FINANCIAL DEVELOPMENT AND ECONOMIC GROWTH: EVIDENCE FROM A PANEL STUDY ON SOUTH ASIAN COUNTRIES

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ABSTRACT

The paper examines the relationship between financial development and economic growth using panel data for five emerging South Asian countries - Bangladesh, India, Nepal, Pakistan and Sri Lanka. The heterogeneous panel data is collected from the World Bank for the period of 1974 to 2012. Economic Growth is represented by GDP growth rate, and for Financial Development, five major variables have been used: (i) Domestic Credit Provided by Financial Sector, (ii) Total Debt Services, (iii) Gross Domestic Savings, (iv) Broad Money, and (v) Trade Balance. Fixed Effect Panel regression model has been used and Time Fixed Effect, Cross Sectional Dependence, Heteroskedasticity, Serial Correlation and Cointegration have been tested for model fitness. The results indicate that growth of total debt services and domestic savings have significant impact on economic development of these countries. Interestingly, broad money, trade balance and domestic credit have no considerable influence on fostering economic growth which is generally unexpected. The paper places several arguments to explain these results. The study appears to be a first hand examination on the South Asian countries and adds new insight into the existing literature. The findings and discussions presented would be valuable in designing long term financial and macroeconomic policies by these countries.

Keywords: Financial development, Economic growth, Financial economics, Economic development, South Asia, Panel cointegration.

Contribution/ Originality

In this study an attempt has been made add to the existing literature by analyzing the relationship between financial development and economic growth which has not been attempted in previous studies .

1. INTRODUCTION

The examination of the relationship between financial development and economic growth can conduct from different perspectives. The most important interlocks between the two variables is that better financial development reduces transaction, information and monitoring cost of of financial businesses. A well performed financial market can facilitate higher savings and investment. So, the general consensus is that a better performing financial sector enables an economy to allocate resources efficiently and increase the gross domestic production. However, many empirical studies have failed to establish the direction of causality between the two factors. Preceding researchers have produced inconsistent results on the impact, nature and direction of the relationship between the variables. Several ideas have been presented. Firstly, the *supply-leading group* which argues that well developed financial system plays an important role in increasing productivity and economic growth (Goldsmith, 1969; McKinnon, 1973; Choe and Moosa, 1999; Levine *et al.*, 2000; Bittencourt, 2012). Secondly, the *demand-following* hypothesis established by the studies of Dematriades and Hussain (1996); Liang and Teng (2006); Zang and Kim (2007) and Odhiambo (2008) who argues that when the real output of the economy goes up, it requires greater amount of financial services. Thus, a growing economy will demand a financial system which is larger and more efficient. The third school of thought shows a bi-directional relationship between financial development and economic growth. This bi-directional idea has been established from the findings of the following researchers Wood (1993); Akinboade (1998); Luintel and Khan (1999) and Apergis *et al.* (2007). Lastly, Lucas (1988) and Deidda and Fatouh (2002). All of them dismissed the idea of financial development as key determinants of economic growth. They found no significant relationship between the variables. It is important to provide some theoretical idea about the two main variables (financial development and economic growth) of the paper. Economists have defined economic growth as the increase in the per capita gross domestic product or a rise in other measures of aggregate income. According to Bjork (1999) to eliminate the distorting effects of inflation, growth is often measured in real terms which mean real increase in production of outputs in an economy. In earlier theories, Hicks (1940) and Samuelson (1950) argued that increasing per capita income is indicative of the potentiality of a nation to achieve future economic welfare. So, they suggested that rising per capita income is a good measure of economic growth. On the other, hand Kuznets (1949) suggested that economic growth is the contribution of different economic activities to accomplish higher status of human welfare and economic growth is a quantitative concept. Again, Kuznets (1968) also stated that sustained increase in population and product per capita can be defined as measurements of economic growth.

In our study we have considered growth of gross domestic product as the indicator of economic growth for five South Asian countries.

Financial systems are a set of institutions, instruments and markets along with legal and regulatory framework that permits flow of money to facilitate economic activity. It provides important information regarding investment and capital allocation. Financial intermediaries monitor investment, assist in increasing productivity. Better financial management facilitates trade, managing risk, savings mobilization and promoting exchange of goods and services. The development of financial services involves the establishment and improvement of financial institutions, instruments and market that support investment and growth process (FitzGerald, 2006). According to a financial report prepared by International Monetary Fund Staff (2005) a well-developed financial system offers alternative investment opportunities with variety of rate of returns, risk and maturities. The motivation of this paper comes from the potential linkage between the two variables for the developing economies of South Asia. According to our knowledge and study no researches have attempted to measure the impact of financial development on the economic growth for South Asian countries using panel data from 1974 to 2012. The countries we have prepared the study on are Bangladesh, India, Nepal, Pakistan and Sri Lanka. Therefore, the main purpose of this article is to show the importance of financial market development for sustainable economic growth of these economies. The paper also aims to identify the key financial market activities that play significant role to promote economic growth. It departs from earlier works by using additional data and better financial variables for defining financial development. Our secondary objective is to find the exact mechanism through which financial system affects economic growth for the five South Asian countries.

The focus is on how big an impact financial development has and will have on the economic growth, not about the direction of the causal relationship in case of South Asian economies. Thus, the results of this empirical study will provide direction to the respective governments to channel their regulatory and supervisory efforts towards improving key areas of the financial system for achieving the coveted economic growth. The layout of the paper is organized as follows. Literature Review (Section 2) provides a brief evaluation of the literature on the relationship between financial development and economic growth. Research objective (Section 4) shows the general objective of undertaking the research. Methodology (Section 4) presents the data and the econometric framework. Analysis and discussion portion (Section 5)states the empirical results. Finally, findings and conclusion (Section 6) draws policy implications and offers concluding remarks.

2. LITERATURE REVIEW

No universal accord on the exact relationship between the variables have been established after a notable number of studies and great deal of attempt devoted empirically in disentangling the impact of financial development on economic growth. Patrick (1966) showed that how much the economy demands financial services often depend on the development of the real output and

modernization of agriculture along with other subsectors of the economy. He concluded that for a nation the financial market develops, expands and becomes more efficient because of real economic growth. Again, he also concluded that financial development can influence real capital stock and economic growth in three major ways. First, better financial market development promotes better use of resources. Second, efficient allocations of resources are key for efficient financial institutions and lastly, well-organized financial market provides incentive to the households to save, invest and work more. Thus, financial development mobilizes domestic savings and investments which encourage higher productivity and economic growth by establishing an efficient financial market. Patrick identified the causality between financial development and growth from two separate standpoints. He provided the supply-leading and demand-following hypothesis. In an attempt to draw a conclusion to the argument, Goldsmith (1969) said that financial development mainly occurs during the premature phases when the economic development and the income is at a low level. His finding was further supported by De Gregorio and Guidotti (1995). They found that the correlation between financial development and economic growth are stronger in early stages of development. In their study with the for the OECD countries, they also showed that as the countries income level goes up the effect of financial development fades away gradually. Likewise, according to Pagano (1993) development of the financial sector can influence the economic growth through increasing productivity of the investment of the investors, reducing transaction costs for the customers and by promoting savings for the households. Adamopoulos (2008) investigated the relationship between credit market development, stock market development and economic growth for Ireland for the period 1965-2007.

The Granger causality test indicated that there is a bi directional relationship between stock market development and economic growth. Again, McKinnon (1973) suggested an efficient financial system that offers higher real interest rate may induce people to save more and this will ensure availability of additional loanable funds which promotes economic growth. On the other hand, Levine (1997) identified that financial development supports economic growth with capital accumulation and technological innovation. Again, Odhiambo (2008) with ARDL bound testing procedure tested the dynamic causal relationship between stock market development and economic growth for South Africa with data from 1971-2007. The empirical study from the research showed that there is causal relationship between economic growth and stock market development. In another panel data analysis (Müslümov and Aras, 2002) conducted a Granger causality test for 22 OECD countries and found a one way relationship from the development of capital market to the economic growth. For recent evidence (Levine *et al.*, 2000) and Beck *et al.* (2000) used panel data of 77 countries from 1960 to 1995 to analyze the causal relationship from financial development to economic growth. Their analysis concluded that increased pace of economic growth and factor productivity can be achieve through higher levels of financial sector development.

Conversely, a different proposition is found from the research of Singh (1997). He argued that in the developing countries the stock market often misallocate resources because of the volatility in the market pricing process. Thus, according to his findings stock market development might put

pressure on the existing banking system in the developing countries and this might lead to economic problem. On a similar note Lucas (1988) commented that economist often overstate the importance of financial system on economic growth. Shan *et al.* (2001) supported Lucas's view by pointing out on the economic performance of some Asian economies (like China) who have achieved remarkable economic growth with a repressive and weak financial system. Again, Deidda and Fatouh (2002) using a threshold regression model found nonlinear relationship between financial development and economic growth. Furthermore, İnce (2011) used data from 1980 to 2010 for Turkey to measure the relationship between economic growth and financial development with cointegration and causality test. The research concluded that there was no long term relationship between economic growth and financial development.

Greenwood and Jovanovic (1990) analyzed the relationship between finance and economic growth and their study concluded that an improved system of financial intermediation is able to allocate more capital to efficient and profitable investment and higher investment cultivates higher economic output. Similarly, Bencivenga and Smith (1991) emphasized on the fact that well established financial intermediaries reduces risk and increases productivity. Christopoulos and Tsionas (2004) investigated the long run relationship between financial depth and economic growth, using panel unit root and cointegration analysis for ten developing countries. The empirical results provided a clear support for the hypothesis that there is a single equilibrium relation between financial depth and growth which means the cointegrating relationship is unidirectional from financial depth to growth. On the contrary, Luintel and Khan (1999) found a bi-directional relationship between the financial development and economic growth by using data from ten least developed countries and Al-Yousif (2002) in his research, which was based on 30 developing countries, concluded that the bi-directional relationship between finance lead economic growths cannot be generalized across countries. Chen (2002) used data from 1952 to 1999 for the Chinese economy to conduct a cointegration test and Bayesian vector analysis test. The aim of the study was to examine the causal relationship between interest rate, savings and national income. His analysis concluded that interest rate liberalization and sound financial intermediation can help to establish sustainable economic growth. Again, Ansari (2002) analyzed the relationship between national income and financial development and money supply for Malaysian economy and the results showed that financial market development has positive impact on income growth. From the perspective of South Asia, Ray (2013) used granger causality test for India to explore the relationship between financial development and economic growth for the period of 1990-91 to 2010-11. The study concluded that financial development in India plays strong role in the growth process. On the other hand, Singh (2008) conducted a time series analysis for Indian economy with data from the period of 1951 to 1996. The results showed only one way causality between financial development and economic growth of India.

In like manner, Mercan and Ismet (2013) looked at the effects of financial development on economic growth for five emerging markets (Brazil, Russia, India, China & Turkey) applying panel data analysis for the period from 1989-2010 and the study concluded that the effect of financial

development on economic growth was positive and statistically significant. In the cases of the developed economies, Schich and Pelgrin (2002) have found significant relationship between financial development and higher levels of investment for nineteen OECD countries. Furthermore, Caporale *et al.* (2009) examined the relationship between financial development and economic growth for ten new EU countries by estimating a dynamic panel model. The Granger causality test of the study indicated that causality runs from financial development to economic growth, but not the opposite direction. In contrast, Arestis *et al.* (2001) explained in their research that financial development is a multifaceted process. According to them there are empirical evidences that found no relationship between financial development and economic growth. As Cargill and Parker (2001) have discussed in their study the dangers and consequences of too much financial liberalization form the experiencesof Japan's economy. Some researchers focused their study of financial development and economic growth from the context of individual countries separately with country specific data. Hasan *et al.* (2009) used panel data from Chinese provinces to study the impact of financial and legal institutions on economic growth rates. The evidence from the study suggests that improvement of financial market, legal environment and political pluralism have strong association with economic growth of China. In another study with Chinese economy (Zhang *et al.*, 2012) collected data from 286 cities of China for the period of 2001-2006 to examine the relationship between financial development and economic growth at the city level in China. The study used cross- sectional regression, first-difference and GMM estimation for the panel data to establish that financial development and economic growth in the cities of China are positively related. Similarly, Yang and Yi (2008) investigated the causal relationship between financial development and economic growth for Korea and established unidirectional relationship between the two variables. Again, Masih *et al.* (2009) used data from Saudi Arabia to analyze the causality between financial development and economic growth with long run structural modeling. They also found unidirectional relationship between the two variables. The authors concluded that the course of causation between financial development and economic growth is supply- leading rather than demand following. Furthermore, there are other researchers who studied the relationship among financial development and economic growth from the perspective of income group of countries. Often the countries are clustered based on low income, developed or developing countries. For example, Hassan *et al.* (2011) performed short run multivariate analysis and long run causality test with panel data for low and middle income countries which are classified by regions. The result shows two different scenarios for poorest and noon poorest regions. Like, two way causal relationships between financial development and economic growth for most regions and one way causality from growth to financial expansion for poorest regions. Again, Giuliano and Ruiz-Arranz (2009) used another important variable to the arguments for hundred developing countries. They used constructive data to understand the correlation between remittance, financial development and economic growth. The results of the study shows that although financial development is important for economic growth but if the financial sector of the country does not function efficiently remittance money can play as an alternative source for investment.

From the above discussion we may conclude that the strong positive correlation between financial development and economic growth is well documented in various literatures. At the same time, diverse contradictory observations are also evident from earlier studies. The previous empirical studies have produced mixed and conflicting results on the impact, nature and direction of the relationship. We have found literatures for both developed and developing countries and also for sub- Saharan African countries. Some supported the view of financial development led economic growth and some researchers said the relationship is ambiguous. But, no researches have been conducted regarding the relationship between financial development and economic growth in South Asian countries. The attempt of this study is to fill the gap and to understand the relationship of financial development and economic growth for developing countries of South Asia.

3. RESEARCH OBJECTIVE

The primary objective of this research is to examine the impact of financial development on the growth of economies at cross-national level in South Asian countries. Although, financial development is a broad concept and can be defined with a varied extent, this research has identified five components of financial development and has examined their long term impact on economic growth analyzing on data of almost four decades. The longer period of data is expected to generate not only the genuine and inherent impact of the financial development variables on economic growth but also the nature and reasoning for inherent deviation of variables and their impact across nations.

4. METHODOLOGY

4.1. Data and Sample

This study assesses the effect of financial development on economic growth. Five (5) South Asian countries – Bangladesh, India, Pakistan, Sri Lanka and Nepal have been considered while the rest two are left out due to lack of adequate data. For all the 5 countries, annual growth data for the following 5 variables has been used for 38 years from 1974 to 2012. All data have been sourced from World Bank Development Indicators database.

4.2. Variables

GDP growth rate has been used in this study to capture Economic Growth. To capture financial development, Growth Rate of five variables have been used: (i) DCFS: Domestic Credit provided by the Financial Sector, (ii) TDS: Total Debt Services, (iii) GDS: Gross Domestic Savings, (iv) BM: Broad Money, and (v) NX: Trade Balance. At the beginning, two more variables – Market Capitalization of Stock Markets and Quasi Money were also considered as proxy for financial development, however late dropped Market Capitalization data were inadequate and Broad Money showed exactly the same amount as Quasi Money.

(i) Domestic Credit provided by the Financial Sector: As defined by the World Bank, DCFS includes all credit except the credit provided to the government to different sectors in the

economy on a gross basis. The financial sector includes monetary authorities and deposit money banks, institutions such as finance and leasing companies, insurance corporations etc.

(ii) Total Debt Services (TDS): The World Bank defines Total Debt Service as the sum of principal repayments and interest actually paid in currency, goods, or services on long-term debt, interest paid on short-term debt, and repayments (repurchases and charges) to the IMF.

(iii) Gross Domestic Savings (GDS): Savings is the amount left after consumption by the households and hence the same for an entire economy. Therefore, according to the classical economics idea, Gross Domestic Savings here is the value of GDP minus final consumption expenditure (total consumption).

(iv)Broad Money (BM): Broad Money is the sum of currency outstanding outside banks including demand deposits and fixed, savings, and foreign currency deposits of resident sectors other than the central government. Here bank and traveler's checks and other securities such as certificates of deposit and commercial paper are also included.

(v) Trade Balance (NX): Trade Balance is the net of Export and Import of goods and services made by a country to outside the country.

4.3. Estimation Model Selection

The data set obtained becomes a Panel Data Set and for such data set either Fixed Effect or Random Effect should be employed. The use of Panel data for this kind of study has significant advantage over cross-sectional or time-series data analysis (Hsiao, 2003). Panel data usually has greater degrees of freedom that finally improve the efficiency of the estimation.

Model for Fixed Effect:

$$GDPgr_{it} = \alpha + \beta_1 NXgr_{it} + \beta_2 DCFSgr_{it} + \beta_3 TDSgr_{it} + \beta_4 GDSgr_{it} + \beta_5 BMgr_{it} + \varepsilon_{it} \text{---------(1)}$$

Model for Random Effect:

$$GDPgr_{it} = \alpha + \beta_1 NXgr_{it} + \beta_2 DCFSgr_{it} + \beta_3 TDSgr_{it} + \beta_4 GDSgr_{it} + \beta_5 BMgr_{it} + \mu_{it} + \varepsilon_{it} \text{--(2)}$$

The data set has been found as 'strongly balanced'. No time-invariant or dummy variable is associated with the model. Also, this research is more focused to know within country effect controlling for inter-nation differences. Therefore, Fixed Effect regression has been decided finally. However, to confirm whether the decision is appropriate, we run the Hausman Test *(Table: 1)*.

Table-1: Hausman Test between Fixed effects and Random Effects

Chi2	3.07
Prob>Chi2	0.6892

Ho: difference in coefficients not systematic

The result clearly indicates that Fixed Effect regression is the appropriate one as the test yields fairly large test statistic. A Fixed Effect model can eliminate the effect of the time-invariant features so that the net effect of the independent variables on the dependent variables is achieved (Torres-Reyna, 2007).

Another vital assumption of the Fixed Effect model is that time-invariant characteristics are particular to the individual entities and thus should not correlate with other individual characteristics. Each entity in the model is assumed to be different therefore the entity's error term and the constant (which captures individual characteristics) should not be correlated with the others. Therefore, equation (1) is the final model to be estimated for this study. However, before final estimation it is important to check for different possible errors lying with the data and model fitness. All the following diagnostics are tested at 5% significance level.

Time Fixed Effect: Results suggest that Time Fixed Effects are not relevant in the considered model (as Prob> F = 0.1907, Appendix-A).

Cross Sectional Dependence: Breusch-Pagan LM test of independence show no cross sectional dependence (Pr = 0.4396). The Pesaran's test (Pesaran, 2007) of cross sectional independence also finds no cross sectional dependence (Pr = 0.4689) (Appendix-B).

Heteroskedasticity: The Modified Wald test shows no existence of heteroskedasticity (Prob>chi2 = 0.1982, Appendix-C).

Serial Correlation: Using Wooldridge test for autocorrelation in panel data suggest that no significant serial correlation exists (Prob> F = 0.0559, Appendix-D).

Cointegration: Using the Error Checking Model Based on Westerlund test statistics we find all statistics of the result rejected the null hypothesis of no cointegration for both 'group' and 'panel'. This suggests that cointegration exists between the variables (Appendix-E).

5. ANALYSIS AND DISCUSSION

As we have finalized that the Fixed Effect Model (1) is appropriate and it passes the necessary diagnostics, we now proceed further to estimate the model. The estimation results are presented in *table: 2*.

For all independent variables, result shows anticipated signs. However, only Total Debt Service (TDS) growth and Gross Domestic Savings (GDS) growth is found statistically significant at 5% level and other variables are not significant. As sign indicates, although insignificant at 5% level, Trade Balance (NX) has opposite effect because all these five South Asian countries are primarily import dependent and have been running with negative trade balance, which is quite common feature for these countries. This essentially reduces economic growth (Ahmad *et al.*, 2013).

Domestic Credit provided by Financial Sector (DCFS) and Broad Money (BM) are considered as main indicators of Financial Development irrespective of country or continent. But it is surprising to see that none of these two variables are statistically significant in the results. Generally, both of these would inject more fund into the economy and thus would push up private sector investment that in turn accelerates the economic activities within an economy. This is supported by the results as we find DCFS and BM growth has positive impact on the GDP growth although not significant even at 10% level. Although, such insignificance of DCFS and BM is

beyond general understanding, similar results were also found by some other literatures, such as Caporale *et al.* (2009) for 10 EU Members at least in the short run.

<p align="center">**Table-2.** Fixed effects regression results</p>

Independent Variables	GDP growth
Dependent Variable	
Trade Balance growth (NXgr)	-0.000 (0.000)
Domestic credit by financial Sector growth (DCFSgr)	0.051 (0.047)
Total debt service growth (TDSgr)	0.065*** (0.012)
Gross domestic savings growth (GDSgr)	0.053*** (0.008)
Broad money growth (BMgr)	0.051 (0.076)
Constant	0.104*** (0.013)
R-squared	0.286
Prob>F	0.000
No. of observations	190
Country included	5

*Level of significance: ***=1%, **=5%, and *=10%*

Such insignificance of Broad Money suggests that fund injected into the economy is somehow missing the link with economic activity preferably with the real sector development. This may be possible mainly in severe cases of large size money laundering and fund mobilization by entrepreneurs, local investors, migrants, workers and any other parties from these underdeveloped or developing nations to higher developed nations. This is common as people largely migrate from developing nations to developed ones for better life and future. But for some of these countries such outflow is not permitted by states. Therefore, it is treated as case of Money Laundering, which is very common in these nations due to their weaker governance, financial infrastructure, and regulatory supervision system.

For DCFS, one possible explanation for such unexpected outcome may be that the South Asian countries are still developing and lie quite close to the least developed group where Government Spending is more crucial for economic development rather than the size of the private sector investment. This rationalization may link with the significance of Total Debt Services (TDS) and Gross Domestic Savings (GDS). As WDI defines, *Total debt service (TDS) is the sum of principal repayments and interest actually paid in currency, goods, or services on long-term debt, interest paid on short-term debt and repayments (repurchases and charges) to the IMF*. These loans are largely and usually taken by governments which in turn go into the economy as investment in infrastructure and development projects and counted as government spending. Thus, we can infer that being in the underdeveloped stage, the development of South Asian economies stage substantially depends on how much and in what ways government spend its money and still it has greater influence over private sector investment to foster economic growth of the countries.

This is also interesting to see that GDS is significant but DCFS is not while the general economic theory says in an economy Savings should be equal to Investment although in practice it is not. As a standard

assumption, Savings may be channeled as Investment through two ways: (i) Financial Institutions (both public and Private) and (ii) Government's direct interventions. In this context, finding GDS significant but DCFS insignificant is somehow interesting. Before any explanation is set for such findings, we must recall that DCFS includes only the credit made to all other entities except for Central Government, as defined by The World Bank. There may be two way explanations for such findings. Firstly, since the governments of these countries usually run with budget deficits, to finance deficit they traditionally heavily borrow from the financial sector (both private and public) which is not reflected into the value of DCFS. Therefore, public savings finally goes as the government spending into the economy at a substantially large amount and contributes in economic growth. When this borrowing is not included in the DCFS value while it still remains a part of the GDS, it is quite acceptable that GDS would be statistically significant while DCFS would not in relation to economic growth. Secondly, to finance deficits and development budgets, governments continue to finance huge sum of fund through alternative market interventions such as government savings securities, post-office saving scheme etc. that also pulls the public savings into the government pocket. In doing so, often governments introduce new securities or increase interest rates on investment in government securities. Governments use these funds in large and long term development projects. Thus, through both government borrowing and government savings schemes, the savings of the general public are continually accumulated by governments to keep the development activities go on. This enables GDS to be significantly affecting economic growth directly and no through DCFS channeling.

The lack of effective stated machinery and a well efficient financial system would certainly not allow the economy to go well. This is because; the financial system injects funds from deficit to surplus units within the economy that keeps the wheel of economic development running. However, overall findings of the paper indicate that different variables are not inter-playing with GDP growth within these South Asian nations which essentially reconfirms a weaker governance and financial infrastructure in these developing countries. Therefore, results are mixed however it gives an idea how the economies are interacting with their financial systems and if this mixed interaction persists, development of these countries may not be sustainable and progress may not be as expected over time.

6. FINDINGS AND CONCLUSION

The study finds that financial sector credit to the private sector is yet to have an influential role in significantly promoting economic development and growth in the developing countries of the South Asian region. Hence, the growth of these economies is still led by substantial amount of continuous government spending and intervention either funded through borrowing from the financial sector or direct market operation. Moreover, the significance of government spending is also supported by the fact that governments of these economies still finances their expenditures largely from foreign counterparts and institutions on continuous a basis for large scale development activities. These make debt repayment and servicing to be significantly related with economic growth. However, as Broad Money is found insignificant it is suggested that these countries should look into proper channeling of the broad money into the real economy and thus ensure that the money created and channelized are used for economic activities within the country. Hence capital flow either in legal or illegal way must have to be checked and supervised so that countries do not lose

their financial strength in the long run.It is notable and a matter of significant consideration that developing countries governments should try to reduce dependency on foreign credit and replace it by domestic credit or preferablyuse internally generated revenues for better economic health in future. Increase in such dependency increases the sovereign risk and potential of economic downturn in the event of exogenous macroeconomic shocks in the long run. As the private sector is a major partner of the public sector in any nation, governments must enable secured, easy and more access to financial sector credit. This would enhance private sector investment which in turn may immensely contribute in the economic growth and development of the nations. Without the encouragement and expansion of private sector investment, the growth and development prospect of countries like Bangladesh, India, Sri Lanka, Pakistan and Nepal might improve but not at the rate which they are expected to grow in the long run.

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APPENDIX

Appendix A: Test for Time Fixed Effects using Wald-test through Tesparm

F Stat	1.24
Prob>F	0.1907

*Level of significance: ***=1%, **=5%, and *=10%*

Appendix B: Pesaran (2007) and Breusch-Pagan LM test for cross-section dependence (CD)

Pesaran CD statistic	0.724
Probability	0.4689
BP-LM Chi2 (10)	10.010
Probability	0.4396

*Level of significance: ***=1%, **=5%, and *=10%*

Appendix C: Modified Wald test for Group-wise Heteroskedasticity

Chi2	7.32
Prob>Chi2	0.1982

*Level of significance: ***=1%, **=5%, and *=10%*

Appendix D: Wooldridge test for Serial Correlation

F Stat	11.942
Prob>F	0.0559

*Level of significance: ***=1%, **=5%, and *=10%*

Appendix E: Westerland (2007) test for Cointegration

Statistic	P-value
Gt	0.000
Ga	0.154
Pt	0.000
Pa	0.011

*Level of significance: ***=1%, **=5%, and *=10%*