



Finance Management

Elixir Fin. Mgmt. 78C (2015) 30073-30079

Elixir
ISSN: 2229-712X

The Association between Economic Growth and Financial Development

Ehsaan Raaygan

Department of Accounting, Faculty of Social Sciences, Razi University, Kermanshah, Iran.

ARTICLE INFO

Article history:

Received: 21 November 2014;

Received in revised form:

11 January 2015;

Accepted: 29 January 2015;

Keywords

Economic,
Economic Development,
Financial,
Financial development.

ABSTRACT

The association between economic growth and financial development has been a wide-ranging subject of experiential research. The practical evidence suggests that there is a significant positive relationship between financial development and economic growth. The endogenous growth literature provides copious evidence that financial development is a key determinant of economic growth. Theory interconnects these two factors based on the logic that by reducing information, transaction, and monitoring costs, a well-developed financial system performs several critical functions to augment intermediation efficiency. The impact of financial development on economic growth is a controversial issue on both empirical and theoretical framework. Aegis et al (2007) classified this matter into four schools of thought. The first one is denoted as supply-leading view which was first analyzed by Schumpeter (1912) and John Hicks (1969). They noticed that the prosperity and evolution of the economies in certain countries were backed up by the capacity of financial systems to activate the productivity of the financial capital. Later on, Levine (1997) pointed out that the development of the financial sector, with its two components stock markets and institutions, plays a remarkable role in the economic growth. Cline (2010) argues that the improvement in the financial sector will lead to an enhancement of the various sectors of the economy. Besides, the endogenous growth literature is in line with this point of view and assumes that the government intervention in the financial system (such as high reserve requirement, interest rate ceilings, etc) has a negative impact on the economic growth. Financial market development is estimated by the effect of credit market development and stock market development on economic growth. The relationship between economic growth and financial development has been an Extensive subject of empirical research. The question is whether financial development Causes economic growth or reversely. The main objective of this study was to investigate the causal relationship between economic growth and financial development taking into Account the positive effect of industrial production index. This paper reviews, appraises, and critiques theoretical and empirical research on the connections between the operation of the financial system and economic growth. It describes the role of financial system development in economic growth at the macro level, both theoretically and empirically. It also describes briefly the relationship of corporate finance and firm performance. It finally concludes the review and presents some policy implications in view of the reviewed literature. Furthermore, theory and evidence imply that better developed financial systems ease external financing constraints facing firms, which illuminates one mechanism through which financial development influences economic growth. The paper highlights many areas needing additional research.

© 2015 Elixir All rights reserved.

Introduction

Financial intermediaries transfer resources across time and space, thus allowing investors and consumers to borrow against future income and meet current needs. This enables deficit units (those whose current expenditures exceed current income) to overcome financing constraints and the difficulties arising from mismatches between income and expenditure flows. Financial institutions play an important role in easing the tension between savers' preference for liquidity and entrepreneurs' need for long-term finance. Therefore, at any given level of saving, an efficient financial system will allow for a higher level of investment by maximizing the proportion of saving that actually finances investment (Pagan 1993). With an efficient financial system, resources will also be utilized more efficiently due to the ability

of financial intermediaries to identify the most productive investment opportunities.

Economic development is subject to availability of the physical and human capital. Financial resources are needed to ascertain the availability of these capitals. In fact, an economic system equipped with an effective and efficient financial system can mold this investment function in an optimal manner. For example, financial system can contribute towards this end by encouraging the public to save and reallocate their savings to productive investment projects, while competently addressing the issues of risk and return. Hence, financial system Development is the process involving actions such as founding and expounding functions of financial institutions, developing new (innovative) financial products and developing markets for these products. However, the recent financial crisis in the

Tele:

E-mail addresses: masoudaleseyyed@gmail.com

© 2015 Elixir All rights reserved

developed economies is an example of the downside of the financial development and is an indication of the complexities involved in relationship between economic and financial development. Moreover, despite the fact that the two are related, the direction of causality in this relationship is yet another undecided phenomenon.

Economists and states have long been interested in the relationship between financial development and economic growth, and promoting financial development has been an integral part of many countries. Growth strategies. A body of literature since the work of King and Levine (1993) and Rajan and Zingales (1998) has found a positive link between financial development and growth, yet Levine (2004), reviewing the empirical literature, cautions that available evidence users from serious shortcomings, and that we are far from definitive answers to the questions: Does finance cause growth, and if so, how?. A critical impediment to a better understanding of this relationship is the lack of exogenous variation in variables of interest: the literature has relied primarily on evidence from cross-country comparisons.

Economists disagree sharply about the role of the financial sector in economic growth.

Finance is not even discussed in a collection of essays by the "pioneers of development economics" (Meier and Seers, 1984), including three Nobel Prize winners, and Nobel Laureate Robert Lucas (1988, p.6) dismisses finance as an "over-stressed" determinant of economic growth. Joan Robinson (1952, p. 86) famously argued that "where enterprise leads finance follows." From this perspective, finance does not cause growth; finance responds to changing demands from the "real sector." At the other extreme, Nobel Laureate Merton Miller (1988, p.14) argues that, "[the idea] that financial markets contribute to economic growth is a proposition too obvious for serious discussion." Drawing a more restrained conclusion, Bagehot (1873), Schumpeter (1912), Gurley and Shaw (1955), Goldsmith (1969), and McKinnon (1973) reject the idea that the finance-growth nexus can be safely ignored without substantially limiting our understanding of economic growth. Research that clarifies our understanding of the role of finance in economic growth will have policy implications and shape future policy-oriented research. Information about the impact of finance on economic growth will influence the priority that policy makers and advisors attach to reforming financial sector policies. Furthermore, convincing evidence that the financial system influences long-run economic growth will advertise the urgent need for research on the political, legal, regulatory, and policy determinants of financial development. In contrast, if a sufficiently abundant quantity of research indicates that the operation of the financial sector merely responds to economic development, then this will almost certainly mitigate the intensity of research on the determinants and evolution of financial systems. Besides reviewing the results, I critique the empirical methods and the measures of financial development. Each of the different econometric methodologies that have been used to study the finance-growth nexus has serious shortcomings. Moreover, the empirical proxies for "financial development" frequently do not measure very accurately the concepts emerging from theoretical models. We are far from definitive answers to the questions: Does finance cause growth, and if it does, how?

Economic growth and financial development

Financial systems play an important role in creating a pricing information mechanism. By providing a mechanism for appraisal of the value of firms, financial systems allow investors

to make informed decisions about the allocation of their funds. Financial intermediaries can also mitigate information asymmetries that characterize Market exchange. One party to a transaction often has valuable information that the other Party does not have. In such circumstances, there may be unexploited exchange opportunities. In the case of a firm, information imperfections can result in sub-optimal Investment. When a manager cannot fully and credibly reveal information about a Worthy investment project to outside investors and lenders, the firm may not be able to Raise the outside funds necessary to undertake such a project (see Myers and Male 1984). In a market plagued by information imperfections, the equilibrium quantity and Quality of investment will fall short of the economies potential. Financial intermediaries can mitigate such problems by collecting information about prospective borrowers the links between financial development and economic growth is not a new theme in the economics literature. Ninety years ago, Schumpeter (1934)⁵ observed that financial markets play an important role in the growth process by channeling funds to the most efficient investors and by fostering entrepreneurial innovation. Schumpeter's view was that financial development leads economic growth. Robinson (1952), however, argued that financial development passively follows economic growth by responding to the increasing demand for funds due to economic prosperity. While the debate on causality is still unsettled, existing historical and econometric evidence suggests that better functioning financial markets, i.e., markets that are able to meet the needs of savers and investors efficiently, have a positive effect on future economic growth (Levine 1997). The economic history literature has documented cross-country and country specific evidence that illustrates the importance of financial systems in early industrial development. Using data from 1790 to 1850, Rousseau and Silly (1999) find quantitative evidence that support the hypothesis that early industrial growth in the United States was finance-led. These authors conclude that by providing debt and equity finance to the corporate and government sectors, the financial system was critical to the modernization process, which it predated. Using data on the United States, United Kingdom, Canada, Norway and Sweden, Rousseau and Watcher (1998) conclude that financial intermediation was an important factor in the industrial transformation of these countries. Other studies include Crosse (1970) who documented the role of early US investment banking in mobilizing savings to raise capital; Cameron, Crisp, Patrick, and Tilley (1967) who examined European countries, Russia and Japan; and Haber (1991) who compared the cases of Brazil, Mexico and the United States.⁶ These studies provide evidence that supports the proposition that better functioning financial systems play an important role in economic growth.

There is no general agreement among economists that financial development is beneficial for growth. In a simple endogenous growth model, Pagan (1993) uses the AK model to conclude that the steady state growth rate depends positively on the percentage of savings diverted to investment, so one channel through which financial deepening affects growth is converting savings to investment.

Arrow (1964) and Debreu (1959) argued that in the absence of any information or transaction costs, there is no need for a financial system, the so-called Arrow- Debreu model. Goldsmith (1969), McKinnon (1973) and Shaw (1973) are among those economists who explored the relationship between financial development and economic growth some four decades ago. They found that financial markets and economic growth rate are positively related. The major weaknesses in their study were; i)

lack of theoretical explanation for this relation (the then existing theoretical discussion was about financial development and level of productivity and not the rate of growth), and ii) failure to establish the direction of causality between financial development and growth.

Theoretical Foundation

There are two main approaches that explain the relationship between financial and economic development. These approaches are the neo-classical approach and the endogenous growth models, as explained here onward. The neo-classical advocates explain that economic growth is dependent on both the accumulation of productivity input factors and the technological advancement and traditionally, finance was related to the first item. However, if technology is to increase production and thus growth rate, then firms' capital stock must incorporate these advances which will require a supportive financing system. The underlying assumption is thus, that the interest rate brings state of equilibrium in savings and investments. Neo-classical theory suggests that the optimal growth rate equals the real interest rate. Prior to the realization of market imperfections and information asymmetries, investment decisions were considered independent of financing decisions. Despite the fact that considerable amount of work has been done under the influence of the two main approaches. However, the uncertainty still exists as far the relation of economic development and financing is concerned. The endogenous growth models realize the importance of entrepreneurship and innovation and magnify the role of finance to induce research and innovation. These models encompass financial institutions impact on economic growth rate. Financial development affects economic growth through several channels as indicated by the famous "AK" model; $Y_t = AK_t$ (Pagan, 1993). This model assumes production of one type of good (Y) with one type of input that is capital (K), and "A" here refers to capital productivity. K depends on the rate of savings, where only certain portion (f) of savings (S) is invested. From this simplest model, a steady growth equation is derived, that is: $g = A f S - d$. Here, "d" is for depreciation rate. This equation explains that financial development can impact economic growth either through capital productivity or financial system efficiency; in other words by reducing loss of resources, and/ or the saving rate.

Financial system efficiency in capital allocation

The efficient channeling of funds means use of them in most optimal investments. Financial system can foster economic growth through channeling capital to projects with the highest marginal capital productivity. Harrison et al. (1999) stated that the transaction costs are subject to geographic distance between funds suppliers and the users. Funds suppliers' profit margin increases with increased economic growth that encourages more entrants of suppliers and boost specialization. While this will decrease transaction costs due to reduction in distances and thus results in more economic growth, they showed that the upward movement of employees' wages in banks hinders the new entrance and the process thus stops. Further, it is imperative for an effective financial system to design a risk-sharing strategy to be able to encourage investors to participate; else it cannot attain optimal state of economic growth. Greenwood and Jovanovich (1990) showed that financial intermediaries have the ability to manage this risk aspect of projects better than the individual investors. Therefore, financial intermediaries can allocate capital resources to projects with higher returns. Diamond and Diving (1983) stated that managing liquidity for individual investors is a vital function of financial intermediaries. Individual investors in

the absence of financial intermediaries will be exposed to investments in illiquid assets and their risk adverse nature will hinder this investment. Financial intermediaries can pool the individual investors' liquidity risk and can invest their deposits in illiquid but high-return assets. In this context, Bencivenga and Smith (1991) showed that financial intermediaries can potentially reduce the level of unnecessary liquidity maintained by individual investors. Financial intermediaries can invest funds in more illiquid but productive assets. In this way, the chances of premature retirements of investments are reduced and productivity of capital is increased and thus, will promote growth rate. Moreover, the chances of investment of these savings by individual investors in unproductive liquid assets can decrease capital productivity but these intermediaries can potentially have optimum liquid assets and can control unnecessary drain of funds towards unproductive asset. It is identified that stock market offers opportunity to insure against the risk of variation in expected rate of return through diversification and the liquidity risk of capital investments by individuals. Levin (1991) identified that an active stock markets can enhance liquidity within an economic system as investors can sell their assets as and when they desire. Saint-Paul (1992) stated that stock market offers the opportunity of portfolio diversification which can reduce risk of sectorized shocks, hence, business firms can opt for more specialization which furthers growth. An interesting empirical finding by Stutz (2000) stated that investors' value specialized firms higher than the diversified firms. Thus, the opportunity to diversify and the liquidity of stock markets contribute towards economic growth. Consumption. Also, reduction in investors' risk exposure due to holdings of diversified portfolio may on one hand induce them to invest in high risk, high return security and might instigate them on the other hand to lower precautionary savings level (Thiele, 2001). This means that investors will either try to pursue their own goals which may not coincide with the goal of economic development or they may increase their present consumption level or the level of more productive investment while reducing the level of precautionary savings.

Empirical evidence: Financial development and economic growth

To better understand the relationship between financial development and economic growth, researchers have employed both industry-level and firm-level data across a broad cross section of countries. These studies seek to resolve causality issues and to document in greater detail the mechanisms, if any, through which finance influences economic growth.

Industry level analyses

Consider first the influential study by Rajang and Zing ales (henceforth RZ, 1998). They argue that better-developed financial intermediaries and markets help overcome market frictions that drive a wedge between the price of external and internal finance. Lower costs of external finance facilitate firm growth and new firm formation. Therefore, industries that are naturally heavy users of external finance should benefit disproportionately more from greater financial development than industries that are not naturally heavy users of external finance. From this perspective, if researchers can identify which industries are "naturally heavy users" of external finance – i.e., if they can identify which industries rely heavily on external finance in an economy with few market frictions – then this establishes a natural test: Do industries that are naturally heavy users of external finance grow faster in economies with better developed financial systems? If they do, then this supports the view that financial development spurs growth by facilitating the

flow of external finance. RZ assume that (1) financial markets in the U.S. are relatively frictionless, (2) in a frictionless financial system, technological factors influence the degree to which an industry uses external finance, and (3) the technological factors influencing external finance are constant (or reasonably constant) across countries. They then examine whether industries that are technologically more dependent on external finance – as defined by external use of funds in the U.S. – grow comparatively faster in countries that are more financially developed. This approach allows RZ (1) to study a particular mechanism, external finance, through which finance operates rather than simply assessing links between finance and growth and (2) to exploit within country differences concerning industries.

RZ develop a new methodology to examine the finance-growth relationship. Consider

Their formulation. *Country* and *Industry* are country and industry dummies, respectively. *Shriek* is the share of industry *k* in manufacturing in country *i* in 1980. *External* is the fraction of capital expenditures not financed with internal funds for U.S. firms in the industry *k* between 1980-90. *FDi* is an indicator of financial development for country *i*. RZ interact the external dependence of an industry (*External*) with financial development (*FD*), where the estimated coefficient on the interaction, δ_1 , is the focus of their analysis. Thus, if δ is significant and positive, then this implies that an increase in financial development (*FDi*) will induce a bigger impact on industrial growth (*Growth*) if this industry relies heavily on external finance (*External*) than if this industry is not a naturally heavy user of external finance. They do not include financial development independently because they focus on within-country, within-industry growth rates. The dummy variables for industries and countries correct for country and industry specific characteristics that might determine industry growth patterns. RZ thus isolate the effect that the interaction of external dependence and financial development/structure has on industry growth rates relative to country and industry means. By including the initial share of an industry, this controls for a convergence effect: industries with a large share might grow more slowly, suggesting a negative sign on γ . RZ include the share in manufacturing rather than the level to focus on within-country, within industry growth rates. RZ use data on 36 industries across 42 countries, though the U.S. is dropped from the analyses since it is used to identify external dependence. To measure financial development, RZ examine (a) total capitalization, which equals the summation of stock market capitalization and domestic credit as a share of GDP and (b) accounting standards. As RZ discuss, there are problems with these measures. Stock market capitalization does not capture the actual amount of capital raised in equity markets. Indeed, some countries provide tax incentives for firms to list, which artificially boosts stock market capitalization without indicating greater external financing or stock market development. Also, as discussed above, stock market capitalization does not necessarily reflect how well the market facilitates exchange. The accounting standards indicator is a rating of the quality of the annual financial reports issued by companies within a country. The highest value is 90. RZ use the accounting standards measure as a positive signal of the ease with which firms can raise external funds, while noting that it is not a direct measure of the actual amount of external funds that are raised. Beck and Levine (2002) confirm the RZ findings using alternative measures of financial development.

RZ note that the economic magnitude is quite substantial. Compare Machinery, which is an industry at the 75th percentile of dependence (0.45), with Beverages, which has low dependence (0.08) and is at the 25th percentile of dependence. Now, consider Italy, which has high total capitalization (0.98) at the 75th percentile of the sample, and the Philippines, which is at the 25th percentile of total capitalization with a value of 0.46. Due to differences in financial development, the coefficient estimates predict that Machinery should grow 1.3 percent faster than Beverages in Italy in comparison to the Philippines. The actual difference is 3.4, so the estimated value of 1.3 is quite substantial. Thus, financial development has a substantial impact on industrial growth by influencing the availability of external finance. RZ conduct a large number of robustness checks and show that financial development influences industrial growth both through the expansion of existing establishments and through the formation of new Establishments.

Instead of examining the impact of banking sector development on the growth of externally dependent firms, recent work studies the impact of banking market structure and bank competition on industrial development. Citronelle and Gambaro (2001) examine the role played by banking sector concentration on firm access to capital. Using the RZ methodology, they show that bank concentration promotes the growth of industries that are naturally heavy users of external finance, but bank concentration has a depressing effect on overall economic growth. Classes and Leaven (2004) disagree, however. They note that industrial organization theory indicates that market concentration is not necessarily a good proxy for the competitiveness of an industry. Consequently, they estimate an industrial organization-based measure of banking system competition. Classes and Leaven (2004) then show that industries that are naturally heavy users of external finance grow faster in countries with more competitive banking systems.

They find no evidence that banking industry concentration explains industrial sector growth. The results support the view that banking sector competition fosters the provision of growth enhancing financial services. Building on RZ, Claessens and Laeven (2003) examine the joint impact of financial sector development and the quality of property rights protection on the access of firms to external finance and the allocation of resources. In particular, they show that financial sector development hurts growth by hindering the access of firms to external finance and insecure property rights hurts growth by leading to a suboptimal allocation of resources by distorting firms into investing excessively in tangible assets. Thus, even when controlling for property rights protection, financial development continues to influence economic growth. This conclusion is different, however, from Johnson, McMillan, and Woodruff's (2002) study of post communist countries. They find that property rights dominate access to external finance in explaining the degree to which firms reinvest their profits.

Extending the RZ approach, Beck, Demirguc-Kunt, Leaven, and Levine (2004) highlight another channel linking finance and growth: removing impediments to small firms. They examine whether industries that are naturally composed of small firms grow faster in financially developed economies. More specifically, as in RZ, they assume that U.S. financial markets are relatively frictionless, so that the sizes of firms within industries in the U.S. reflect technological factors, not financial system frictions. Based on the U.S., they identify the benchmark average firm-size of each industry. Then, comparing across countries and industries, Beck et al (2004) show that industries that are naturally composed of smaller firms grow faster in

countries with better-developed financial systems. This result is robust to controlling for the RZ measure of external dependence. These results are consistent with the view that small firms face greater informational and contracting barriers to raising funds than large firms, so that financial development is particularly important for the growth of industries that, for technological reasons, are naturally composed of small firms.

Using a different strategy, Warbler (2000) also employs industry-level data to examine the relation between financial development and economic growth. Using industry-level data across 65 countries for the period 1963-1995, he computes an investment elasticity that gauges the extent to which a country increases investment in growing industries and decreases investment in declining ones. This is an important contribution because it directly measures the degree to which each country's financial system reallocates the flow of credit. Warbler (2000) uses standard measures of financial development. He shows that countries with higher levels of financial development both increase investment more in growing industries and decrease investment more in declining industries than financial underdeveloped economies.

Firm level analyses of finance and growth

Demirguc-Kunt and Maksimovic (henceforth DM, 1998) examine whether financial development influences the degree to which firms are constrained from investing in profitable growth opportunities. They focus on the use of long-term debt and external equity in funding firm growth. As in RZ, DM focuses on a particular mechanism through which finance influences growth: does greater financial development remove impediments to the exploitation of profitable growth opportunities. Rather than focusing on the external financing needs of an industry as in RZ, DM estimate the external financing needs of each individual firm in the sample.

DM notes that simple correlations between firms' growth and financial development do not control for differences in the amount of external financing needed by firms in the same industry in different countries. These differences may arise because firms in different countries employ different technologies, because profit rates may differ across countries, or because investment opportunities and demand may differ. To control for these differences at the firm level, DM calculate the rate at which each firm can grow using only its internal funds and only its internal funds and short-term borrowing. They then compute the percentage of firms that grow at rates that exceed each of these two estimated rates. This yields estimates of the proportion of firms in each economy relying on external financing to grow. The firm-level data consist of accounting data for the largest publicly traded manufacturing firms in 26 countries. Beck, Demirguc-Kunt, Levine, and Maksimovic (2001)

Demirguc-Kunt and Maksimovic (2005) use a different dataset and methodology to investigate the effect of financial development on easing the obstacles that firms face to growing faster. They show that financial development weakens the impact of various barriers to firm growth and that small firms benefit the most from financial development.³¹ In sum and consistent with the industry-level work by Beck, Demirguc-Kunt, Leaven, and Levine (2004), these firm-level studies indicate that financial development removes impediments to firm expansion and exerts a particularly beneficial impact on small firms.

Deck and Singles (2003) provide additional firm-level evidence on the mechanisms through which financial development influences growth by examining whether financial

development influences the private benefits of controlling a firm. If there are large private benefits of control, this implies that insiders can exploit their positions and help themselves at the expense of the firm. The resultant loss of corporate efficiency could have aggregate growth effects.

Neisse and Kruger (1998) and Levine et al. (2000) represent two different poles in the literature. Nasser and Kruger focuses on time series properties of the data ignoring the simultaneity issue, while Levine et al. (2000) deal with simultaneity without accounting for the time series properties of the data. An alternative is explored in this paper. This alternative consists briefly in the following: In Levine et al. (2000) estimation is conducted in two steps, first a cross-sectional regression of growth on finance and ancillary repressors, and GMM in the second stage to address simultaneity. In our estimation approach, we exploit both the cross-sectional and time-series dimension of the data by using panel co integration techniques. In that way we can address the simultaneity issues of the regressions but we also have another important advantage relative to previous research. In Levine et al. (2000), the first-pass cross-sectional regression represents the long-run regression while the second-pass regression (estimated by GMM) captures the short-run dynamics. The two regressions, however, are not connected as they should: One would expect that the second-pass regression can be derived from the long-run model by appropriate restrictions but this does not seem possible within the Levine et al. (2000) framework. More importantly, Levine et al. (2000) do not formally test that the first-pass regression is valid so it is not certain that it represents something structural. It is, therefore, not certain whether the second-stage regression represents an adjustment to the long-run equilibrium implied by the first stage. Within the panel co integration framework used in this paper, we are able to address these important issues, and at the same time we retain the flexibility of the Levine et al. (2000) approach in that we are able to provide long-run estimates, short-run adjustments, and address the endogenous issues by formally treating all variables as part of a vector auto regression in the context of testing for co integration, and estimating panel co integrating regressions. More importantly, we can formally test whether there is indeed a structural, long run relationship between financial development and growth.

Conclusions

It is commonly accepted that financial development is a concept with multidimensional characteristics and constitutes a predominantly significant mechanism for long run economic growth. There are abundant studies that support the relationship between financial development and economic growth, both theoretically and empirically (Baltagi et al., 2008; Abu-Bader and Abu-Qarn, 2008; Demetriades and Andria nova, 2004; Godhart, 2004; Levine, 2003; Beck et al., 2000; Von Furstenberg and Fratianni, 1996; King and Levine, 1993). The theoretical foundation of this relationship can be traced back to the work of Schumpeter (1911).

The 2008 financial crisis led to a sharp retreat of private credit in many countries. In contrast, credit surged in Lebanon from an already higher base than the median compared to other countries. It was a golden period for the Lebanese banks. The private sector credit growth was about 20 percent per year during 2008-2010, which is higher than the average 6% a year during 2005-2007. The credit growth in 2008-2010 was mainly concentrated in trade and services, household loans, and the construction sector. This letter boosted remarkably during this period. The mentioned sectors profited from 80% of all new loans since 2008. As a result, this crisis and its economic

repercussions had positive effects on the Lebanese economy during the period 2008–2010.

Thereafter, the economic growth, affected by the national and regional events, retreated significantly during the period 2012–2011. The financial system can enhance efficiency in the corporate sector by monitoring Management and exerting corporate control (Stieglitz 1985). Savers cannot effectively verify the quality of investment projects or the efficiency of the management. Financial Intermediaries can monitor the behavior of corporate managers and foster efficient use of borrowed funds better than savers acting individually. Financial intermediaries thus fulfill the function of “delegated monitoring” by representing the interests of savers (Diamond 1984). Financial markets also can improve managerial efficiency by Promoting competition through effective takeover or threat of takeover (Jensen and Heckling 1976). Following the work by King and Levine (1993a, 1993b) several studies have provided econometric evidence that supports the view that financial development is a potent predictor of future economic growth. The results in these studies have made significant progress in establishing that to some extent, the causal relationship runs from financial development to economic growth. The findings from studies based on aggregate data have been supported by studies that use disaggregated data on the industry and firm level. Using a large sample of industries from many countries, Rajang and Zing ales (1998) find evidence indicating that financial development mitigates financing constraints for industries that rely most heavily on external finance. These authors find that such industries grow faster in countries with more developed financial systems. Demirgüç-Kunt and Maksimovic (1996) and Beck and Levine (2000) provide further international firm-level evidence on the positive effects of access to a well-functioning financial system on firm growth. These studies have generalized the results from the literature on the effects of financing constraints on investment initiated by Fizzer, Hubbard and Petersen (1988) who used data from the manufacturing sector of the United States. Several studies have shown that the results on

The links between financing constraints and investment by manufacturing firms hold also for developing countries. It is important to reiterate that while this large amount of historical and econometric evidence suggests that financial development facilitates economic growth, this does not rule out the possibility of a causal relationship in the reverse direction. It is perfectly possible that financial systems develop in response to higher economic growth or in anticipation of future prosperity. These two causal processes are not mutually exclusive and may very well be a natural feature of the links between finance and economic growth. It is in this context that we should interpret the evidence discussed in this chapter. Substantively advanced by the further modeling of the dynamic interactions between the evolution of the financial system and economic growth (Smith, 2002). Existing work suggests that it is not just finance following industry. But, neither is there any reason to believe that it is just industry following finance. Thus, we need additional thought on the co-evolution of finance and growth. Technology innovation, for instance, may only foster growth in the presence of a financial system that can evolve effectively to help the economy exploit these new technologies.

Furthermore, technological innovation itself may substantively affect the operation of financial systems by, for example, transforming the acquisition, processing, and dissemination of information. Moreover, the financial system may provide different services at different stages of economic

development, so that the financial system needs to evolve if growth is to continue. These are mere conjectures and ruminations that I hope foster more careful thinking. In terms of empirical work, this paper continuously emphasized that all methods have their problems but that one problem plaguing the entire study of finance and growth pertains to the proxies for financial development. Theory suggests that financial systems influence growth by easing information and transactions costs and thereby improving the acquisition of information about firms, corporate governance, risk management, resource mobilization, and financial exchanges. Too frequently empirical measures of financial development do not directly measure these financial functions. While a growing number of country-specific studies develop financial development indicators more closely tied to theory, more work is needed on improving cross-country indicators of financial development. Although many empirical studies have investigated the relationship between financial depth, defined as the level of development of financial markets, and economic growth, the results are ambiguous. On the one hand, cross country and panel data studies find positive effects of financial development on output growth even after accounting for other determinants of growth as well as for potential biases induced by simultaneity, omitted variables and unobserved country-specific effect on the finance-growth nexus, see for example King and Levine (1993a,b), Khan and Sanhedrim (2000) and Levine et al. (2000). On the other hand, time series studies give contradictory results. Demetriades and Hussein (1996) find little systematic evidence in favor of the view that finance is a leading factor in the process of economic growth. In addition they found that for the majority of the countries they examine, causality is bi-directional, while in some cases financial development follows economic growth. Lintel and Khan (1999) used a sample of ten less developed countries to conclude that the causality between financial development and output growth is bi-directional for all countries. All these results show that a consensus on the role of financial development in the process of economic growth does not so far exist. Much more research needs to be conducted on the determinants of financial development. To the extent that financial systems exert a first-order impact on economic growth, we need a fuller understanding of what determines financial development. There are at least two levels of analysis. There is a growing body of research that examines the direct laws, regulations, and macroeconomic policies shaping financial sector operations. There is a second research agenda that studies the political, cultural, and even geographic context shaping financial development. Some research examines how legal systems, regulations, and macroeconomic policies influence finance. As a result, there is mutual interaction between financial sector and economic growth. The former leads the economic growth by successfully identifying profitable projects that could be funded. Moreover, a well functioning financial system would stimulate technological improvements since it has the ability to select and finance businesses that are expected to be successful. Hicks (1969) and Bagehot (1973) stipulated that industrialization in England was mainly financed by funds from the financial sector which was in period of remarkable development. The latter spur the financial sector to develop its policies and promote innovations in order to satisfy the requirements of the economic enhancement.

References

Aziz J, Duenwald C (2003). Growth-Financial Intermediation Nexus in China, in W. Tseng M. Rodlauer edited, *China: Competing in the Global Economy*, IMF, Washington.

- Arestis, P., Demetriades, P. O., & Luintel, K. B. (2001). Financial Development and Economic Growth: The Role of Stock Markets. *Journal of Money, Credit, and Banking*, 33(1), 16–41. <http://dx.doi.org/10.2307/2673870>
- Bagehot W (1873). *Lombard Street*. Homewood, IL: Richard D. Irwin, [1873] 1962 Edition.
- Bencivenga VR, Smith BD (1991). Financial Intermediation Endogenous Growth. *Rev. Econ. Stud.*, 58(2):195-209.
- Caballero RJ (1990). Consumption puzzles precautionary savings. *J. Money Econ.*, 25:113-36.
- Calderon C, Liu L (2003). The direction of causality between financial development economic growths. *J. Dev. Econ.*, 72: 321–334.
- Hristopoulos DK, Tsongas EG (2004). Financial development economic growth: evidence from panel unit root co integration tests. *J. Dev. Econ.*, 7: 55–74.
- Debreu G (1959). *Theory of value*. New York: Wiley.
- Demirguc-kunt A, Maksimovic V (1998). Law, finances firm growth. *J. Finance.*, 53(6): 2107-37.
- Ericsson NR, Irons JS, Tryon RW (2001). Output inflation in the long run. *J. Appl. Econ.*, 16: 241–253.
- Fazzari SM, Hubbard RG, Petersen BC (1988). Financing constraints corporate investment. *Brook. Papers Econ. Activities*, 1: 141-195.
- Geweke J (1982). Measurement of Linear Dependence Feedback between Time Series. *J. Am. Stat. Assoc.*, 79: 304--24.
- Goldsmith RW (1969). *Financial structure development*. New Haven, CT: Yale U. Press.
- Greenwood J, Jovanovic B (1990). Financial development, growth the distribution of income. *J. Polit. Econ.*, 98(5): 1076-1107.
- Guiso L, Sapienza P, Zingales L (2002). Does local financial development matter?. National Bureau of Economic Research Working Paper No. 8922.
- Harrison P, Sussman O, Zeira J (1999). Finance Growth: Theory New Evidence. Federal Reserve Board Discussion Paper No. 35.
- Hoshi T, Kashya A, Sharfstein D (1991). Corporate structure, liquidity investment: Evidence from Japanese panel data. *Q. J. Econ.*, 106(1):33-60.
- Hurlin C, Venet B (2008). Financial Development Growth: A Re- Examination using a Panel Granger Causality Test.
- Jappelli T, Pagano M (1994). Saving, growth liquidity constraints. *Q. J. Econ.*, 109(1):83-109.
- Jensen MC, Meckling M (1976). Theory of firm: Managerial behavior, agency costs capital structure. *J. Financ. Econ.*, 3: 305-60.
- King RG, Levine R (1993). Finance, entrepreneurship, growth – theory evidence. *J. Money Econ.*, 32:513-542.
- Kimball MS (1990). Precautionary saving in the small in the large. *Econometrica*, 58: 53-73.
- Lang L, Ofek E, Stulz RM (1996). Leverage, investment firm growth. *J. Fin. Econ.*, 40(1): 3-29.
- Lel HM (1968). Saving uncertainty: The precautionary demand for saving. *Q. J. Econ.*, 82: 465-473.
- Levhari D, Srinivasan TN (1969). Optimal savings under uncertainty. *Rev. Econ. Stud.*, 36(1): 153-63.
- Levine R (1997). Financial Development Economic Growth: Views Agenda. *J. Econ. Lit.*, 35(2): 688-726.
- Lintel BK, Khan M (1999). A quantitative re-assessment of the finance growth nexus: evidence from a multivariate VAR. *J. Dev. Econ.*, 60:381–405.
- McConnell JJ, Servaes R (1995). Equity ownership the two faces of debt. *J. Financ. Econ.*, 39: 131-57.
- McKinnon R (1973). *Money capital in economic development*. Washington, DC: Brookings institution.
- Nickell S, Nicolitsas D, Dryden N (1998). What makes firms perform well? *Eur. Econ. Rev.*, 41: 783-96.
- Oura O, Kohli R (2008). Financial Development Growth in India: A Growing Tiger in a Cage?. IMF Working Paper.
- Pagan M (1993). Financial markets growth, An overview. *Eur. Econ. Rev.*, 37: 613-622.
- Pesaro MH, Smith R (1995). Estimating long-run relationships from dynamic heterogeneous panels. *J. Econ.*, 68: 79–113.
- Rousseau PL, Wachtel A (1998). Financial intermediation economic performance: historical evidence from five industrialized countries. *J. Money Credit Bank.*, 30: 657-678.
- Rajan RG, Zingales L (1998). Financial Dependence Growth. *Am. Econ. Rev.*, 88: 559-586.
- Rao BB, Tamazian A (2008). A Model of Growth Finance: FIML estimates for India.
- Robinson J (1952). *The Rate of Interest, Other Essays*. London: Macmillan.
- Roubini N, Sala-i-Martin X (1995). A growth model of inflation, tax evasion financial repression. *J. Money Econ.*, 35(2): 275-301.
- Saint-Paul G (1992). Technological choice, financial markets economic development. *Eur. Econ. Rev.*, 36(4): 763-81.
- Schaller H (1993). Symmetric information, liquidity constraints Canadian investment. *Can. J. Econ.*, 26(3): 552-74.
- Schumpeter JA (1912). *Theorie der Wirtschaftlichen Entwicklung* [The theory of economic development]. Leipzig: Dunker & Humblot, 1912; translated by Redvers Opie. Cambridge, MA: Harvard U. Press, 1934.