FINANCIAL DEVELOPMENT AND ECONOMIC GROWTH IN SAARC COUNTRIES

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Abstract

The main objective of this study is to investigate empirical links between financial development and economic growth in SAARC countries. More specifically the hypothesis of whether the financial development fosters or hinders economic growth in SAARC countries. Unbalanced panel dataset of six SAARC countries has been taken that includes Pakistan, India, Bangladesh, Bhutan, Nepal and Srilanka from the period of 1980 to 2009. By using linear-log model it has been found that financial development through the channel of financial liberalization affects economic growth significantly in SAARC countries.

Key words: Financial development, Financial liberalization, Economic growth

1. INTRODUCTION

Financial system consists of banking institutions, financial markets, and other intermediaries such as pension funds, insurance companies and a head institution (central bank) that watch over and supervises the functions of all these intermediaries.

As the world bank (1989,p.30) states that growth in countries, increase in investment and more financial deepening can be fostered by higher savings and all these things depend upon quality of a financial system and institutions a country has. This proves the relationship between financial development and economic growth .

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Financial development played a vital role in the economic progress of SAARC countries. In Pakistan it started in the early 1990s with the start up of financial sector liberalization under the broader macroeconomic structural adjustments programs. The large indicators of financial development showed upward trend due to the implementation of financial liberalization policies. This liberalization has been marked as a greater scope granted to market forces in determination of interest rate and allocation of credit. Financial reforms that have been implemented have lead to an improvement in the allocation of resources. Many studies based on cross-country data have found positive impact of various indicators of financial development. Similarly in India financial liberalization started in 1990s also in the late 1980s, the Prime Minister Rajiv Gandhi started some financial reforms after India faced balance of payments crisis. In the regime of P.V.Narasimha Rao and his finance minister Manmohan Singh breakthrough reforms were introduced through neo-liberal policies in which opening of international trade and investment, deregulation, initiation of privatization, tax reforms, inflation controlling measures were included. The purpose of Indian government was to transform the economic system from socialism to capitalism in order to achieve the high economic growth. Economic liberalization contains either trade liberalization or capital and current account liberalization or both. Since 1980s Bangladesh introduced various liberalization policies. This process was started with the liberalization of international trade which comprised permission of the export of non-traditional items to convert some of their export earnings at higher exchange rate in the secondary market, reduction of tariff level and tariff dispersion, simplification and rationalization of tariff structure and the deregulation of the import process as well as export incentives. Financial liberalization in Bangladesh was also introduced in 1990s including liberalization of interest rates, improvement of monitory policy, eliminating priority sector lending, strengthening central bank supervision, regulating banks, improving debt recovery and broadening capital market development. Empirical evidence on the effects of financial development on economic growth in Bangladesh has been mixed.

This paper is attempt to determine the empirical relationship between financial development and economic growth in South Asian Association for Regional Cooperation (SAARC) countries which includes Pakistan, Bangladesh, India, Maldives, Bhutan, Nepal, Sri lanka and Afghanistan. As there are many factors that influence the impact of financial development on economic growth of any country like wise factor accumulation, resource endowment, the degree

of macroeconomic stability, educational attainment, institutional development, legal system effectiveness and trade openness. Therefore, the relationship may vary across the countries because of different economic conditions faced by each of them. Financial development in any country can be defined as improvements in:

1- Creating information for possible investment and allocation of capital
2- Examining firms and applying corporate governance
3- Trading, diversification and managing risk
4- Mobilizing and grouping of savings
5- Making comfortable exchange of goods and services.

Finally these overall functions influence saving and investment decisions, technological innovations and ultimately economic growth. (Financial development and economic growth: A review of literature by Tridip Ray) .

The relationship between financial development and economic growth has always been taken as a subject of interest by the economists. As in 1873 Bagehot argued that financial development has performed a pivotal role in increasing the phase of industrialization in England by providing the mobilization of capital for growth. Schumpeter (1934) pointed out that banks actively stimulate the innovation and future growth by pinpointing and funding productive investments. However McKinnon an Shaw (1973) brought the attention of many researchers towards the relationship of financial development and economic growth. Lucas however disagrees with the point that finance is a major determinant of economic growth because he thought that its role is over-emphasized by many economists. Due to prevalence of this contradictory evidence Khan and Senhadji (2000) stress that the relationship between financial development and economic growth still must be defined with appropriate estimation methods employed. Another factor of financial development that must be taken into consideration is financial liberalization which has been the wide spread topic of debate among many economists especially in terms of its consequences on developing countries. Those who are against globalization used to claim that it is purely a western imperialism and most of the costly breakdowns that are concentrated since 1980s are ignited by financial liberalization but one of the staunch advocates of globalization Amritia Sen states that globalization is not only a western control but it is based on the mutual advantage gained by two or more parties involved in it and

also financial liberalization promotes average growth significantly under certain circumstances like in the presence of prudent fiscal and monitory policies implemented by the government .

The rest of the paper is organized as follows: section 2 describe an overview of the literature review; section 3 contains data and methodology; section 4 shows empirical results and section 5 conclusion.

2. LITERATURE REVIEW

There is a vast variety of literature present on this topic of relationship between financial development and economic growth as it has been the topic of great debate over the years especially in terms of its implications on developing and transitional economies which are undergoing structural changes .As it has also been the matter of concern for many researchers whether the effects are more pronounced in developing economies or in developed.

Law and Habibullah (2009) provided some evidence by empirically determining the influence of institutional quality and financial liberalization on financial market development using data from 27 economies (the G-7, Europe, East Asia and Latin America) during 1980-2001 and on the basis of empirical results they suggested that effects of financial liberalization programs are more pronounced in developed economies.

Guilaumont et al. (2005) and Arestis et.al (2006) are of the view that financial development improves productivity and economic growth in the developing countries.

Anderson and trap tried to determine the relationship between financial liberalization, financial development and economic growth using panel data of 95 countries during the period of 1960-1989 and the same relation was examined by James using time –series data of Malaysia with additional variable saving mobilization for the period of 1960-2007. Ghali (1999), Ghirmay (2004) and Rousseau and Wachtel (2001) studied the empirical relationship between the degree of financial development and economic growth and concluded that with the existence of inefficient financial system (e.g. high transaction and information cost) effects may not be more pronounced. Moreno (2002), Jeanneney et al.(2006), Bittencourt (2009) and Habibullah et al.(2006) by taking panel data and using the two variables: liquidity ratio and credit to private ratio found that financial development allow the poor to take benefit from financial services that increase their income through interest earned and enable them to undertake profitable

investments and other activities and also concluded that there is income inequality, financial development benefit the poor not the poorest.

Compton et al. (2010) and Cheng et al. (2009) tried to determine whether the institutional reforms particularly related to banking sector affects the link between financial development and economic growth and they found positive impact of it and also found that countries that already have good institutions may show less positive impact of institutional development.

The relationship between financial development and economic growth with the additional impact of human capital was determined by using translog production function. Financial development is as important as human capital in economic growth. (Green & Murinde,2002)

And also the same relationship between financial development and economic growth was studied by Auerbach and Sidiki (2004) suggesting the importance of financial liberalization in economic progress. It was found that there is the long term relationship between financial development and income in Algeria, Egypt and Morocco when the two variables: ratio of liquid liability to GDP and ratio of deposit money to GDP are included. (Lutz,2008)

The effect of financial development on growth was determined by using the variables bank credit to private sector and GDP and found that in short run there is a weak linkage between them Dritsakis and Adamopoulos (2001) and Hung (2009) by using the same variables found the non-linear relationship between financial development and economic growth. Lensik (2003) tried to determine whether the negative impact of uncertain monetary and fiscal policies is mitigated by the financial development and found that those countries who have improved financial sector mitigate the negative impact of policy uncertainty on economic growth. Alper and Cakici (2008) investigated empirical link between financial development coupled with fiscal prudence and economic growth and found more significant impact than individual impact of financial development.

Apergis et al.(2009) examined relationship between financial development and economic growth and found positive relation. Also (colle, 2010; Al-Tamimi, 2002; Tarlok Singh, 2008) studied the long-run relationship between financial development and economic growth and found positive relation.

Gallindo et al. (2002) studied the impact of financial liberalization on the linkage of financial development and economic growth and found that the effect of financial liberalization differ significantly across countries and is strongly related to the quality of the institutions governing

credit markets. Also Andini (2009) used the cross-sectional data from 71 countries to show that the positive impact of financial development on economic growth is sensitive when outliers are present and found that if the countries having high growth rate are removed from the sample then the positive effect will be decreased or we will get mixed results.

Kose et al. (2003) and Norman et al. are of the view that higher financial development leads to higher GDP volatility whereas Waheed & Jalil (2010) determined that higher financial development reduces GDP volatility in china. It is determined that rise in real interest rate is essential to stimulate saving and investment for economic growth (Odhiambo & Imail, 2010; Gaiha et al.; Ghatak, 1997; Auerbach and Siddiki, 2010; Yongfu Huang, 2010; Arestis et.al, 2002).

The positive relationship between financial development and economic growth in terms of bank and market based financial structure was determined by Thangavelu et al. (2002) and Levine (2001). Beck, Kunt et.al (2008) found from empirical results that financial development really fosters the growth of small-firm industries more than large-firm industries. Dawson (2003) found that there is insignificant impact on economic growth when financial development is measured by liquid liabilities as a proportion of gross domestic product.

3. DATA AND METHODOLOGY

The data is collected from World Bank and bureau of labor statistics departments of SAARC countries. To examine the relationship between financial development and economic growth in SAARC countries unbalanced annual data of these countries was collected from the period of 1980 to 2009. Six countries of SAARC are included: (Bangladesh, Bhutan, India, Nepal, Pakistan and Srilanka) and rest of the countries (Afghanistan and Maldives) were not taken because of insufficient data availability.

The variables are:

Y = Nominal GDP

Lnm_2 = Money two as a percent of GDP

R = Real interest rate

NX =Net exports

Fdi = Foreign direct investment

Unm =Unemployment

G = government expenditure as a percent of GDP

$$Y_{it}=\beta_0 + \beta_1 lnM2_{it} + \beta_2 r_{it} + \beta_3 g_{it} + \beta_4 fdi_{it} + \beta_5 unm_{it} + \beta_6 nx_{it} + \beta_7 nx_{it}*fdi_{it} + \beta_8 unm_{it}*fdi_{it} + \beta_9 g_{it}*lnM2_{it} + u_{it}$$

The dependent variable Y represents nominal GDP and independent variables m2 represents money 2 as a percent of GDP with natural log, r represents real interest rate and control variables are also taken into account to reduce omitted variable bias. Control variables includes nx that represents net exports, fdi represents foreign direct investment, unm represents unemployment and g means government expenditure which are also taken as percent of gdp and other interactions are used to examine joint effect of control and independent variables.

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	Model 1	Model 2	Model 3	Model 4

Dependent Variable GDP				
Constant	-6.25248*	-20.4041***	-19.908***	-19.8873**
	(3.43153)	(7.794426)	(7.716566)	(8.283244)
Lnm_2	3.345272***	7.692049***	7.86495***	8.06643***
	(0.965196)	(2.297517)	(2.275319)	(2.435983)
NX	-0.12107**	0.120266**	-0.01767	-0.01432
	(0.050416)	(0.048627)	(0.080833)	(0.089863)
FDI	-0.20417	-1.94096***	-2.7298***	-2.85412***
	(0.274911)	(0.713348)	(0.864341)	(0.935679)
Unm	0.048998	-0.2064*	-0.20295*	-0.21591*
	(0.062901)	(0.107117)	(0.105981)	(0.114627)
R	-0.10766*	-0.1587**	-0.1926***	-0.29283**
	(0.054964)	(0.061968)	(0.064959)	(0.130391)
G	-0.05845	1.746558*	1.733502*	1.637234*
	(0.068132)	(0.950921)	(0.940679)	(0.996095)
*NX*fdi*			-0.12523	-0.13394
			(0.079297)	(0.085871)
*unm*fdi*		0.271424***	0.26414***	0.276698**
		(0.103423)	(0.10241)	(0.111454)
$g*lnm_2$		-0.48856*	-0.48979*	-0.47372*
		(0.260595)	(0.257779)	(0.271703)
*g*lnm2*r*				0.001345
				(0.002625)
R-squared	0.271121	0.351565	0.374837	0.38769
Adjusted R-squared	0.208646	0.275278	0.29086	0.297644
F-test	4.339648	4.608482	4.463570	4.305482

Note: * significant at 10% level, ** significant at 5%, *** significant at 1%

4. EMPIRICAL RESULTS AND DISCUSSIONS

As to check the robustness of a model only few variables were included in first model and then interactions among these variables were included in 2nd, 3rd and 4th model. The results of OLS regression show that independent variables natural Log of broad money (lnm_2) and real interest rate (r) are statistically significant former showing positive relation and latter negative as decline in interest rate to increase money supply is an indicator of efficiency in financial institutions of a country (e.g. financial development) that fosters economic growth. An increase in broad money as a percent of GDP also indicates the financial efficiency of the system that causes increase in economic growth in SAARC countries. Control variables were also added that have effect on economic growth on SAARC countries and were related to financial development indicators that were taken as independent variables. The variable broad money (M2) as a percent of GDP taken as a measure of financial development has positive effect on economic growth of these six countries as investment increases which generates employment in six countries which is also proved by the negative relation of unemployment rate as it has a negative co-efficient used as a control variable. Other control variables like FDI (foreign direct investment) and NX (net exports) taken as a percent of GDP are statistically insignificant and variable g representing government expenditure is significant at 10 percent. The effect of government expenditure over the economic growth is negative in model 1 but with the addition of interaction terms among measures of financial development in model 2, model 3 and model 4 yields a positive impact of government expenditure over economic growth.

In model 1 independent variables lnm2 is statistically significant at 10 percent level showing negative relation, as supply of broad money as a percentage of GDP increase in SAARC countries that is attributed to financial development causes GDP growth in these countries, also real interest rate is statistically significant at 1 percent level and showing negative relation, the real interest rate increment in SAARC countries reduces efficiency of financial institutions causing less demand of loanable funds from the side of households and corporations that in result hampers financial development causing low GDP growth in SAARC countries. All the control variables are statistically insignificant except the control variable net export that is significant at 5 percent level showing negative relationship with the dependent variable GDP growth

suggesting the net exports increase in SAARC countries is likely to hinder financial development eventually causing low GDP growth in these countries.

In model 2 the impact of independent variables become more pronounced as the interaction between foreign direct investment and unemployment, government expenditure and natural log of broad money are added, both the interaction terms are statistically significant at 1 and 10 percent level respectively.

In model 3 when interaction between net exports and foreign direct investment is added the significance of independent variable *Lnm2* increases more than the Lnm_2 in model 2 and now interest rate is significant at 1%. Coefficient of interaction term shows negative relationship with economic growth due to the insignificant values of foreign direct investment and net exports otherwise individually these both have the positive impact on the economic growth. Increase in R-square value show that these variables explain more variability and there will be omitted variable bias if we exclude the interaction term that is between net exports and foreign direct investment.

In model 4, four interaction terms are included. By including the interaction between government expenditure, Lnm_2 and interest rate, there is very small increase in R-square and adjusted R-square. This shows that there is little impact of it and there will be no any omitted variable biased if this term will be excluded from the model. Due to addition of this interaction term, significance level of real interest rate and government expenditure is decreased.

5. CONCLUSION

Using unbalanced data of SAARC countries during the period of 1980-2009 the relationship between financial development and economic growth was investigated. Positive relationship between financial development and economic growth was found. As the empirical results suggest that broad money in each country increases overall financial efficiency of the system due to liberalization of trade fostering financial development which causes GDP growth in SAARC countries. Financial liberalization causes FDI to decrease because interest rate will decrease due to financial liberalization that discourage the foreign direct investment. Financial liberalization

does not only cause net-exports to rise but it reduces unemployment rate through foreign direct investment. So financial development through financial liberalization does not only have single impact on south Asian economies (e.g. Bangladesh, Bhutan, India, Nepal, Pakistan and Srilanka) but it has a tickle down effect, financial efficiency of a system brings social as well as economic development in these economies. There are host of factors like rise in FDI, employment generation, increase in broad money and net-exports which make these south Asian countries financially strong than they were in the past and ultimately cause their GDP to grow.

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