

Study on Development of Financial Sector in Persian Gulf Basin Countries

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ABSTRACT — Vast studies have shown positive contribution of financial sector to economic growth. However, some new results indicate that the previous findings do not hold especially in recent years. In this study, we reexamine the relationship between the financial sector development and economic growth using the empirical endogenous growth model based on the work of King and Levine (1993) and a panel data consisting of Persian Gulf basin countries for the period of seven years from 2001 to 2007 for seven of Persian Gulf basin countries. These countries include Bahrain, Iran, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. The results of studies have shown positive and significant relationship between financial sector and economic growth.

KEYWORDS: *Financial Sector, Economic Growth, Persian Gulf Basin Countries, Panel Data*

Introduction

Development of financial sector may play a major role in the economic growth. By collecting capitals and decreasing the exchange and information expenses, the financial intermediaries can have important roles on investment and increase of economic productivity. Analysis of the relation between finance and economic growth entered the economic researches through Schumpeter's theory (1911). That theory emphasizes the effective role of development of financial intermediation acts on economic growth. He believed that the plans, risk management, controlling and monitoring manager's performance, and facilitation of exchanges are among the necessities of technology renovations and economic growth. Therefore, most of the models studying the relation between financial phenomena and economic growth and placed then within the scope of the neo-Schumpeter models. In such models, technology innovations are represented within the models and the institutes can benefit from technology innovations as a monopoly in order to achieve profits more than zero. In fact models such as neo-Schumpeter model, that is a subcategory of endogenous growth models, the financial performances are effective in two approaches of the rate of capital collecting and rate of technology innovations on economic growth (Eschenbach, 2004). After Schumpeter so many economists certified a positive effect of financial sector on economic growth. For instance, in the 1960s economists such as Gerschenkron (1962), Patrick (1966) and especially Goldsmith (1969) pointed out to the role of financial sector on economic growth. From that time the subject of causality between financial sector and economic development caught the attention of the economists more than earlier. According to Patrick (1966), in the initial stages of economic growth, appearance of financial intermediaries, through establishing relation between subordinate depositors and entrepreneurs, will motivate economic growth and then economic development will lead to supply of financial services (Eschenbach, 2004). In this decade, Cameron (1967) found a bilateral causality between financial sector and economic growth. But a number of economists believe that financial institutions are not relatively important factors in economic development. For example, Robinson (1952) claimed that financial development is subject to economic growth and this sector cannot assist economic growth (Keshavarz Haddad, 2004). In 1970s, a new subject titled financial repression was introduced in the area of finance; financial repression refers to the intervention of government in prescribing rate of interest and applying inflating monetary policies that were planted with the aim of increasing income and motivating growth in a short period. This approach that was set forth within the theoretical frameworks of Keynes and Tobin defends the intervention of government in financial markets. Theory of financial repression was criticized by McKinnon and Shaw (1973), because they believed that repressing financial institutes for payment of low and usually negative interest rates lead to the decrease in private saving and limitation in financial supply (Taghavi and Khalili Araghi, 2005). In early 1980s the neostructuralists claimed that financial liberalization leads to the slowdown of economic growth. In fact, their argumentation followed the approaches of Keynes and Tobin. Neostructuralists criticize the viewpoints of McKinnon and Shaw (1973) because they have not considered the role of unorganized or unofficial markets. They believe that the regulations concerning removal of regulations of official financial markets lead to the increase in interest rate of deposits in such markets and therefore it leads to the transfer of deposits from unofficial financial markets to official markets. In this case financial indicators are increased, but the rate collecting of fixed assets does not necessarily increase. The reason is that the banks are subject to regulations concerning legal reserve while the loans in the unofficial financial markets are not subject to such regulations.

Therefore, transferring resources from unofficial markets to official markets decreases the capital at hand and increases the rate of interest in the unofficial markets. Also Stieglitz (1989) in this decade, severely criticizes liberalization according to the theoretical bases on market failure in financial markets (Taghavi and Khalili Araghi, 2005). In 1990s, these debates entered a new theoretical channel. In this decade the attentions of economists in the area of interaction between financial development and economic growth were influenced by development of endogenous growth models through which the possibility of the impact of institutional arrangements on growth rates were considered (Naderi, 2003). In this connection we can refer to the works by King and Levine (1993), Bencivenga et al. (1995), Greenwood and Smith (1996), Obstfeld (1994) in which factors such as financial intermediaries, risk sharing, and information were brought to the focus. Of course in such models, the results achieved are severely influenced by the type of model specification (Eschenbach, 2004). However, new research benefitting from new econometric approaches and removal of the shortcomings of previous works, have questioned such deductions. For instance, Rousseau and Watchtel (2003) analyzed the interstate and incorporated data for 84 countries and showed that the positive and meaningful relation that was observed in 1960s, 1970s and 1980s is wiped out in 1990 to 2003. They concluded that in poor countries relation between financial sector and economic growth is positive, however such relation is not noticeable in rich countries. Watchtel (2002) through a theoretical investigation and review on the existing literature declared that the methodological investigation related to the inter-country studies and the objective interpretations conducted in such researches are weak. Rioja and Valev (2004) benefiting from GMM method for 74 countries showed that the relation between financial sector and economic growth relates to the financial development of countries. To describe the reason of crisis and negative effect of financial sector on the economic growth, Crotty (2007, 2008) said that, in recent years the deregulation and the decrease of implications of the rules at the financial sector for two decades has led to formation of a “new financial architecture” and the main paradigm of the system formed is based on the financial markets efficiency theory where the interactions of the economic agents are resulted in more systematic risk of the financial markets and eventually in downfall of the financial sector and economic growth of all countries of the world due to the interrelationship structures among the whole universal markets. Koetter and Wedow (2006) studying the financial intermediary in Germany concluded that the quality of the financial intermediation mainly affected the economic growth not the quantitative indexes (which have been attributed at the researches).

Importance of the Study

Understanding the proper relation between financial sector and economic growth at any time or in any place will have major impact of selection of proper policies, because fiscal and economic policies as well as rules and regulations all influence the financial system performance. In this research, researcher is using the empirical endogenous growth model based on the work of King and Levine (1993). Researcher wants to investigate the interaction between economic growth and financial sector through incorporated data and to ascertain whether the impact of the financial sector on economic growth in the Persian Gulf basin countries is claimed by the researchers made in the past decades as well as in recent years. Obviously the positive meaningful relation makes it necessary to adopt certain policies in relation to effective variables on financial sector. The result of this study can be used in evaluating the role of financial sector and its impact on economic growth.

Statement of the Problem

This research is regarding “the analytical study of linkages between financial sector and economic growth”. Therefore the statement is “there are direct or positive linkages between financial sector and economic growth”.

Research Methodology

Sources of Data

This study is based on secondary data. Our sources of data are various libraries, internet, and government documents. From those libraries and internet, researcher got the data from World Bank, World Development Indicators (WDI), International Monetary Fund (IMF), International Financial Statistics (IFS), Statistical Central of Iran and Central Bank of Iran (CBI).

Statistical Techniques

According to the recent empirical works related to the financial sector and economic growth literature, the empirical endogenous growth model based on the work of King and Levine (1993) will be used as follows:

$$Y_{it} = \alpha_0 + \alpha_1 F_{it} + \alpha_2 X_{it} + u_{it} \quad (1)$$

Where:

Y_{it} is the value dependent variable for country i in the period t . Y_{it} is indicator measure of economic growth for country i in the period t . Gross domestic product (GDP) per capita has been considered as an indicator of economic growth, which we show in the model with GYP . α_0 is the unknown intercept for each country. α_1 is the coefficient for the independent variable F_{it} . F_{it} represents independent variables for country i in the period t . In this model F_{it} is the indicator measure of financial sector development for country i in the period t . Indicators measuring financial sector development are as follows: The first financial development index is the size of the formal financial intermediaries to economic activities. It is the ratio of liquid liabilities of the financial system (currency plus demand and interest-bearing liabilities of banks and nonbank financial intermediaries) to GDP , that represents financial depth, which we show in the model with $DEPTH$. Whatever is greater than the size of financial intermediaries, financial services provision will be expanded? The second financial development index is the ratio of credit allocated to private enterprises to GDP . This index has been used to study the development of monetary sector, which we show in the model with $PRIVY$. Although King and Levine (1993) have shown that, finance can predict the growth; they only focused on

part of the financial system and ignored the capital market. So we have considered another financial development indicator in our research, which is the ratio of total value of stocks traded to *GDP*. This indicator is one of the criteria of capital market development, which we show in the model with *STV*. α_2 is the coefficient for the independent variable X_{it} . X_{it} is a set of variables which is effective in the economic growth for country i in the period t . In other words, X_{it} is a set of auxiliary variables in the growth model. The vector X includes the following variables:

- (1) *LYO*: it is the logarithm of initial income, which should capture the tendency for growth rates to converge across countries and over time
 - (2) *TRD*: it is the ratio of trade (i.e., imports plus exports) to *GDP*
 - (3) *GOV*: it is the ratio of government expenditure to *GDP*
 - (4) *GPO*: it is the population growth
 - (5) *INV*: it is the ratio of investment to *GDP*
 - (6) *FDI*: it is the ratio of foreign direct investment to *GDP*
- u_{it} is error term for country i in the period t .

Also, researcher can show the equation (1) in other forms as follows:

$$GYP_{it} = a_{0i} + a_1 FDI_{it} + a_2 INV_{it} + a_3 TRD_{it} + a_4 LOG(LYO_{it}) + a_5 GPO_{it} + a_6 GOV_{it} + a_7 PRIVY_{it} + u_{it}$$

MODEL PRIVY

$$GYP_{it} = b_{0i} + b_1 FDI_{it} + b_2 INV_{it} + b_3 TRD_{it} + b_4 LOG(LYO_{it}) + b_5 GPO_{it} + b_6 GOV_{it} + b_7 DEPTH_{it} + u_{it}$$

MODEL DEPTH

$$GYP_{it} = c_{0i} + c_1 FDI_{it} + c_2 INV_{it} + c_3 TRD_{it} + c_4 LOG(LYO_{it}) + c_5 GPO_{it} + c_6 GOV_{it} + c_7 STV_{it} + u_{it}$$

MODEL STV

(Countries) i = Bahrain, Iran, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates

(Period) t = from 2001 to 2007

In this study, researcher has tried to estimate MODEL PRIVY, MODEL DEPTH by panel data analysis of seven Persian Gulf basin countries from 2001 to 2007. These countries included are Bahrain, Iran, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. Researcher has used Panel data analysis. The term panel data refers to multi-dimensional data. Panel data contains observation on multiple phenomena observed over multiple time periods for the same firm or individuals. Time series and cross-sectional data are cases of panel data that are in one-dimension only.

Methodology

Researcher uses panel data regression model, which allows us to pool cross-sectional data, and estimate coefficients of our independent variables. In many cases, researchers can use panel data for items that cannot be examined only the time-series or within only cross-sectional. For example, if there is a problem in production function studies this can be separated from technological changes to form the economies of scale. In this case, cross-sectional data only provides information about the economies of scale. However, time series data affects technological changes and the economies of scale without splitting its effects. Empirical work typically is assumed. There is constant return to scale. So changes will be created only by changes in technology. Obviously this assumption was ambiguous and rather questionable. While researcher can examine the effects of both (technological changes and the economies of scale) separately using panel data (Vafaei, 2008). This methodology of research gives us the opportunity to use all the variables for all the countries for the same time together. With panel data analysis, we make a panel of data with three kinds of information: countries, economic variable and time series data. Therefore, it is reasonable to use this methodology for our research.

Scope of the Study

This study includes the Persian Gulf basin countries. Persian Gulf basin countries are selected on the basis of purposive sampling method. The countries included are Bahrain, Iran, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. This research covers a period of 7 years from 2001 to 2007.

Limitations of the Study

As mentioned above, the main goal of this thesis is an analytical study of linkages between financial sector and economic growth in Persian Gulf basin countries. In panel data analysis, we miss one particular entry then we would lose that data for all of our case studies. Therefore, it is very important to choose good quality data for our model. We have used the data covering a period of seven years from 2001 to 2007 for seven of Persian Gulf basin countries for our analysis for the following reasons: Lack of financial sector development in the Persian Gulf basin countries, high dispersion and also lack in consistent data related to financial indicators and macroeconomics for other years. Also, Iraq was not in our basket. Iraq's data is not acceptable for our research because during Iraq's war with Kuwait, it was a weak country in the Persian Gulf basin countries and lost most of its economic power. Then it did not have any real economic growth during war with Kuwait and later period. In fact, because of our methodology, panel data analysis and above mentioned limitations of availability of data, basket had to be reduced to seven countries.

Findings

In this growth model by unit root test, we tested the variables of model and the results show that all of the variables are stationary. We could use it for forecasting in the past. Each variable is estimated with data for seven countries. So automatically, the entire variable could be stationary even if data for one or two countries are missing. The results show that we have a positive relationship between financial sector and economic growth, which is significant. In other words, from estimate of the growth model, we have found that financial development indicators used in this study credit allocate to private enterprises, liquid

liabilities of the financial system (currency plus demand and interest-bearing liabilities of banks and nonbank financial intermediaries) and total value of stocks traded have a positive and significant impact on economic growth. Some researches such as Rousseau and Watchtel (2003) based their works on regression model used by King and Levine (1993), analyzed the interstate and incorporated data for 84 countries and showed that the positive and meaningful relation that was observed in 1960s, 1970s and 1980s is wiped out from 1990 to 2003. The results of this research are consistent with results of King and Levine study (1993) that provided evidences concerning systematic relation between a set of financial indices and economic growth. Four of the six variables which we introduced as independent variables (auxiliary variables in the growth model), have a positive relationship with the economic growth. Two other independent variables (auxiliary variables in the growth model) have a negative relationship with the economic growth. Initial income, foreign direct investment, investment and trade (i.e., imports plus exports) have a positive relation with the economic growth, which is significant. In this way government expenditure and population growth have a negative and significant relation with the economic growth.

Recommendations and Policy Implications

According to the results of the tests, findings confirm that the impact of financial sector development on economic growth is positive and significant. Therefore, abundant attention to this sector can reveal the effects it has done on the economic growth of society. So, to improve the conditions governing the financial sector can be expressed in strategies as follows:

1. The shareholders in stock exchange are mainly agencies and institutions affiliated to the Government. Thus, for the increased amount of transactions in the capital market, it is necessary to attempt increase in the free flow of stock.
2. According to the previous section, to increase the transactions in the stock exchange, it is better to provide large assignment of stocks to people which should be free.
3. Introduction of new tools and diversification of stocks such as Islamic bonds supply, papers futures etc, should be done.
4. Reduction in the interference of, Government agencies and organizations affiliated to the capital market.
5. Use of the tools (monetary & fiscal policies) which are effective in monetary and financial markets to apply policies to control inflation.
6. Diversification of financial instruments and financial innovations for diversification of assets, are necessary.

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