Investigating the Institutional Determinants of Financial Development: Empirical Evidence From SAARC Countries

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Abstract
A more regulated and better working financial sector contributes toward achieving monetary growth based on proficient resource allocation and reducing information asymmetries. Current trends in research highlight the significance of factors determining the financial sector’s development; therefore, this study explores the institutional drivers, which are indispensable for developing the financial industry in the South Asian Association of Regional Cooperation (SAARC) region. Specifically, it examines the impact of institutional factors, trade openness, real output, legal origin, and inflation on the financial sector’s development. By employing the panel data method of generalized method of moments (GMM), the study concluded that trade openness, institutional factors, legal origin, and real gross domestic product (GDP) have a positive and significant impact on financial depth. However, the inflation rate has been found to affect it negatively. Finally, the study presents policy recommendations based on empirical findings.

Keywords
World Governance Indicators, legal origin, dynamic panel data, financial sector development

Introduction
Over the past two decades, researchers and policymakers worldwide have developed a renewed interest in developing the financial sector to encounter long-run financial development. In the perspective of real output growth, among many policy initiatives, bank and stock market development have been regarded as a pre-condition, particularly in the case of emerging and underdeveloped countries (Levine & Zervos, 1998). Theoretically, Endogenous growth models by Romer (1986) and Lucas (1993, 1998) proclaimed that financial development positively contributes toward the pace of firm state evolution (Ang & McKibbin, 2007; Pagano, 1993), while the studies by Levine (1999), Levine, Loayza, and Beck (2000) supported the finance-growth nexus empirically. Ayadi and Gadi (2013), a strong proponent of the stock market and banking sector’s growth, anticipated that the financial sector development is a crucial determinant for catalyzing monetary progression and a significant source of stimulating economic opportunities.

Levine (2003) discussed how finance enhanced development and proposed that the finance-growth nexus works through various channels. The channels include monitoring managers, encouraging technological advancement by identifying successful products and processes, saving apportionment to optimal projects, removing information asymmetries, boosting sound corporate governance, and risk transformation. In sum, the evidence ropes that effective financial institutions are mandatory to accomplish the desired goal of real output growth. The literature demonstrates four competing arguments in favor of finance-growth relation, that is, Financial Services Theory, Market based theory, Law and Finance Theory, and Bank based theory (Merton & Bodie, 1995; Kose et al., 2009). Recently, countries adopt various policy and financial reforms to develop the financial sector. There is an agreement that these policies must focus on creating a transparent legal and institutional framework. Among various arguments mentioned above, the finance and law
hypothesis (La Porta et al., 1998; Levine, 1999) affirmed that institutions and the legal environment play a critical role in a well-known finance-growth relationship. Hence, it provides an avenue to investigate the institutional factors vital to the stock market and banking sector growth. Apropos, one could not deny the contribution and importance of the development of the financial sector (DFS) to enhance economic growth; therefore, it is worthy of exploring, comprehending, and improving its determinants (Murinde, 2012; Emenalo et al., 2018).

The determinants of financial sector development have been widely documented in the literature, and the macroeconomic factors include inflation rate and real gross domestic product (GDP) (economic growth). McKinnon (1993) and Shaw (1973) emphasized that economic growth represented by GDP growth is an essential factor, which enhances economic growth by saving mobilization and lifting the interest controls. Theoretically, endogenous growth literature also augments that financial intermediation is positively determined by economic growth. Countries with high economic development require more advanced financial systems to fulfill households, and firms’ needs to channel their savings (Dekle & Pundit, 2016). Ang and McKibbin (2007) also supported this argument by stating that higher real GDP (RGDP) per capita generates more financial services, as more households require banking services. Various other studies in literature support the growth-finance-led relationship, including Agbetsiafa, 2004, Odhiambo, 2004, 2010, and Sunde, 2012. Theoretically, there is a negative relationship with financial development; however, it is noticed only when it exceeds a certain threshold level (Azariadis & Smith, 1996). In line with these studies, Berger et al. (2003) referred to inflation as a source of impacting the financial sector through the disruptions in financial markets and financial intermediaries’ activities. High and volatile inflation could also hamper financial development by lowering real returns on assets (Feldstein, 1980) and deteriorating asymmetric information complications. Boyd et al. (1996) elucidated that higher inflation reduces saving efficiency, leading to a reduction in the financial system’s accumulation of funds.

The other factors affecting financial development include trade and financial openness. Recent studies support the argument that financial liberalization encourages financial development by improving efficiency, encouraging technological progress, supporting financial stability, and enhancing competition (Levine, Loayza, & Beck, 2000; Shaw, 1973). It is a well-established fact that higher financial openness intensifies competition in the credit market by facilitating borrowers’ acquiring funds from the international financial need and the domestic market (Ashraf, 2018; Le et al 2016; Mahawiya, 2015) argued that countries with financial openness are more likely to experience financial development. Moreover, many others provide empirical evidence in support of this theory, including Chinn and Ito (2002), Ito (2002), H. Ito (2006), Baltagi et al. (2007), Demetriades and Hook Law (2006), Demetriades and Andrianova (2005) and G. Huang (2006). With the increase in trade openness, domestic markets’ ability to produce for the international market is higher, increasing the demand for long term financial capital formation. Empirical studies supported (openness of trade may increase bank credit volume by increasing the need for long-term and short-term financing (Y. Huang & Temple, 2005). Theoretical and empirical studies. Rajan and Zingales (2003) postulated that the financial and trade sectors’ simultaneous opening brings financial development.

Matadeen and Seetanah (2013) empirically showed that both financial openness and trade openness are pre-conditions for financial development. Financial liberalization (capital account openness in most cases) contributes to financial development in equity and stock markets for both less developed and emerging market countries. Besides the above factors, there is extensive literature on institutions and legal systems for financial sector development. A sound legal system and institutional quality ensure investors’ and creditors’ legal protection and the overall financial system (Djankov et al., 2007; La Porta et al., 1997). Badeeb et al. (2016) demonstrated that institutions are at the top of the most often cited financial development determinants. Better functioning institutions determine the financial sector development, and it has attracted the attention of development economists since last a few decades. The shift of focus is attributed to inadequate financial restructuring programs, the eastern financial crisis, and the ineffectiveness of aid provided by the international development community Wolfensohn and Bourguignon (2004). Institutions play a role by specifying property rights and protecting creditors and borrowers’ rights—parties at a disadvantage and enforcing previously agreed-upon contract terms. Property rights and protection from powerful elites Institutions can protect disadvantaged parties by protecting minority shareholders against better-informed shareholders/managers; protecting creditors against asymmetric information and the risks of expropriation; and protecting borrowers and depositors against the power of monopolists (Fernández & Tamayo, 2017). A similar argument by Gani and Ngassam (2008) supports that institutional quality matters for the DFS in emerging and developing economies.

While emphasizing the importance of the finance-growth nexus, a consensus is emerging in the literature to discuss and discover the financial sector factors particular to institutions. A growing body of literature stressed the need for macroeconomic policy measures, legal and institutional frameworks, and competition in the financial sector to improve its effectiveness and efficacy. From a theoretical perspective, Law and finance hypothesis emphasized that the institutional framework is an essential determinant for the financial industry as it helps to protect financiers’ rights. Beck et al.’s (2004) study showed that the degree of financial development is better explained across different nations based on their legal institutions’ differences. A similar argument by Galindo and
Micco (2004) stressed the importance of investor protection, as it enhances the credit cycle by lessening the elasticity of credit supply to shocks in the short term. Besides, Wurgler (2000) stated that protecting minority investors help boost capital allocation.

Recently, many countries have initiated their efforts to develop financial sectors, implement financial reforms, and contribute to global financial integration. The countries in the SAARC region (excluding Afghanistan) have adopted this financial restructuring program. The SAARC was established in 1985 to support the relationship between its associate nations; this region occupies a central position on the world map, geographically and economically. This region is endowed with a variety of natural resources and characterized by a growth and development potential. Keeping in mind the importance of the region, it has been implementing various measures for development. As a result, overall growth standards have been improved, such as two and half times rise in per capita GDP, between 1990 and 2014 (Khan et al., 2014). When we look into the issues confronted by this state, there is partisan variability, lack of democratic practices, violation of human rights, and corruption in this region Wagle (2007) and Transparency International (2010).

Concerning economic growth, since the incidence of the Asian financial crisis, this region has outpaced other regions, and significant innovations have emerged in its banking sector. The considerable developments include giving importance to institutional investors, bond and stock market, where the banking sector dominates the financial industry compared to equities and bonds. In the global context, the financial system in SAARC remained underdeveloped compared to other markets worldwide (D. P. Le et al., 2015).

Despite the positive role of financial development in fostering economic growth in SAARC countries, compared to other regions, the level of financial development remained very low, as is clear from Figure 1. The financial development index started from a minimum value of 13.7 in 1995 and began rising and touched the highest value of 20.9 in 2010. After this year, it started declining gradually and reached a minimum of 13.9 (WDI, 2019). Since the financial sector development positively impacts gross domestic savings (GDS), Figure 1 reports GDS trends as a GDP share, which remained stagnant at 22% from 1995 to 2000. It rose gradually, reaching the highest level of 30.8 in 2013, which was a direct financial development outcome. It reduced to 28% and finally got a level of 30.1 in 2016. The financial development and savings trends did not show a positive and consistent trend as the financial sector of SAARC are facing significant challenges. There arises a need to discuss the factors behind the low financial sector performance and its outcomes. Ul Hassan et al. (2017) contemplated that the financial sector development of the Asian region has remained low due to the instability of economic conditions and financial crisis. The countries in this region recorded a lower level of financial development compared to the other advanced countries. Considering all these aspects, the current study investigates the financial sector determinants, focusing on institutional quality that may affect FD. The detailed analysis would further help to design suitable policies for the SAARC region in the future.

Given the importance of financial sector development and its contribution to economic growth, developing and emerging economies worldwide are initiating efforts to advance their financial sector. Despite implementing policy packages and frameworks, the growth performance differs mostly. Hence, the policymakers are dedicated to understanding the reasons and critical factors behind the growth performance difference. To answer this question, exploration of determinants of financial sector development has become a growing priority for countries to achieve sustainable economic growth.

**Figure 1.** Trends of Gross Domestic Savings (% of GDP) and financial development.

*Note. Data statistics taken from http://www.saarcstat.org/db/statistics/real_gdp/real_gdp_per_capita & WDI.*
Moreover, literature shows that financial development contributes positively to economic growth and a better understanding of the determinants of its development is necessary. The role of governance and, in recent years, institutional quality has drawn attention, with little empirical evidence supporting the link between institutional quality and financial development. There are only a few studies on this subject, especially in the SAARC region. To this end, the current research tries to explore the determinants of financial development.

Keeping in mind the significance of the SAARC region, this research’s precise objectives contain probing the institutional determinants of the stock market and banking sector in SAARC member countries, including Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. The study is organized as; following an introduction in section 1, section 2 reviews empirical and theoretical studies, section 3 defines significant variables, data sources, model, and methodology. Section 4 includes a discussion on results, and the final section of the study interprets empirical results and conclusion.

Review of Literature

Various studies highlight factors contributing to the financial system; the most studied of all these factors is the institutional and regulatory frameworks (Ayadi and Gadi, 2013). The pioneering study of La Porta et al. (1997) and Levine et al. (2000); Demirgüç-Kunt et al. (2004); Law and Azman-Saini (2008) highlighted that presence of strong institutions, which keep and match the essentials of stakeholders, reinforces creditors’ rights and enforces contracts is a strong determinant for a developed financial sector. Besides, institutional excellence, especially the degree to which institutional checks and balances exist, likewise initiates designate critical in defining the achievement of monetary improvements and extenuating the probability of catastrophes (Acemoglu & Johnson, 2005; Barth et al., 2004; Demetriades & Andrianova, 2005; Tressel & Detragiache, 2008).

As the relation between finance and growth is well established; therefore, the studies on monetary growth factors attract researchers’ attention. A recent survey by Abubakar and Kassim (2018) explored the macroeconomic and institutional factors of monetary growth for 50 OIC states from 2003 to 2011 and found that income level and exchange rates enhance financial development. The study also highlights the importance of institutions’ financial openness and quality to promote financial depth and lending activities. A similar study by D. P. Le et al. (2015) tried to highlight the significant determinants of monetary depth for Asian and Pacific region economies. It came out with trade openness, institutional factors, and RGDP as significant determinants that affect financial sector development.

Recent studies discussed various factors, which positively or negatively affect the finance-growth relation. Ehigiamusoe et al. (2019) explored the impact of inflation on the relationship between finance and economic growth in the West African region. They found a negative interaction term of the inflation rate and financial development. A novel outcome is finding the threshold level of inflation, which was 5.6% above, which could harm the relationship. Significant findings suggested that instead of increasing both financial development and inflation, it is worth to improve financial development and reduce the inflation rate. A similar analysis by Ebiogiamusoe et al. (2019) discussed that macroeconomic stability is an essential determinant of financial development. The West African region study found that macroeconomic stability is an important factor, particularly for financial sector development. Baltagi et al. (2009) addressed whether financial openness and trade openness are important factors to enhance the country’s financial sector development. However, the study could prove partial evidence in Rajan and Zingales’s favor that both types of openness are necessary for banking sector development. Falahatry and Law (2012), in an analysis conducted for the MENA region, found that trade openness and banking concentration matter for the financial sector development. However, it also identified the quality of institutions and macroeconomic stability as a vital factor to catalyze financial sector deepening. Many studies, including Baltagi et al. (2007), Y. Huang (2010), and Chin and Ito (2006), also supported that institutions and their quality matters for financial development. Agyemang et al. (2018) also supported the argument that institutional quality matters for financial sector efficiency and development, and policies must ensure it through law enforcement. Effiong (2016), in an empirical study, checked whether financial development matters for economic growth, and he conditioned his analysis upon the quality of institutions. The study conducted for 21 African countries stated that institutions’ current state does not support financial development; however, there is a need to improve institutions’ standards for better functioning. While looking at previous studies, we see that monetary sector growth determinants need further exploration.

Arayssi (2018) investigated the impact of the Arab Spring (AS) and the government’s institutional performance on the finance growth nexus of the Mena region. An analysis of exclusive data set ranging from 6 years before and after AS and found that finance is a contributor to economic growth, AS resulted in a decline in economic growth. Moreover, a finding suggested that financial development is necessary but not a sufficient condition, and political instability adversely affects growth performance. D. P. Le et al. (2015) examined the factors affecting financial development in 26 countries of the Asia and Pacific region, including trade openness, economic development, and institutions’ quality. The major conclusion included that quality of institutions and better governance is a pre-requisite to developing the financial sector. Better management and institutional quality foster financial development in developing economies. Among other determinants, economic growth and trade openness are also crucial for financial sector development. Khalfaoui et al.
Ellahi et al. (2015) explored the economic and institutional determinants of financial sector development for 15 developing and 23 developed economies. The findings after thorough empirical analysis showed that legal, institutional, and economic stability are important determinants for financial sector development of developed countries, while for developing countries, among major factors are economic and human development. Osondu et al. (2014) examined the institutional determinants of financial development for Nigeria and found that regulatory quality, government effectiveness, and political stability positively impact Africa’s financial development. Rani and Kumar (2019) checked the interrelationship between economic growth, financial development, and trade openness and highlighted the variables’ long-run causal link. Khan et al. (2020) explored the institutional determinants of financial development for developing economies and emerging economies. An empirical analysis of a sample of 189 countries concluded that institutions’ quality matters most for developing countries’ financial development. Similarly, Kacho and Dahmardeh (2017) discussed the determinants of financial sector development, focusing on institutional quality. They found that it is an essential and crucial factor that causes economic growth in the long run through enhancing financial sector development.

The literature on finance growth nexus falls into three categories. First, the studies highlighting the role of financial liberalization for financial development through the removal of controls. (e.g., see Shaw [1973]. Second, stating that crisis and recession in developing economies are the outcomes of financial liberalization directly or indirectly (see Bekker et al., 2005; Kose et al., 2009). Third, a scarce but still growing literature emphasizes the positive link between financial liberalization and finance-growth link while controlling institutional factors, for example, Arestis (2006). Mbulawa (2015), who also studied 11 Southern African Development Community (SADC) countries from 1996 to 2010, found evidence of the importance of the institutional quality (including low corruption, increasing government accountability, improving regulation quality, maintaining the Rule of Law and low levels of political violence) to the financial development. Another study by Ayadi and Gadi (2013) on the determinants of financial development in Mediterranean countries for the years 1985 to 2009 found that countries with strong legal institutions, good democratic governance, and adequate implementation of financial reforms can substantially impact financial development.

This literature is still limited due to actual data unavailability on institutional factors and reforms and further empirical investigations. The current study is an effort to contribute to this gap in the literature.

Figure 2 below portrays the trends of RGDP per capita in the SAARC region. It is observed that the overall GDP per capita of this region increased over time (1985–2016). This shows the growth potential of this region; however, the overall growth has been slow. The overall increase has been 2.91%.

Figure 3 below shows the trends of governance for the mentioned period. Overall, the value persisted negative for the whole period. This has happened because SAARC is characterized by weak governance structure, partisan variability, and occurrence of dishonesty Wagle (2007).

From the extensive review of literature on Asian countries, it is evident that the financial sector of SAARC lags compared to other developing regions of the world. Moreover, it is marked by the poor quality of institutions, low levels of access to financial services, liquidity, diversification, and stability due to a lack of financial depth. Consequently, entrepreneurs may find it challenging to obtain adequate and
affordable financing, which may hinder the economic development process. Hence, a key policy issue for SAARC is strengthening its financial sector structure and performance, which includes an understanding of financial development determinants. This concern motivated authors to conduct this analysis and make a significant contribution, and we try to investigate how institutional and macroeconomic factors influence financial development. Moreover, in the context of the SAARC region, the empirical evidence is limited. Therefore, this study attempts to fill this gap by investigating institutional and macroeconomic determinants of financial development.

Methods and Materials

Data

This research used annual frequency time-series data from 1995 to 2018 for selected SAARC countries to conduct empirical analysis. Since the data for World Governance Indicators (WGI) is available from 1995 to onward, therefore, the study chooses it as a starting point. The data on financial statistics are extracted from International Financial Statistics (IFS) various issues, data on trade variables, legal origin (LO), and GDP per capita is taken from World Development Indicators (WDI). In contrast, all statistics on the inflation rate and government spending have been extracted using websites of central banks of each country.

Variables

Measuring financial sector development. Keeping in consideration the previous studies, See, for example, Voghouei et al. (2011), Ben Naceur and Ghazouani (2007), Law and Habibullah (2009), we used both banking sector growth and stock market growth indicators to capture the impact of monetary growth. The banking development measures (measured as a share of GDP) are as follows: King and Levine (1993) stated that Liquid liabilities measure the overall size of financial intermediaries. To measure the growth of the monetary sector, it is more relevant in developing countries. To demonetize it, we subtracted currency in circulation; otherwise, it shows the degree of monetization. Broad money (M2) demonstrates a degree of financial depth, particularly in advanced countries; however, it represents the degree of monetization, not financial depth, due to currency presence. There are various studies, which used M2 for financial depth quantification, including Gelb (1989); King and Levine (1993). Among many others, M1 and M2 are the most commonly used indicators of financial depth (Arestis & Demetriades, 1997; Berthélemey & Varoudakis, 1995; De Gregorio & Guidotti, 1995; King & Levine, 1993; Lyons & Murinde, 1994; Murinde & Eng, 1994; Odhiambo, 2009; Sinha & Macri, 2001). Contrary to all other indicators, Credit to Private Sector has been regarded as the most imperative because it characterizes the effect of excellence and the amount of investment and specifies the monetary sector’s actions right the course-plotting of funds to the private sector. The indicator has been used by following studies in finance-growth literature; Levine, 2005; De Gregorio & Guidotti, 1995.

Each indicator has its strength and weakness when used alone to measure financial sector development. However, to get a more robust and sounder pointer, we constructed a conglomerate index. In the first step of the formula, we transformed each variable’s value using Equation 1, while, in the second step, we take the arithmetic mean of all transformed variables to get an index. The transformation in Equation 1 is an expression of variables relative to the cross-section average and the latter percentage. The study intends to ensure stationarity of variables, and the same is referred to by Ben Naceur and Ghazouani (2007).

\[ Y_{it} = \left( Y_{it} - \bar{Y} \right) / \bar{Y} \]  

(1)
We used Stock Market Capitalization as a share of GDP to measure the development of the stock market.

**Measuring institutional quality.** Institutional quality is measured by the WGI, which comprises of six major measures, that is, Voice and accountability; Political stability; Government Effectiveness; Regulatory Quality; Rule of Law, and Control of corruption. We aggregated all six dimensions to get a single predictor of Institutional factors by taking an average.

**Other macroeconomic variables.** The study included other variables to reduce the potential for spurious findings. The study included the inflation rate as a policy variable. The other control variables are included to segregate the relationship between financial intermediation, financial sector liberalization, and governance. Further studies in the literature support the use of control variables. It provides inflation rate (Info), which is a policy variable and in line with the studies of Andries and Capraru (2013) and Zermano et al. (2018). The openness of trade (TOPEN) is included based on Rajan and Zingales (2003) hypothesis. In contrast, LO, government spending, and GDP per capita are macroeconomic indicators that determine financial sector development based on Law and finance hypothesis by Beck (2013) and Badeeb et al. (2016).

**Econometric Specification**

The estimable model is given as:

\[
DFS_{it} = \alpha_i + \gamma_t + \sum_{j=1}^{k} \beta_j INST_{ij} + \sum_{k=1}^{l} \gamma_k X_{ik} + \mu_{it}. \tag{2}
\]

The econometric form of this model is given as:

\[
\ln(DFS_{it}) = \alpha + \beta_1 \ln DFS_{it-1} + \beta_2 INST_{it} + \beta_3 LO_{it} + \beta_4 [X]_{it} + \mu_{it}. \tag{3}
\]

Where DFS is the financial development; INST is the institutional factors; LO is the legal origin; and \(X_i\) is a vector of control variables; \(\alpha, \beta, \gamma\) are parameters of equation; and \(\mu_{it}\) is white noise stochastic error term.

**Estimation Method**

The present study applied the generalized method of moments (GMM) for empirical analysis. Arellano & Bond, 1991; Holtz-Eakin et al., 1988 and Arellano & Bover, 1995 argued that GMM covers a diverse range of macro-econometrics applications. It is accorded as the best suitable technique to deal with many panels and a short range of the dataset. Moreover, GMM upshots the reliable approximations beneath the supposition of no autocorrelation in the inaccuracies and assumes the regressors to be feebly exogenous (Bond & Windmeijer, 2002). This method is preferred for three reasons in literature. First, it controls country-specific effects. Second, the variables in the model are treated as endogenous. Third, the problem of autocorrelation arises due to lagged dependent variables. A distinctive characteristic of dynamic panel data GMM is that the number of instant circumstances increases with T. Hence, we applied a Sargan test to test the over-identification limits. This study conducted an analysis using *Stata version 12.0*.

**Specification Tests for GMM**

We applied the second-order serial correlation test to check the validity of instruments. In the given software, the Sargan test of over-identifying restrictions is the best solution proposed by Arellano and Bond (1991). Hence, here the residual term is estimated and checked for first-order and second-order serial correlation. The null hypothesis of the Sargan test is: the overidentifying restrictions are valid.

**Discussion on Results**

This study tried to explore the factors that touch the monetary sector’s growth in the SAARC region comprising seven economies: Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. The empirical findings produced the following results. The summary statistics measures are given below in Table 1.

| Variables | M    | St. deviation | Minimum | Maximum |
|-----------|------|---------------|---------|---------|
| PDF       | 22.24| 6.76          | 6.67    | 31.75   |
| INST      | -0.39| 0.46          | -1.12   | 0.56    |
| RGDP      | 752.13| 659.47        | 213.78  | 2,929.31|
| INF       | 6.92 | 3.29          | 2.01    | 15.94   |
| OPEN      | 0.05 | 0.054         | 0.003   | 0.24    |
| GEF       | -0.13| 0.52          | -0.73   | 0.91    |
| CCR       | -0.32| 0.51          | -1.17   | 0.72    |
| VAC       | -0.40| 0.44          | -1.32   | 0.40    |
| REGQ      | -0.27| 0.54          | -1.06   | 1.00    |
| PLST      | -0.59| 0.96          | -1.93   | 1.11    |
| RLW       | -0.18| 0.49          | -0.96   | 0.53    |
| LO        | 0.85 | 0.35          | 0       | 1       |

*Note. DFS = development of the financial sector; INST = institutional quality index; RGDP = Real GDP per capita; INF = inflation rate; TOEN = trade openness; GEF = government effectiveness; VAC = voice and accountability; REGQ = regulatory quality; PLST = political stability; RLW = law rule; LO = legal origin variable, constructed by generating a dummy, which assumes value one for Muslim law origin countries and 0 for mixed LawLaw (that can be civil, common, or combination of both) origin.*
The direct association between TOPEN and DFS is justified as open trade serves as a comparative advantage in the international financial market with more demand for financial products, as supported by Rajan and Zingales’ hypothesis. The positive link of GDPPC with FD in our analysis is supported by theoretical studies of Robinson (1952) and Patrick (1966). This is possible because when the real sector is healthy, it directs more and more resources to the banking sector. The evidence of the negative coefficient value of INF is according to theory and could be inferred in a way that causes rigorousness of credit market resistances. Studies, including Moore (1986) and Azariadis and Smith (1996), also defended that borrowers are discouraged from saving in financial institutions due to low returns on savings. These result in informational resistances and hence the scarcity of credit. The diagnostic tests are satisfactory, where nonappearance of initial command serial correlation is rejected and of next command, serial correlation is not rejected at 5% level of significance. Moreover, the Sargan test does not reject the null hypothesis of over-identification.

Table 3, given below, shows the impact of institutional factors on stock market capitalization (MCAP), where DFS here does not include the banking sector variable. Here RGDP per capita is insignificant and positive; the positive sign here shows that it is an important and critical factor for sophistication and expansion of the stock market. Again, the coefficient of (LO) is significant and positive. Besides, the coefficient values of inflation (INF) are similar to the previous one in the case of banking sector development as the dependent variable; it is supported by Huybens and Smith (1999) and Boyd et al. (2001). Its frugality with advanced degrees of price rises does not grasp the firm state where its capital stock would be high. In addition, these economies present a smaller amount of effectual financial market as of extraordinary interest rates that shadow great degrees of price increases Bittencourt (2011). The short-run diagnostic presented below this table is satisfactory.

The institutional variable here is WGI, which has six individual dimensions. Table 4 below presents the extension of results given in Table 2, where the effect of all six individual dimensions of INST has been estimated on banking sector development. The findings are satisfactory, based on short-run diagnostic tests.

**Conclusion**

The present study explores the institutional factors that affect the DFS for seven SAARC countries, that is, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka, from 1995 to 2016. The analysis has considered both the growth of the banking sector and the stock market’s growth as representative of the financial industry. The institutional

### Table 2. Effects of Institutional Quality on Bank Sector Development.

| Variables | Coefficients | t-statistics |
|-----------|--------------|--------------|
| DFS(-1)   | −0.3485***   | −3.22        |
| INST      | 0.5597***    | 6.57         |
| LO        | 0.86117***   | 6.23         |
| RGDP      | 0.07315      | 0.72         |
| INF       | −0.0081      | −1.20        |
| TOPEN     | 0.53692***   | 4.43         |
| Constant  | −1.6816      | −1.22        |

*Note. DFS = development of the financial sector; INST = institutional quality index; RGDP = Real GDP per capita; INF = inflation rate; TOEN = Trade openness; GEF = government effectiveness; VAC = Voice and accountability; REGQ = regulatory quality; PLST = political stability; RLW = law rule; LO = legal origin variable, constructed by generating a dummy, which assumes value one for Muslim law origin countries and 0 for mixed LawLaw (that can be civil, common, or combination of both) origin.**

### Table 3. Effects of Institutional Quality on Stock Market Development.

| Variables | Coefficients | t-statistics |
|-----------|--------------|--------------|
| DFS(-1)   | −0.5583***   | −4.66        |
| INST      | 0.3943***    | 6.18         |
| RGDP      | 0.0915       | 0.89         |
| LO        | 0.9033**     | 2.11         |
| INF       | −0.0065      | −0.93        |
| OPEN      | 0.4619 ***   | 3.48         |
| Constant  | −1.0415      | −0.90        |

*Note. DFS = development of the financial sector; INST = institutional quality index; RGDP = Real GDP per capita; INF = inflation rate; TOEN = Trade openness; GEF = government effectiveness; VAC = Voice and accountability; REGQ = regulatory quality; PLST = political stability; RLW = law rule; LO = legal origin variable, constructed by generating a dummy, which assumes value one for Muslim law origin countries and 0 for mixed LawLaw (that can be civil, common, or combination of both) origin.**
Table 4. Estimation of Model With Individual Dimensions of Governance (FD = Banking Sector Development).

| Variables   | (CCR)   | (GEF)    | (RGQ)   | (RLW)   | (VAC)    | (PST)    |
|-------------|---------|----------|---------|---------|----------|----------|
| DFS(-1)     | -0.2308242 (0.1792) | -0.28640** (0.1372) | 0.10476 (0.0771) | 0.03739 (0.1198) | 0.14560 (0.1821) | 0.05858 (0.1355) |
| INST        | -0.4226* (0.0672) | -0.596078* (0.10897) | -0.52978* (0.1343) | -0.36530* (0.1310) | 0.11502 (0.1201) | -0.16128** (0.0691) |
| LO          | 0.72405*** (0.4625) | 1.8570* (0.5347) | 1.05095*** (0.5861) | 1.82517* (0.6742) | 0.87067** (0.3893) | 0.29017 (0.3260) |
| RGDP        | 0.04683 (0.1588) | (0.2827)** (0.1181) | 0.04395 (0.1532) | 0.15218* (0.1921) | 0.13503 (0.1856) | 0.06391 (0.2721) |
| INF         | -0.00050 (0.0092) | -0.19021*** (0.0077) | -0.00949 (0.0095) | -0.00929 (0.0099) | -0.00160 (0.0110) | -0.00043 (0.0083) |
| TOPEN       | 0.28176*** (0.1318) | 0.37331* (0.1073) | 0.28216* (0.1031) | 0.19133* (0.1588) | -0.05730 (0.1589) | -0.04334 (0.0982) |
| Constant    | -0.51632 (2.3621) | -3.84013* (1.2747) | -2.64751 (2.1328) | -3.5887 (3.1883) | -0.13681 (2.6040) | -1.2008 (2.5737) |

Note. DFS = development of the financial sector; INST = institutional quality index; RGDP = real GDP per capita; INF = inflation rate; TOEN = trade openness; GEF = government effectiveness; VAC = voice and accountability; REGQ = regulatory quality; PLST = political stability; RLW = law rule; LO = legal origin variable, constructed by generating a dummy, which assumes value one for Muslim law origin countries and 0 for mixed law/Law (that can be of civil, common, or combination of both) origin.

*Shows significance at 1%, ** is significance at 5%, and *** is significant at a 10% level of significance.
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