International Journal of Economics, Commerce and Management
United Kingdom Vol. II, Issue 11, Nov 2014
http://ijecm.co.uk/ ISSN 2348 0386

'DEVELOPMENT OF FINANCIAL SECTOR' AN EMPIRICAL EVIDENCE FROM SAARC COUNTRIES

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Abstract

This empirical research is contribution towards strengthening the financial sector of SAARC countries and an attempt to investigate the key factors that determines the financial sector development. Private Sector Credit (PSC) is used as dependent variable while Trade openness, Inflation, Real Interest Rate and Real GDP are used as independent variables. We have collected data of seven SAARC countries (Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka) for the time period of 21 years (1993 to 2013) from different authenticated sources i.e. data bank World Bank and Asian Development Bank. Random effect model is used for statistical analysis. Results show that Trade openness and Real GDP have positive impact while Real interest rate and inflation have negative impact on financial sector development. At the end, study makes policy implications and suggests scope for further research.

Keywords: SAARC, Private Sector Credit, Trade openness, Inflation, Real interest rate, Real GDP

INTRODUCTION

This research study is an attempt to investigate key factors that determines the development of financial sector in SAARC countries. This study explores the linkage between different financial and economic indicators and their impact on the financial sector development. The recent financial crises of United States of America and euro-zone have motivated researchers to explore the factors that determine the development of financial sector.

"Financial development of a country refers to such elements, policy making decisions and institutions that lead to an efficient financial markets and easy access to capital and financial service" (Financial development Index, 2008). The development of financial sector has a significant importance because it promotes the economic development in a country and well-established financial system of a country has a significant importance for economic growth (Levine, 2004).

Recent research has showed how the financial sector of any country has contributed in developing the economy of country by enhancing overall production level and eventually economic growth of country. For the last two decades, it is seen that many developing and industrialized countries have liberalized their financial and banking sector. License was given to private local banks, barriers of entering of foreign banks were uplifted, many public financial institutions were privatized, market based securities were introduced. The major purpose has been to increase effectiveness and efficiency of allocation of investment and to increase the provision of banking sector to all sectors of country.

The advantages of well-developed financial markets have been widely discussed. Effective and efficient financial markets not only mobilize capital and resources towards investments but it diversify risks and monitor the working of corporate sector (Standley, 2010). The financial sector is a key player in mobilizing and allocation of savings of people towards productive use and provides basic mechanism for monetary management in a country. Banking sector also helps in minimizing the risk faced by companies and organization in their productive processes and helps in upgrading their portfolio diversification. Moreover, the banking system provides bonding between various sectors of economy and it encourages the high level of specialized skills. Financial sector provides the essential environment for execution of different economic policies in country having major focus to reach non- inflationary growth, stability of exchange rate in country, equilibrium of balance of payment and reducing unemployment level in country (Nzotta & Okereke, 2009).

Research has shown that well developed financial sector not only increases the capital supply but due to the favorable policies by host nations, it can also help in gaining the technological innovation. A bidirectional causal relationship exists between economic growth and technological innovations. Financial sector development promotes the economic growth in country through direct and indirect ways (Anwar & Nguyen, 2009).

The importance of financial sector in promoting economic growth has been well documented in finance literature. However, the question is why a number of economies are still financially underdeveloped if financial sector is good for economic growth of country. More precisely, why some countries have well developed financial sector while other lack behind.

The rest of the paper is structured as follow: In section 2, we will discuss about the findings of previous researches and their findings and will construct econometric model according to it. In section 3, we will explain the research methodology. In section 4, we will discuss the empirical analysis and in section 5, we will conclude our findings and give recommendations for development of financial sector.

LITERATURE REVIEW

One of the most controversial issues among the economist and finance researchers is the relationship between the economic growth and the financial sector development. According to Hicks (1969) the financial system had a significant role in industrial revolution in England. Schumpeter (1911) suggested that well developed financial structure promotes the technological advancement in country by increasing the amount of funding to entrepreneurs that eventually results in the economic development of country.

The early research on the financial development by McKinnon (1973) and Shaw (1973) suggested the important sources of financial underdevelopment in a country. They emphasises that high interest rates, reserve requirement ceiling and direct credit programs are mainly responsible for undevelopment of financial sector in a county.

Trade openness or trade liberalization is considered to be an opportunity for any country to integrate with other economies of the world. Trade openness promotes the economic and financial development in a country because it enables the domestic economy to interact with the internationally adopted techniques and skills (Mohammad, 2010).

One of the highly debated topics in finance and economic literature is the relationship between trade openness and growth. However, this topic is not resolved yet. According to theoretical growth studies, the relationship between trade restrictions and financial growth is complex and uncertain. According to endogenous growth theory, trade restrictions have a tendency to increase or decrease the financial growth in a country (Romer, 1990; Grossman & Helpman, 1990; Matsuyama, 1992).

Yanikkaya (2003) conducted a research to explore the relationship between trade openness and financial and economic growth. His findings suggests that trade openness is significantly positively associated with growth of country. Moreover trade openness promotes the financial and economic growth through transfer of technology and comparative advantage.

Greene & Villanueva (1990) investigated the determinants of investments in 23 countries. There results suggested that real interest rate negatively influence financial sector. Hyder & Ahmed (2003) validates the findings of Greene & Villanueva (1990) by concluding the negative relationship of real interest rate with private investment that eventually affects the financial sector development of country. In other words, high interest rate negatively affects the financial sector development.

Bader & Malawi (2010) studied the impact of real interest rate on the financial development. They argued that real interest rate has a negative impact on the investment level i.e. higher the interest rate lower will be the investment level in country. However the findings of Yu & Gan (2010) suggested that real interest rate is positively associated with financial sector development however this relationship was found insignificant.

RESEARCH METHODOLOGY

Hypotheses

On the basis of above literature review, we propose the following hypothesis.

H1: Trade Openness have a significant positive impact on the financial development of SAARC countries

H2: Inflation have a negative impact on the financial development of SAARC countries

H3: Real Interest rate have a negative impact on the financial development of SAARC countries

H4: Real GDP have a positive impact on the financial development of SAARC countries

Sample Size & Data Collection

We have collected the data for seven SAARC countries i.e. Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Srilanka. We have gathered data from different authenticated sources i.e. data bank World Bank and Asian Development Bank. We have gathered 21 year data from 1993 to 2013,

Statistical Analysis

Panel regression is used for obtaining the statistical results. In order to check whether fixed effect model is appropriate or random effect model, we have used Breusch and Pagan Lagrangian test. The results of Breush and Pagan Lagrangian test will reveal which model is more appropriate for balanced panel regression.

ANALYSIS & FINDING

Breusch and Pagan Lagragian multiplier test

Table 1 .Breusch and Pagan Lagragian multiplier test for random effects

	Var	Sd=sqrt(var)
PSC	.1321011	.3634571
E	.0330671	.1818437
U	.0485695	.2203848
Prob > chi2 = 0.0000	**chi2(1) = 393.14**	

The P-value clearly rejects the null hypothesis showing that random effect model is more appropriate than fixed effect model as the results of random and fixed effect model do not differ significantly. Another test that can be used to check which model is more appropriate is Hausman test, however Breush and Pagan Lagrangian test is more favorable because of less degree of freedom

Random Effect Model

The results of Breush and Pagan Lagrangian test clearly reveals that random effect model is more appropriate than fixed effect model; therefore the statistical equation for random effect model is given below.

$$PSC_{it} = \beta_1 + \beta_2 TO_{2\ it} + \beta_3 INF_{3\ it} \beta_3 RI_{3\ it} + \beta_4 RGDP_{4\ it} + \delta_t + \omega_{it}$$

$$\omega_{it} = ei + \varepsilon_{it}$$

Idiosyncratic error is known as the error term of random panel regression as it is combination of two components *ei* andε_{it}. As ω_{it} changes stochastically over *i* and *t* that is why it requires special treatment.

Table 2. Random Effect Model

Variable	**Coefficient**	**Std. Error**	**t-statistics**	**Prob.**
C	1.548303	.167692	9.32	0.00
TO	. 1068847	0.0321767	3.32	0.001
INF	-.0225297	0.0053053	-4.25	0.00
RI	-.0103405	0.0046076	-2.24	0.025
RGDP	.4344449	0.032079	13.56	0.00
R-Squared = 0.7071			Adjusted R Squared= 0.5478	

The above table represents the results of generalized panel least squares. Trade openness (t=3.32), and Real GDP (t=13.56) have positive impact while Inflation (t=-4.25)and Real Interest (t=-2.24) have negative impact on Private Sector Credit (PSC). The value of Adjusted R-squared is 0.5478 that means that all independent variables (TO, INF, RI & RGDP) are explaining 54.78% variation in dependent variable (PSC).

Table 3. Expected and Observed Sign of independent Variables

Variable	**Expected Sign**	**Observed sign**
Trade Openness	+ve	+ve
Inflation	-ve	-ve
Real Interest	-ve	-ve
Real GDP	+ve	+ve

CONCLUSION

This research is an effort to better understand the key factors that determine the financial sector development in SAARC countries i.e. Bangladesh, Bhutan, Pakistan, India, Maldives, Nepal and Srilanka. This study explores the linkage between different financial and economic indicators and their impact on the financial sector development. We have used private sector credit as proxy for financial sector development. Trade openness, Inflation, Real Interest rate and Real GDP is used as independent variable. Results of random effect reveals that trade openness and real GDP have positive and significant impact on financial sector of SAARC countries. Meanwhile Inflation and Real interest rate have negative impact on development of financial sector of SAARC countries. On the basis of above discussions and results, we can conclude the following

- Trade openness has a positive and significant impact on financial sector development. SAARC countries should promote the trade openness, as it is an opportunity to integrate and interact with economies of different countries. It will help in promoting the internationally adopted techniques and skills in domestic economy. Hence we fail to reject H1 that trade openness have positive impact on financial sector development.
- Inflation has a significant but negative impact on financial sector development. SAARC countries should reduce the inflation rate. High inflation rate will result in less saving behavior in country. Hence, we fail to reject H2 that inflation have negative impact on financial sector development.

- Real interest rate has a negative but significant impact on financial sector development. SAARC countries should focus on decreasing the real interest rate. Higher interest rate will lead towards the low investments level in country. Hence, we fail to reject H3 that Real interest rate have negative impact on financial sector development
- Real GDP has a positive and significant impact on financial sector development. Higher Real GDP will tend towards the better infrastructure of financial sector. Hence, we fail to reject H4 that Real GDP have positive impact on financial sector development

Recommendations

Based on above conclusions, we recommend that SAARC countries should focus towards Trade openness. It will bring new and innovative technologies and skills in domestic economy. Moreover, it will help local economy to interact with international economy. It will help in strengthening the financial sector. SAARC countries should also focus on Real Interest rate and inflation. High interest rate and inflation rate will have negative impact on financial sector development. If the interest rate will be high, the investment level in country will be low.

Direction for Future Research

A further study shall be carried out as under:

- Domestics and liquid liabilities can also be used as proxy for banking sector development
- Semiannually, quarterly or monthly data can be obtained for research.
- Other macro-economic variables like financial liberalization can be incorporated in the research framework.

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