both financial development and economic growth could be driven by common omitted variables such as the tendency of households in the economy processes to save. Variables such as households could still be both the initial level of financial development and long-term growth which has correlation between them. Stock market valuation may lend more in anticipation of higher growth in the sales of their customer's services (Guiso *et al.*, 2004). They have also shown that there is a potential problem of anticipation as financial development may predict economic growth simply because financial markets anticipate future growth. For instance, stock market capitalisation presents the value of growth opportunities rather than the situation whereby financial institutions lend more if they consider that real financial sectors will grow.

More and more authors stress the collaborative relationship between financial development and economic growth, which affects stock market development. Economic growth renders the development of financial intermediation systems profitable and more active. It will further lead to the establishment of an efficient financial system permitting faster economic growth by pooling funds, risk diversification, liquidity management, available information, project evaluation and increasing the productivity capacity of the real financial sector. At the same time, the technological efficiency of the financial sector increases within its market size, because economies of scale and learning-by-doing effects are present in financial intermediation activities. Stock market capitalisation in the world grew from 2 trillion US\$ in 1982 to 4.7 trillion US\$ in 1986. It also rose from 10 trillion US\$ in 1993 to 15.2 trillion US\$ in 1996, on 15 *per cent* of average annual growth rate. Emerging market capitalisation grew from 4 to 13 *per cent* of the total world capitalisation (see Arestis *et al.*, 2001 and Demirgüç-Kunt and Levine 1996). Accordingly, the real financial sector

could apply positive externality on the financial sector via the volume of savings. Therefore, financial development and economic growth positively influence each other in the project process.

4. Empirical results

Many authors emphasise the links between the state of development of a country's financial sector and the level and rate of economic growth. Essentially, the argument is that the functions of the financial sector provide spatial design of economic growth rates. Barro and Sala-I-Martin (1995:443) point out that *"it is under whether the relation between growth and financial sophistication isolates the effect of an exogenous improvement in financial system on the growth rate, or, inversely reflects the impact of good growth prospects on the intensive to develop the financial sector."* This type of empirical study started with Goldsmith (1969) and Mckinnon (1973, 1989) and more recently studies by Ghani (1992), King and Levine (1993a,b), Degregorio and Giudotti (1995) Rousseau and Wachtel (1998), Beck *et al.* (1999) Levine *et al.* (2000), Levine (2000, 2004), Deidda (2006) and others. Goldsmith (1969) used data from 35 countries which were both developed and less developed countries during the 1860-1963 period to examine the value of financial intermediary assets as the share of economic output. He found that the size of the financial intermediary and growth is positively correlated within the quality of financial function measured by financial sector. He notes that, *"with confidence the direction of capital mechanism, i.e., of deciding whether financial factors were responsible for the acceleration of economic development or whether financial development orpiment reflected economic growth whose mainsprings must be sought elsewhere"*, Goldsmith (1969:48).

Gupta (1984) was the first to test empirical causal link relationship between financial development and economic growth. He argued that M2 changes, as measured by financial development, cause changes in output for the long-term. As recognised by Liu and Woo (1994) there is further a proxy for the degree of financial "refined" the ratio of the long-term to short-term financial assets' value as money supply (M1) is used as the short-term of financial assets' value. The ratio (M2/M1) of broad to narrow money should be positively related to a country's level of financial development (Liu and Woo, 1994). Savings' deposits increase more rapidly than transaction balances as the financial system increases in turn. Another measure would be the "quasi-liquid liabilities" defined by King and Levine (1993b) as the difference between the broad and narrow money ratio to GDP (Outreville, 1999). Broad money M2 is, of course, often taken as a sufficient measure of the size of the financial sector. This is because of the paucity of data surrounding other financial assets.

By the early 1990s where the data was available it was not in the form of an extensive empirical study until King and Levine (1993 a, b) developed Goldsmith's work, which had used a cross-section of 80 countries during the 1960-1989 period. Abu-Bader and Abu-Qarn (2005:3) point out, *"improper assessments of casual relationship in a static cross-section setting led the researcher to seek more dynamic time series analyses to uncover whether financial development causes economic growth or vice versa. Granger causality tests have been the principal tool for investigating this issue."* They considered three indicators in order to measure financial development: firstly, the ratio of liquid liabilities to GDP; secondly, the importance of bank deposits relative to the central bank in allocating credit; thirdly, the share of

credit measured by non-financial institutions in total credit and GDP. They examined the physical capital accumulation and productivity growth channels and analysed whether the level of financial development predicts long-term economic growth, physical capital accumulation and productive growth rate. They found that the initial measure of financial development is significantly correlated within further growth rate of real GDP per capita, real per capita physical capital and productivity. Robison (1952) argued that the significant positive correlation is also consistent where financial development follows economic growth by responding to the increasing demand for funds due to economic boom. Accordingly, they argued that financial development is a good predictor of future economic growth rate but the other financial agencies are not considered; for instance the stock market. They also indicate that financial development is a good predictor for long-term economic growth over the next ten to thirty year period (Roubini and Sala-i-Martin, 1992; Levine, 1997; Levine, 1998; Beck *et al.* 2000; Levine, 2000 and Easterly and Levine, 2003).

Following the same empirical studies of King and Levine (1993a), Levine and Zervos (1995) identified that stock markets offer different services from those provided by banks using data from 49 countries over the period 1976-1993 to investigate the development of stock markets and rate of economic growth. They discovered that stock market development is strongly correlated with growth rates of real GDP per capita and real physical capital per capita. In addition, they discovered that both stock market liquidity and banking development predict future economic growth rate when they enter the growth regression. However, they did not elucidate upon the precise nature of this difference. Demirgüç-Kunt and Levine (2000) used bank-level data from 80 developed and developing countries over the 1990-1997 period. They investigated whether there is any relationship between bank performance and the level of stock market development. They found that the larger market capitalisation to GDP increases bank profits and interest margins to reflect possible complementary balance between banks and stock markets. They concluded that the stock market may improve bank sector performance as, for instance, stock markets generate useful information about firms and banks. Rousseau and Wachtel (1998:675) examined the relationship between financial and economic development for five industrialised countries on the long-term during the 1870-1929 period. They identified a unique co-integration relationship between real per capita levels of out-put and financial intermediation and money as proxied by monetary base as proxied by assets of commercial banks, saving institutions, and insurance companies, credit co-operatives, and pension funds. This also shows that financial intermediation Granger-causes real output per capita, but they did not discover evidence of feedback affects from output to financial intermediation. They point out that: “[...] *Data limitations associated with the historical period of our study and the dominant roles of commercial banks, savings banks and insurance companies in the financial systems of these countries at the time justify our narrower focus. Nevertheless, the role of financial markets in a broader context remains an important topic for further investigation.*”

Bayoumi (1993) examined the interaction between financial deregulation and household savings, using regional data for the UK's countries in the 1980s. He considered that financial deregulation was responsible for controlling the lowering equilibrium level of saving by 2.25 *per cent* per year, which made the savings more dependent on alteration in wealth income and interest rate. Rousseau and Sylla (1999) examined the historical role of financial economic

growth during the 1790-1850 period in the US, using time-series model measures (banking and equity market activity to investment, imports and business incorporations- During the 1929-2000 period, real GDP in the US grew at an average rate of 3.4 *per cent* per year, Ghate and Zak (2002). They found strong evidence from the theory of “*finance led growth*”. Following the same methodology Rousseau and Sylla (2001) used 17 countries to research the 1850-1997 period. They also discovered evidence consistent with financial development and economic growth rate. Arestis *et al.* (2001) used time series methods from five developed countries. Arestis *et al.* (2001) have used quarterly data for five developed countries, Germany (1973:1-1997:4), US (1972:2-1998:1), Japan (1974:2-1998:1), UK (1968:2-1997:4) and France (1974:1-1998:1). . They examined the relationship between stock market development and economic growth controlling effects by banking systems and stock market volatility. They found that stock markets and banks seem to have made significant contributions to the output growth in France, Germany and Japan. The link between financial development and growth in the UK and US statically was found to be weak even any think to run from growth to financial structure. Arestis *et al.*, 2001, findings suggest that stock market volatility had negative real effects in Japan and France. In the UK stock market volatility seems to have negative effects both on financial development and output. In Germany the effects of stock market volatility were found to be insignificant.

Al-Awad and Harb (2005) examined the link between financial development and the stock market in Middle East countries, using panel cointegration with time series methodologies during the 1969-2000 period. They found that, in the long-term, financial development and economic growth seems to be related to some level of growth but, in the short-term, it demonstrates that causality runs from economic growth to financial development. They suggest that neighbouring countries should adopt more measures to reduce financial repression to help increase financial development; a view which is supported by Lucas (1988). Atindehou *et al.* (2005) examined the relationship between financial intermediation and economic growth, using time series data for the 1961-1997 period for the Economic Community of West African States (ECOWAS). They discovered that, in three countries, there is no significant causal relationship between economic growth and all the financial variables used. In the remaining eight countries a one-way relationship could be observed from the variable, depending on the countries and the variables used.

5. Tips for Policy Makers

Given the important role well-functioning stock markets seem to play in economic growth, what can countries do to promote them? Fully answering this question is well beyond the scope of any single article. Historically, both theoretical and empirical studies of financial development and growth within the endogenous growth literature focuses almost always on the role the banks play in the rate of financial market development (see Cameron (1967), and Mckinnon (1973), among others). Furthermore, following the new growth theory, which was beneficial in re-emphasising the number of fundamental issues concerning the interdiction of technical progress, economies of scale and formation of physical “*convergence*” of countries where the institutional policy and repudiation of the notion of “*unconditional*” convergence (on global scale) is useful and one way of focusing attention upon the interaction of “*proximate*” and “*ultimate*” causal influences, (Maddison, 1995).

Singh (1992a, 1992b, 1996, 1999) and Singh and Weisse (1998) argued that the stock market development in developing countries during the 1980s and 1990s is unlikely to have resulted in achieving quicker industrialisation and faster long-term growth rate in most developing countries and, too, has not led to an increase in aggregate savings as a result of greater new-issue activities on the stock markets in developing countries (e.g. Turkey and Mexico) where aggregate savings fell during the 1980s period. The World Institute for the Development of Economic Research (WIDER) in their annual report (1990:6) stated that: *“The need to attract foreign capital in non-debt creating forms is only one reason, and not the most important reason, why developing countries should wish to foster their emerging equity markets. Equity markets are a vital part of economic development—they encourage savings, help channel savings into productive investment and encourage entrepreneurs to improve the efficiency of investment.”*

Liu (2002) examined the direction of causality between financial development and economic growth, using Geweke (1992) as his model to test pooled data for 109 developing and industrialised countries during the 1960-1994 period. However, most imperial studies use Granger causality modelling analysis. For more comprehensive investigation see Line (2004). He recognised five interesting points. First, financial development in general, leads to economic growth in 109 developing and industrialised countries. He proposes that financial deepening in many countries has yielded economic structure. Second, there is evidence of bi-directional causality when the sample is split into developing and industrialised nations. This illustrates that financial depth stimulates economic growth and, at the same time, economic growth propels financial development. Third, financial deepening contributes more to causal relationship in developing countries than in industrial countries, thus implying that financial intermediaries have large relative effects on less-developed economies than on those of more developed countries. In other words, developing countries have more room for financial and economic improvement. Fourth, the sampling has a gap in the long-term effect of financial development on economic growth, which suggests that the impact of financial deepening on the real financial sector takes greater time. Fifth, financial development may enhance economic growth through both more rapid capital accumulation and technological changes, enhancing the channel productivity far more strongly. This suggests that causal relationship from finance to TFP growth is stronger for developing countries as the converse is strong for industrial economies.

6. Conclusion

In this study it has been possible to provide a simple theoretical and empirical literature framework that links together the endogenous growth theory and the current theory on function of financial market and institutions, in order to study how financial markets development affects economic growth rate. The argument that the stock market influences real economic growth rate depends on how effectively it provides liquidity bands, the risk between sharing and pooling and, finally, the information and monitoring functions. Additionally, there is a link between the financial market and endogenous growth economic theory model, which is made by some authors such as Romer (1986), Lucase (1988)

and Rebelo (1991), etc, in order to include the effect of stock market development¹. There are, too, other significant studies which introduced endogenous growth models to identify the channels through which financial markets affect the long-term growth rate of economy, for instance Greenwood and Jovanovic (1990), Berthelemy and Varoudakis (1996), Greenwood and Smith (1997) and Boyd and Smith (1998), which predict two-way causality between financial development and economic growth.

Bencivenga and Smith (1991) and King and Levine (1993a) considered additional theoretical support for relationships between financial markets and the rate of economic growth. In their model they identified innovation as the mechanism of growth rate. King and Levine (1993b) and Levine and Zervos (1995) believed that capital accumulation is an important conduit. Other studies, however, by Rajan and Zingales (1996) and Jayaratne and Straahan (1996) did not support this view. Deidda (2006) argued that the relationship between financial development and economic growth is generally weak or has insignificant correlation at low levels of per-capita income. This stems from the result of the cross-section analyses by Deidda and Fattouh (2002) and Harris (1997). Furthermore, investment in physical and human capital, respective of the endogenous growth theory, appropriate policies and options, assists private agents which could influence long-term steady growth. Therefore, in short, the overall policy regime of a country, including taxes, financial structures, market and regulatory regimes, liberalisation and macro-economic distortions, could alter savings and investment allocation in various ways that shape long-term growth rate.

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⁴⁰ For more studies about the positive impact between financial development and economic growth, see Keynesian economists, for instance, Schumpeter (1912) and Moors (1988).

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