

# A LITERATURE SURVEY ON THE RELATIONSHIP BETWEEN FINANCIAL DEVELOPMENT AND ECONOMIC GROWTH

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## ÖZET

*Finansal kalkınma ile ekonomik büyüme arasındaki ilişki, kalkınmakta olan ülkeler için oldukça önemli bir konudur. Konunun önemi finansal aracılık fonksiyonlarına ve bu fonksiyonların ekonomik büyüme süreci üzerindeki etkilerine dayanmaktadır. Bu bağlamda, yıllardır pek çok ekonomist finansal kalkınma ve ekonomik büyüme arasındaki ilişki ve bu ilişkinin yönü üzerine teorik ve ampirik çalışmalar yapmaktadır. Bundan dolayı, bu çalışma ilk etapta, finansal kalkınma ile ekonomik büyüme arasındaki ilişkiyi daha iyi anlayabilmek için kavramsal bir çerçeve oluşturmakta ve ardından, çalışmaları dönemlerine ve araştırma alanlarına göre sınıflandırarak kapsamlı bir literatür taraması yapmaktadır.*

## ABSTRACT

*The relationship between financial development and economic growth is a crucial issue for developing countries. The importance of this issue depends on the financial intermediation functions, and their effects on the economic growth process. In this sense, many economists have made theoretical and empirical studies on the relationship between financial development and economic growth and the direction of this relationship for years. Therefore, this study forms a conceptual framework in order to provide a better understanding of the relationship between financial development and economic growth as a first step, and then makes a comprehensive literature survey by classifying studies according to their time periods and research areas.*

## I. INTRODUCTION

The main purpose of this study is to provide a conceptual and theoretical framework for the relationship between financial development and

economic growth, which has been a crucial issue for economists for a long time. The importance of this issue depends on the financial intermediation

functions, and their effects on the economic growth process.

After the late 1970s, economists have began to criticize the closed nature of the developing country economies, and have emphasized the importance of the financial liberalization policies aiming to remove the government control on the financial system, to organize a free market mechanism, to open the economy to international finance, and thereby to provide financial development. The importance of the relationship between financial development and economic growth has also been realized by international institutions, like the International Monetary Fund and the World Bank, and has been emphasized in stabilization programs recommended to the developing countries like Turkey. As a result, most of these countries have used financial liberalization policies in order to improve the efficiency of their financial system functions and to support economic growth. Within this context, this study is organized as follows.

In the second chapter, the main concepts in studying the relationship between financial development and economic growth are represented, and the functions of the financial system, which can be grouped as mobilizing, and then allocating savings to the most productive investments, providing investment control, facilitating risk management, and facilitating the exchange of goods and services, and their effects on the economic growth process are explained.

Given this conceptual background, the third chapter provides a comprehensive literature survey on the relationship between financial development and economic growth. Because an efficient financial system is a crucial phenomenon for developing countries, economists have been studying on the relationship between financial development and economic growth since 1910s. The third chapter provides a survey of the most important ones of these studies by dividing them into five eras: early studies until 1960s, 1960s,

1970s and early 1980s, late 1980s and 1990s, and recent empirical studies. The results of both theoretical and empirical studies have demonstrated the existence of a positive correlation between these two concepts, but the identification of the direction of causation have led various conclusions.

## 2. CONCEPTUAL FRAMEWORK

The relationship between financial development and economic growth has been a crucial issue for economists for a long time, and has been seen as an important factor underlying the difference between income levels of countries. Therefore, before studying the relationship between financial development and economic growth in detail, the concepts that are well-known in discussing this relationship must be explained. These concepts are financial development, economic growth and the functions of the financial system.

### 2.1. Financial Development

*Financial development*, which can be defined as the development of the financial system by means of an increasing efficiency of financial system functions, is a crucial concept in the literature of economic growth. Before studying the concept of financial development, the structure, functions and importance of the financial system should be examined.

The *financial system* which includes financial markets, financial intermediaries, and financial instruments is concerned with channeling of excess funds from the ones who have a budget surplus to the ones who have a budget deficit. An efficient financial system acts this main function by mobilizing savings and then allocating them to the most productive uses, diversifying risk, increasing liquidity, and monitoring to ensure that savings are being used well. Thus, well-functioning financial systems create productive

investments and high returns, and stimulate economic growth (Stiglitz, 1998:1).

*The channeling of funds has two routes: direct finance through financial markets, and indirect finance through financial intermediaries. In direct finance, borrowers borrow funds directly from lenders in financial markets by selling them securities which are called financial market instruments. By this way, funds could be transferred from the saver who has no investment opportunities to the spender who has productive uses, and so both of them would be better off. Production and efficiency in the economy would be improved.*

*On the other hand, indirect finance involves a financial intermediary that helps the allocation of funds to their best possible uses. While acting this financial intermediation function, a financial intermediary reduces two important costs of fund allocation: transaction costs and information costs.*

*Transaction costs are the time and money spent in carrying out financial transactions. Financial intermediaries reduce transaction costs through specialization and economies of scale, and encourage the productive productions. On the other hand, information costs imply that one part of the fund transfer (usually lender side) often does not know enough about the other part (usually borrower side) to make accurate decisions. This inequality is called asymmetric information, and creates two types of problems in the financial system. The problem created by asymmetric information before the transaction occurs is called adverse selection which indicates that the potential borrowers who are the most likely to produce an undesirable (adverse) outcome -the bad credit risk- are the ones who most actively seek out a loan and thus most likely to be selected. On the other hand, the problem created by asymmetric information after the transaction occurs is called moral hazard which is the risk (hazard) that the borrower might engage in activities that are undesirable (immoral) from*

*the lender's point of view because they make it less likely that the loan will be paid back (Mishkin, 1998:35-36).*

*Both of these problems can make lenders to decide not to make any loans even though there are good credit risks in the market place. Thus, several tools aim to produce more information for the market should be used to solve asymmetric information problems. The system of private production and sale of information, and the government regulation are the most important ones of these tools. But since financial markets have imperfect structures of transaction and information costs, both private production and sale of information, and government regulation can't solve the problem completely.*

*Financial intermediaries, which can alleviate transaction costs in financial markets, also produce solutions for asymmetric information problems. Since they are better equipped than individuals to screen out good from bad credit risks, losses due to adverse selection reduce, and also since they develop expertise in monitoring the borrowers they lend to, losses due to moral hazard reduce. Financial intermediaries, most importantly banks, can also take collateral, apply risk premium, and look for high net worth of firms to reduce asymmetric information problems (Ökte, 2001:10).*

*Thus, it can be said that a well-functioning set of financial intermediaries plays a key role in improving economic efficiency which in turn increases the volume and aggregate productivity of investment.*

## 2.2. Economic Growth

The second part of this chapter explains the economic growth concept which investigates the causes of the differences in income over time and across countries. The generally accepted indicator of economic growth is the *growth rate of Gross National Product (GNP)* (Begg, Fischer, and Dornbusch, 1994:354). Increasing GNP means

both increasing amount of real production/output and welfare of the domestic citizens, and so a higher growth rate of GNP indicates a higher level of economic growth. Within this context, every factor affecting the amount production in an economy also affects the rate of economic growth, and the existence of an efficient financial system is one of these important factors. Because an efficient financial system mobilizes and then allocates resources among the most productive investments, it can also stimulate economic growth of a country.

### 2.3. A Theoretical Approach to Financial System and Economic Growth

The primary function of financial systems can be defined as: facilitating the allocation of resources, across space and time, in an uncertain environment, and this primary function can be broken down into four basic functions: mobilizing and allocating savings, providing investment control, facilitating risk management, and facilitating the exchange of goods and services.

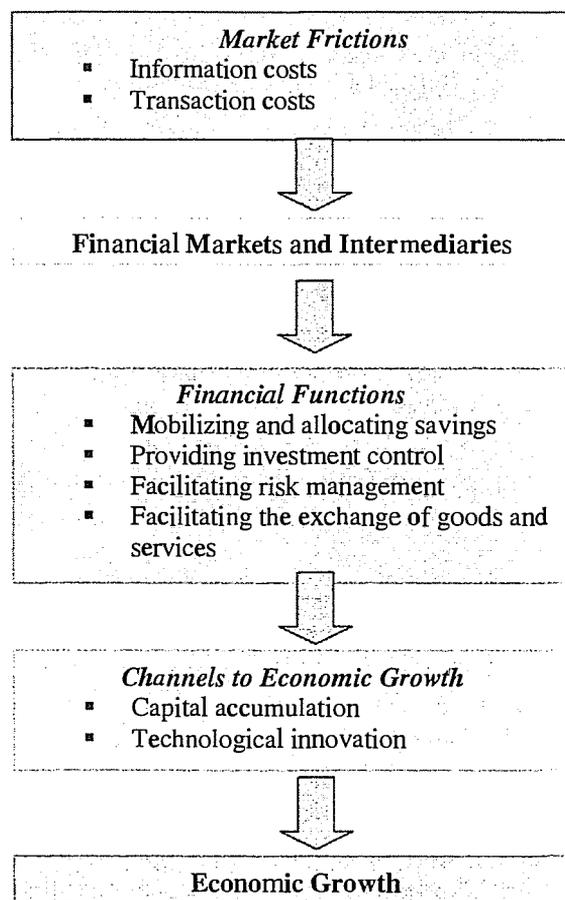
Each of these functions affects economic growth through two channels. The first one is *capital accumulation* on which the functions performed by the financial system affect steady-state growth by influencing the rate of capital formation. The second channel from financial functions towards growth is *technological innovation* on which the functions performed by the financial system affect steady-state growth by altering the rate of technological innovation. **Figure 1** summarizes these routes from market frictions towards economic growth, and indicates the role of financial intermediation services.

An efficient financial system ensures better mobilization of the available savings by facilitating the gathering of the economy's financial resources, and improves the allocation of these savings to the best investment opportunities by using information technologies and risk diversification. By the help of this function, the possibility of adverse selection could be reduced and financial markets and financial intermediaries offer savers a relatively higher yield on their

assets, contribute directly to a rise in the productivity of capital, and hence provide a faster economic growth through capital accumulation and technological innovation (Berthélemy and Varoudakis, 1996:27).

Financial systems also reduce the information costs of the period after transaction occurs, which create moral hazard problem, by providing investment control. Collaterals, risk premiums, and financial contracts reduce information costs by lowering monitoring and enforcement costs (Levine, 1997:696-697).

Figure 1: A Theoretical Approach to Finance and Growth



Source: Ross Levine, "Financial Development and Economic Growth: Views and Agenda", *Journal of Economic Literature*, Vol.35, No.2, January 1997, p.691.

The third function of a financial system is related to the two main risks of resource

allocation: productivity (or demand) risks and liquidity risks. *Productivity risks* arise due to the uncertainties about the amount of future product demand of the investor and the imperfect domination of technology. Therefore, risk-averse economic agents would prefer less risky liquid assets and less risky technologies instead of productive investment opportunities (Berthélemy and Varoudakis, 1996:29). On the other hand, *liquidity risks* arise due to the uncertainties about converting savings into a medium of exchange when necessary. But high-return projects generally require a long-run commitment of capital. Since savers do not like to leave the control of their savings for long periods, in the absence of the financial system, less investment is likely to occur in the high-return projects (Levine, 1997:692). Financial markets and financial intermediaries ease risk diversification through direct or indirect exchanges and thus, eliminate the negative effects of productivity and liquidity risks, allocate resources efficiently, and contribute directly to the acceleration of economic growth through both capital accumulation and technological innovation.

The last function of a financial system occurs as facilitating the exchange of goods and services, and so ensuring the proper functioning of the payments system through the existence of a reliable medium of exchange and financial arrangements. It can also be concluded that the easier the exchange of goods and services, the lower will be the transaction costs, and as a result of more transactions, specialization and growth will be greater (Levine, 1997:700). Economic growth also contributes to the evolution of the payments system and financial intermediation function. The productivity gains, the opening up of new markets, and the increasing complexity of trade are the results of economic growth which in turn lead to a secular trend towards a slowdown in

the *velocity of money* (GDP/Money Supply). The opportunity cost of holding monetary assets that yield a poor return can be reduced by a steady movement of the payments system towards credit relations managed by banking intermediaries. This process rises the weight of financial activities in GDP, and causes the intermediation technology to develop (Berthélemy and Varoudakis, 1996:27).

### 3. A LITERATURE SURVEY ON THE RELATIONSHIP BETWEEN FINANCIAL DEVELOPMENT AND ECONOMIC GROWTH

After explaining the services provided by the financial system and their effects on economic growth generally, a survey of some important themes and studies in the literature of financial development and growth will be provided in this section by dividing them into five eras: (1) early studies until 1960s, (2) financial intermediation and causality: 1960s, (3) financial repression and financial liberalization: 1970s, and early 1980s, (4) financial development and endogenous growth models: late 1980s, and 1990s, and (5) recent empirical studies on the direction of causality between financial development and economic growth.

#### 3.1. Early Studies until 1960s

During this period, economists didn't give the necessary importance to the financial structure and financial intermediation function. They only concerned with the question of how the financial system can be used in order to get the necessary funds for economic development.

One of the most important studies of this period is *The Theory of Economic Development* written by *Joseph A. Schumpeter* in 1911. Schumpeter investigated the concepts of the circular flow of economic life, the fundamentals of economic development, credit, capital,

entrepreneurial profit, interest on capital, and the business cycle.

In his famous book, Schumpeter describes *economic development* as changes in economic life that are not forced upon it, but arise by its own initiative, and emphasizes the role of *new combinations (enterprises)*, which means simply the *different* employment of the economic system's *existing* supplies of productive means (Schumpeter, 1951:66). But, since savings of the previous periods would not be enough to carry out these new combinations, Schumpeter implies that a well functioning banking system could finance innovations necessary for the production of new combinations through *credit* extension, and forms an element of economic development. Besides credit as a financial instrument, Schumpeter also emphasizes the role of a banker as a financial intermediary in the economic development process (Schumpeter, 1951:74-103).

On the other hand, in *The Rate of Interest and Other Essays (1952)*, Joan Robinson advocates that the financial system automatically responds to the demands created by economic growth, and makes her famous statement as *where enterprise leads finance follows*. According to Robinson, if the previous savings of an entrepreneur, *internal finance*, is not enough to carry out the new investment, financial intermediaries, *external finance*, may enter the system, and they also get the experience necessary for their own development from this financing process (Robinson, 1952:86).

*W. Arthur Lewis* is one of the other economists of early 1960s. He studies on the economies of the Post-Second World War period, and implies that if labor is abundant and physical resources scarce, like in less developed countries, there are two ways to generate capital formation in order to enter a development process: creating capital out of taxation or out of credit creation.

The primary effects of these two ways on output is the same: the output of consumer goods is unchanged, but redistributed. However, credit creation has one further effect: it also redistributes income towards the industrial class and speeds up capital formation out of profits (Lewis, 1954:169, 171).

### 3.2. Financial Intermediation and Causality: 1960s

These were the years of financial intermediation concept, and economists have begun to discuss the causality relationship between financial development and economic growth during this period. The proper understanding of the importance of domestic financial system in the economic growth process also corresponds to 1960s.

One of the most famous economists of this period is *Kenneth J. Arrow* who published *The Economic Implications of Learning by Doing* in 1962, and formalized the *learning by doing process* in a growth model as an externality. Arrow calls the acquisition of knowledge as *learning*, which is the product of experience, and his hypothesis, which depends on learning by doing, says that technical change in general can be attributed to experience. He also emphasizes that technological knowledge is growing in time, and causing increasing returns as the production and capital accumulation take place (Arrow, 1962:155-156). But, there are some failures of the learning by doing model of Arrow. First, learning takes place in effect only in the capital goods industry, and no learning takes place in the use of a capital good once built. This is not realistic. Second, learning takes place only as a by-product of ordinary production, and does not include the institutions, education, and research created by the society for the purpose of enabling learning to take place more rapidly (Arrow, 1962:172).

On the other hand, in *Money and Economic Growth* (1965), James Tobin discusses that *monetary supplies* and *portfolio behaviour* affect the interest rate and the capital intensity as well as productivity and thrift (Tobin, 1965:684). In a closed economy, he says, the alternative stores of value for the capital are monetary assets, and their yields set limits on the acceptable rates of return on real capital and on the acceptable degree of capital intensity through the process of portfolio choice (Tobin, 1965:677). Therefore, governments and financial institutions have an important role in the process of investment, in the productivity, and so in the economic growth.

One of the crucial studies of 1960s is the paper of Hugh T. Patrick titled *Financial Development and Economic Growth in Underdeveloped Countries* (1966) which introduces the idea of the *bi-directional* causal relationship between financial development and economic growth, and suggests two new approaches to this causality. The first one of these approaches is the *demand-following phenomenon* in which the creation of modern financial institutions, their financial assets and liabilities, and related financial services is in response to the demand for these services by investors and savers in the real economy. One assumption of this view is that, the growing financial system responds to the demand of the real sector growth *automatically*. But at this point, Patrick also underlines some difficulties such as restrictive banking legislation (like France in the early 19th century), religious barriers against loans and interest charges, and absence of a modern investment bank (like Italy in 1880s) (Patrick, 1966:174-175).

The second phenomenon defined by Patrick is the *supply-leading phenomenon* in which the creation of financial institutions and the supply of their financial assets, liabilities and related financial services is in advance of the demand for them. In other words, the growth of the financial system causes the growth of the real sector, and

the financial system acts two functions in this process: to transfer resources from traditional (agricultural and commercial) sectors to new modern sectors, and to promote and stimulate an entrepreneurial response in these modern sectors. Patrick indicates that, in actual practice, there is likely to be a *bi-directional* relationship between financial development and economic growth. In the earlier stages of the real sector growth, supply-leading phenomenon may be valid. But, as the process of real sector growth occurs, the demand-following phenomenon becomes dominant. According to Patrick, Japan between the 1870s and the beginning of the World War I presents an excellent example of the sequence of these two phenomena (Patrick, 1966:175-177).

The first empirical study on the causal relationship between financial development and economic growth is the seminal book of Raymond W. Goldsmith titled *Financial Structure and Development* (1969). Goldsmith relates financial development to the size of the financial system, and so his empirical study contains 35 tables, each of which shows the *amount of total assets* of all important types of financial institutions in one country, in order to represent financial development; and a table, which shows the *GNP levels* of the same 35 countries at current prices, in order to represent economic growth. Time period of this study is from 1860 to 1963, which includes nine benchmark dates for which data are available for all countries. As a result of his empirical study Goldsmith suggests that, the separation of the saving and investment functions and the enlargement of the range of financial assets increase the rate of growth through the channels of increasing the efficiency of investment and raising the ratio of capital formation to national product (Goldsmith, 1969:392). According to Levine, the weaknesses of this study can be summarized as the limited observations on only 35 countries, other factors influencing economic growth which are not controlled systematically, and the possibility that the size of the financial

intermediaries may not be an accurate measure for financial development (Levine, 1997:704).

*John Hicks* who published *A Theory of Economic History* in 1969, and studied on the development of financial system in England could be included as the last economist of this period. Hicks evaluates the *Renaissance* as a period in which not only the use of money increased but also money began to link up with credit and finance and argues that financial development is based on the need for widening the circle of credit worthy borrowers. According to him, the development of *financial intermediaries*, in the broadest sense banks, can reduce information costs and risks through the intermediation function. In addition, in the later stages of development, security markets enter the financial system, and help investors to reduce their risks through portfolio diversification (Hicks, 1969:77-80). Thus, financial system enhances economic growth through promoting the discovery of new opportunities for investment, and so contributes to the development process of a modern industry, which is the key factor for the Industrial Revolution (Hicks, 1969:142-145).

### 3.3. Financial Repression and Financial Liberalization: 1970s and early 1980s

The period of 1970s and early 1980s is very important for the literature on the relationship between financial development and economic growth. Three competing views emerged during this period: *financial repression*, *financial liberalization*, and *the structuralist school*.

In 1970s, Keynesian view was very dominant. Keynesian economists advocated that negative real interest rate policies stimulate investments, and because of these restrictions on interest rates, those years are known as the period of *financial repression*. The theoretical analyses of financial repression was first made by *Ronald I. McKinnon* and *Edward S. Shaw*. They criticized financial repression policies seriously and

proposed the *financial liberalization* policies instead. According to them, banking sector is the most efficient financial sector, and funds should be oriented to the banking sector by applying a positive real interest rate policy (Kar and Tunçer, 1999:7).

*Ronald I. McKinnon* examines economies of underdeveloped countries in his famous book *Money and Capital in Economic Development* (1973), and discusses that *misallocation* of existing capital and government subsidies causes the income inequality between the rich and the poor to grow, and a *fragmented economy* to occur. According to him, financial intermediation function should enter the economic system to prevent this misallocation (McKinnon, 1973:5-7). At this point, he emphasizes the role of efficient bank lending in the enlargement process of the real size of the monetary system, and in alleviating *financial repression*, which he defines as the poor performance of organized bank lending that is related to *regulated interest ceilings* and *collateral requirements*, and advocates *financial liberalization* policies (McKinnon, 1973: 69, 73).

A monetary reform (financial development), according to him, can stimulate growth in real output (economic growth) by raising savings and capital formation, while he does not analyse the reverse causation (McKinnon, 1973:89, 117).

*Edward S. Shaw*, the other economist who first made the theoretical analyses of financial repression, published his book titled *Financial Deepening in Economic Development* in 1973. In his book, Shaw suggests *financial liberalization policies* that has the effect of *financial deepening* instead of financial repression policies, and lists important *measures and indicators of financial deepening* as the increase of the reserves of liquidity, the change in the financial flows, the emerge of new types of financial intermediaries, and the change in the financial prices, which are the interest rates and the foreign exchange rates (Shaw, 1973:7-9). He also explains *the objectives*

of financial liberalization as to raise the ratios of private domestic savings to income, to develop the financial system and its functions, to equalize the distribution of income, and to contribute to the stability of growth in output and employment (Shaw, 1973:9-12). In spite of all these positive effects, because of the prohibition of usury during that period, the absence of an effective control over growth rates in nominal money and rate of changes in the price level, the minimization and misinterpretation of the role of finance, and high costs involved that are not covered by the potentially beneficial results of real financial growth financial liberalization is rare, and financial repression is preferred (Shaw, 1973:92-107).

In 1980s, some of the *structuralist school* economists, including Lance Taylor and Edward F. Buffie, criticized the role of banking sector in financial liberalization policies, and advocated that the financial intermediaries other than banks, which they called as *curb market*, were more efficient than banking sector (Kar and Tunçer, 1999:10).

Lance Taylor, who wrote *Structuralist Macroeconomics: Applicable Models for the Third World* in 1983, is one of the structuralist school economists. He discusses what happens if the world does not operate according to the neoclassical growth theory in which higher interest rates raise saving rates and available deposits in the banking system, and these extra savings are transferred into investment through the increased use of banking system and greater financial intermediation. At this point, he assumes that higher interest rates raise savings, but investment demand is interest-sensitive as well, and explains the interest rates that affect investment demand as the rates ruling in *informal markets*, such as *curb and village markets*, which are often efficient, which answer to the needs of small borrowers, and so which charge quite high interest rates. Therefore, the role of the curb

markets must be taken into account in the economic growth process (Taylor, 1983:197).

In his paper titled "*Financial Repression, the New Structuralists, and Stabilization Policy in Semi-Industrialized Economies*" (1984), Edward F. Buffie emphasizes the pivotal role of the curb market as the marginal supplier of the loanable funds, and examines the short-run and long-run effects of a variety of macroeconomic policies in a simple model including the curb market. He also underlines the importance of financial liberalization, and states that financial liberalization can be successful only if the demand deposits are much better substitutes with currency and foreign goods than with curb market loans (Buffie, 1984:312).

### 3.4. Financial Development and Endogenous Growth Models: Late 1980s, and 1990s

These were the years of *endogenous growth models*, which accept technological progress as endogenous and the return of capital as constant or increasing, and which give the necessary importance to the human capital, the positive externalities in the production process, and the government policies. The relationship between financial development and economic growth was investigated under the assumptions of endogenous growth models during this period. The seminal studies of the period may be classified into seven groups according to their research areas such as:

#### 3.4.1. Early Endogenous Growth Models

Initial studies on the endogenous growth issue examine the two channels on which the functions performed by the financial system affect steady-state growth: *capital accumulation* (through influencing the rate of capital formation), and *technological innovation* (through influencing the rate of technological innovation).

*Paul M. Romer (1986, 1990)* says that, increasing marginal productivity implies a positive external effect on each of the firms in the economy created by an increase in the amount of knowledge. Thus, in a situation of high levels of consumption and low levels of research, an *intervention* that shifts the allocation of current goods away from consumption and toward research can improve the welfare and contribute to the economic growth process (Romer, 1986:1026). He also states two important implications. The first one is that because research projects exchange current costs for a stream of benefits in the future, the rate of technological change is sensitive to the rate of interest, which is an endogenous factor. The second implication of the model is that an economy with a larger total stock of human capital will experience faster growth, and so free international trade can contribute to this faster growth by increasing the stock of human capital (Romer, 1990:99).

*Sergio Rebelo (1991)* uses an economy which includes a *core* of capital goods whose production does not involve nonreproducible factors to explain his endogenous growth model with *constant returns to scale*. Therefore, endogenous growth will be compatible with production technologies that exhibit constant returns to scale (Rebelo, 1991:515, 519).

### 3.4.2. Financial Intermediation and Economic Growth

By using endogenous growth models, economists examine whether financial development affects economic growth through financial intermediation functions like mobilizing and efficiently allocating resources, providing information and control, and diversifying risk.

The study of *Valerie R. Bencivenga and Bruce D. Smith (1991)* indicates that financial intermediation promotes economic growth by channeling savings towards productive investment opportunities, thereby increasing capital accumulation (Bencivenga and Smith, 1991:195-196).

*Robert G. King and Ross Levine (1993)* finds that there is a significant and robust correlation between higher levels of financial development, and faster current and future rates of economic growth, physical capital accumulation, and economic efficiency improvements, and also the predetermined component of financial development is a good estimator of long-run growth over the next 10 to 30 years (King and Levine, 1993:719).

### 3.4.3. Bi-directional Causal Relationship between Financial Development and Economic Growth

The two seminal papers of this section suggest a bi-directional causal relationship between financial development and economic growth: Financial development enhances economic growth, which in turn encourages the formation of new financial markets.

*Jeremy Greenwood and Boyan Jovanovic (1990)* indicate that in the early stages of development, financial markets of an economy are virtually nonexistent and grow slowly. As the economy approaches to the intermediate stage of the economic growth cycle, financial structure begins to form, growth and saving rates increase, and the distribution of income across the rich and poor widens. Financial intermediation function develops during the development process of the economy, and in the final stage of development, the distribution of income across agents stabilizes, the saving rates falls, and the growth rate of the economy reaches to a higher level (Greenwood and Jovanovic, 1990:1078-1079).

The study of *Jeremy Greenwood and Bruce D. Smith (1997)* implies that financial intermediaries alter the social composition of savings by channeling funds to more productive, illiquid capital investment through liquidity provision, and also emphasizes the importance of the equity markets in the process of economic growth as well as banking sector, and allows for

the endogenous formation of either banking or equity markets (Greenwood and Smith, 1997:148).

#### 3.4.4. Stock Market Development and Economic Growth

The existence of a stock market eliminates liquidity and productivity risks of investments, and stimulates economic growth through this financial intermediation function. The seminal papers on this issue are the following ones.

*Ross Levine (1991)*, finds that taxes associated with stock market transactions reduce the amount of investment in firms and increase the premature liquidation of firm investments, both of which slow the rate of economic growth through lowering human capital accumulation (Levine, 1991:1448, 1456).

*Ash Demirgüç-Kunt and Ross Levine (1993, 1995)* say that, economic literature demonstrates that financial services importantly influence economic development, which in turn influences financial system, and financial crises can retard economic development. Thus, in 1980s, the *World Bank*, as one of the international institutions, began devoting an increasing amount of effort toward improving the financial systems of countries, and coping with financial crises in order to stimulate economic development (Demirgüç-Kunt and Levine, 1993:2). As a result of their studies, they also find that there are enormous cross-country differences in the level of stock market development, while countries with higher per capita incomes generally have more developed stock markets than the ones with lower per capita incomes, many emerging countries are systematically more developed than the already developed ones (Demirgüç-Kunt and Levine, 1995:27-29), the level of stock market development is highly correlated with the development of other financial intermediaries (Demirgüç-Kunt and Levine, 1993:20).

#### 3.4.5. Financial Repression Policies, Financial Development, and Economic Growth

This group of studies discusses why governments imply financial repression policies, how these policies affect economic growth, and what the optimal degree of financial repression is.

*Valerie R. Bencivenga and Bruce D. Smith (1992)* states that since the government is forced to monetize a sustained deficit, legislation in general, and government policies associated with *financial repression* in particular are widespread in developing countries. These policies are carried out through *reserve requirements* and/or *deposit interest rate ceilings*, and impede the development of the banking system. In order to weigh output losses due to the implementation of such policies, the government should use the *inflation tax* more efficiently. It is also suggested that financial repression policies promote self-financed investment and investment financed through *informal money markets* which are presumably inefficient (Bencivenga and Smith, 1992:767). Bencivenga and Smith also emphasize the importance of financial liberalization and say that the liberalization of financial markets is always welfare improving, because financial intermediation provides better *risk diversification*, and increase the *inflation tax base* (Bencivenga and Smith, 1992:787-788).

The study of *Nouriel Roubini and Xavier Sala-i-Martin (1995)* indicates that before 1970s, applying a financial repression policy is favored because it is accepted as a way to impose anti-usury laws, to control money supply effectively, to allocate resources more efficiently through the intervention of government from a social perspective, and to reduce the costs of government debts by means of creating revenues, *seigniorage revenue* which is the value of real resources acquired by the government through its ability to

print money for the public sector (Begg, Fischer, and Dornbusch, 1994:491), and *inflation tax revenues*, for the public sector (Roubini and Sala-i-Martin, 1995:295, 297).

#### 3.4.6. Legal Systems, Financial Development, and Economic Growth

The existence and high quality of national legal and regulatory conditions can stimulate financial intermediary development through the *exogenous component* defined by these conditions, and thereby induce a rapid acceleration in long-run economic growth. It should be mentioned that only the following two models include an exogenous factor in this section.

*Rafael La Porta, Florencio Lopez-De-Silanes, Andrei Shleifer and Robert W. Vishny (1998)* examine three issues in their study: legal rules covering protection of corporate shareholders and creditors, the origin of these rules, and the quality of their enforcement in 49 countries. This study implies that countries with poor investor protections indeed have significantly smaller debt and equity markets, and so suggests a negative effect of a poor legal system on financial development, and thereby on economic growth (La Porta, et. al., 1998:1152).

The important findings of the study of *Ross Levine (1999)* are that national legal and regulatory conditions can define an *exogenous component* for financial intermediary development (Levine, 1999: 8, 10), and this component positively influences economic growth. Thus, legal and regulatory changes can induce a rapid acceleration in long-run economic growth by means of stimulating financial intermediary development (Levine, 1999:33).

#### 3.4.7. International Financial Integration and Economic Growth

In theory, international financial integration affects financial intermediation development

through international risk diversification, which creates a world portfolio shift from safe but low-yield capital to risky but high-yield capital, and therefore promotes economic growth. The seminal papers on this issue are the following ones.

*Maurice Obstfeld (1994)* states that the process of expanding global diversification opportunities always raises expected growth as well as national welfare (Obstfeld, 1994:1311).

On the other hand, *Hali J. Edison, Ross Levine, Luca Ricci and Torsten Slok (2002)* find that although international financial integration is positively associated with economic success, there is no robust evidence to support the view that international financial integration stimulates economic growth (Edison, et. al., 2002:751-751, 772-773).

#### 3.5. Recent Empirical Studies on the Direction of Causality between Financial Development and Economic Growth

Recent empirical studies have extensively used econometric modelling in investigating the causal relationship between financial development and economic growth, and find important results. The most important ones of these studies are the study of *Thorsten Beck, Ross Levine and Norman Loayza (2000)* which suggests the direction of causality as being from financial development towards economic growth (Beck, Levine, and Loayza, 2000:296); the study of *Yousif Khalifa Al-Yousif (2002)* which states that there is a strongly supported *mutual causality* between financial development and economic growth which cannot be generalized across countries because of the differences in economic policies and in the efficiency of policy implementing institutions (Al Yousif, 2002:148); and the study of *César Calderón and Lin Liu (2003)* which finds that financial development generally enhances economic growth, there could be a bi-directional causality between financial development and economic growth generally in

developed economies, financial deepening is more effective in the process of causal relationships in developing countries than in the industrial ones, and the developing countries should further undertake financial reforms in order to gain sustainable economic growth, and should stimulate the real sector development besides financial sector (Calderón and Liu, 2003:321, 331-332).

#### 4. CONCLUSION

Both theoretical and empirical studies have found that an important factor underlying the difference between income levels of countries is the difference between development levels of their financial systems. In other words, there is a *positive correlation* between financial development and economic growth of a country.

The direction of causality between financial development and economic growth can have two routes: First, a developed financial sector can favour economic growth through mobilizing, and then allocating savings to the most productive investments, providing investment control, facilitating risk management, and facilitating the exchange of goods and services; and second, economic growth can permit the financial sector to achieve economies of scale and increase its efficiency.

*As a result of the literature survey it can be concluded that financial functions are very important for economic growth, but the role of the government control on these functions has been discussing by economists for many years.*

*1970s were the years of financial repression. But, financial repression policies which imply the strict government control on the financial system through negative real interest rates, high reserve requirements, restrictions on the international finance, and etc. in order to meet public budget deficit hit several developing countries towards the end of the 1970s. For this*

*reason. McKinnon (1973) and Shaw (1973) criticized financial repression policies seriously and proposed the financial liberalization policies which provide a free market economy, and efficient resource allocation instead. According to them, positive effects of financial liberalization on the mobilization and allocation of savings, and investments can stimulate real economic growth.*

*Implementing financial liberalization policies needs financial deregulation, which is briefly the increasing variety of financial institutions and financial services created by deregulation policies diminishing the control of and intervention into the financial system. Then, successful financial deregulation is accompanied by financial deepening which is simply the resource mobilizing capacity of the financial sector. Higher financial deepening means a higher amount of savings is concentrated in the financial system in order to be allocated to the productive investment opportunities by financial intermediaries, which in turn enhances economic growth. Beside financial deregulation and financial deepening, economic stability is also a growth enhancing factor. In the absence of economic stability, investors can not predict their long-term earnings, and therefore, the funds in the financial system can not be transferred into the real sector and can not be used in the production processes (Oksay, 2005:2).*

Consequently, there is a *positive correlation* between financial development and economic growth of a country, and this relationship promotes the development level of a country by the help of economic stability.

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