Financial Development, Fiscal Policy and Economic Growth: The Role of Institutional Quality in Pakistan

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Abstract

The study examines the influence of financial development, fiscal policy, and institutional quality on Pakistan’s economic growth. We investigate whether financial development and/or fiscal policies promote economic growth. We also analyse the effect of institutional quality on economic growth in Pakistan. We use time series data from 1985-2016, and use GDP to proxy economic growth. We use unit-root tests to check for stationary of our sample. We perform a logarithmic transformation on the series to reduce outlier effects and use Autoregressive Distributed Lag (ARDL) Model. The results show that financial development and revenue have a positive impact on growth. Our study results implicate that sound, strategic, and result-oriented policies should be formulated to transform our institutions and financial sectors into the well organized, powerful, and trusted frameworks. These transformations will ensure efficient and productive utilization of savings.

Keywords: Economic growth, GDP, government expenditures, institutional quality, net domestic credit to private sector, revenue.

JEL Classification: E02; E44; E62; G20

Introduction

1.1. Background

A well organized financial system can stimulate real growth and innovation. Diverse studies have investigated the relationship between economic growth and financial development (Law & Singh, 2014; Jalil, Feridun & Ma, 2010; Beck & Levine, 2004). An effi-

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cient financial structure plays an important role in enhancing the economic growth (Rehman & Cheema, 2013).

Earlier research shows that economic growth might be considered an outcome of financial development (Khan, Qayyum, Sheikh & Siddique, 2005). Financial development and growth are positively correlated (Salah-Uddin, Jio & Shabaz, 2013; Jalial, Feridun & Ma, 2010) and there exists a unidirectional causality from financial development to economic growth (Bojanic, 2012; Yang & Yi, 2008). These studies find that there is a long run relationship between financial development and economic growth. Numerous studies examine the relationship in developed countries, whereas only a few examine the question in the context of developing countries. Therefore, this study aims to fill this gap in literature and investigate the impact of financial development on economic growth in Pakistan.

Since 1990, it is a recurrent debate that fiscal policies affect the economic activity (Curutchet, 2006). On the one hand, a number of studies claim that a contractionary fiscal policy may have an expansionary effect on investment, consumption, and output, i.e., fiscal policy has non-Keynesian effects (Giavazzi, Jappelli & Pagano, 2000). Whereas, on the other hand, several studies reject the non-Keynesian hypothesis and demand that the results should not be generalized (Van & Garretsen, 2003; Hjelm, 2002a; Hjelm, 2002b). The empirical evidence therefore presents mixed results.

The coefficient of government consumption is larger for developing countries as compared to industrial developed countries (Curutchet, 2006). The private sector is relatively weak and underdeveloped in developing economies and so the public spending on physical infrastructure affects the productivity of the entire economy. The fiscal policy therefore also has an impact on the medium- and long-term economic growth in developing Asian countries (Abdon, Estrada, Lee & Park, 2014). Based on findings in the literature, the impact of fiscal policy on economic growth remains contradictory. Our study examines the role of fiscal policy in Pakistan’s economic growth.

Prior economic literature has highlighted the significance of an efficient institutional and legal framework for enhancing
economic growth (Valeriani & Paluso, 2011). Inefficient transmission mechanisms and institutions may result in low productivity (Siddiqui & Ahmed, 2010). Better quality of institutional support reinforces the rate of investment, which in turn improves the capital creation process and enhances economic growth (Kirkpatrick, Parker & Zhang, 2006; World Bank, 2003).

A significant amount of studies examine the connection between institutions and economic growth and find mixed evidence (Kauffman, Kraay & Mastruzzi, 2005; Rodrik, Subramanian & Trebbi, 2004). On the one hand, studies find significant impact of higher institutional quality on growth and argue that the impact is more pronounced in the long-run as compare to the short-run (Acemoglu & Johnson, 2005; Djankov, McLiesh & Ramalho, 2006; Siddiqui & Ahmed, 2010). On the other hand, studies find that the impact of institutions on economic growth is different across countries (Farole, et al, 2011).

Fiscal gap is defined as the deficiencies of government investments in infrastructure and human capital (Todaro & Smith, 2015). Knowledge, health, and skills, increase the productivity of human capital, which in turn enhances economic growth. Earlier studies support the functional role of human capital in economic growth (Asghar, Awan & Rehman, 2012; Levitsky, 2003; Nasir & Nazil, 2001; Abbas & Mujahid-Mukhtar, 2000).

Since it inception in 1947, Pakistan is clustered among the developing economies with an economic growth rate of 4.71% as of 2016. This study examines whether financial development and/or fiscal policy promote the economic growth. Furthermore, it seeks to explore the role of institutional quality in economic growth process in Pakistan. Many studies have investigated the role of financial development, fiscal policy, and institutional quality on economic growth through multiple channels (Asghar & Hussain, 2014; Ahmad & Malik, 2009; Siddiqui & Ahmed, 2010; Bose, Emranul & Osborn, 2007; Shafique & Haq, 2006; Khan et al., 2005) but this study explores, another dimension of the underlying relationship.
1.2. Characteristics of Pakistani Economy

Pakistan is considered among the underdeveloped economies with a large population and unstable governance system. The review of industrial landscape of Pakistan’s economy reveals that agriculture is playing an important role in the economy. The services sector is also considered a dominant sector of the economy. Textiles industry is the major contributor which comprises almost 60% of the country’s exports. Recently, Pakistan has implemented developmental reforms and market-oriented economic adjustments. The purpose of the reforms is to enhance the macroeconomic stability, promote the private sector, and boost the industrial development by promoting exports. Moreover, these reforms drew attention towards social sectors, population planning, health, and education which were widely ignored in the past. The government has tried to minimize monetary and external imbalances, restore the financial sector, and offer definite incentives to attract foreign investment. Furthermore, the reforms have focused on minimizing trade barriers and privatizing state owned industries.

Although domestic market offers cheap labor and access to regional markets, yet the foreign investors avoid to invest in Pakistan because of the political instability, lack of skilled labor, unlimited corruption, and obsolete infrastructure. Moreover, in the recent years, domestic investment has also reduced.

According to World Bank, weak governance is at the top of economic problems. This covers bad performance of the public institutions in areas of accountability, inefficient management, inappropriate tax collection, and corruption. Among these problems, corruption is most acute. In 1996 and 1998, Pakistan ranked as 2nd and 5th on the list of most corrupt countries of the world by Transparency International. Corruption damages economy by elevating the transaction costs.

According to a survey of the World Bank in 1994, 200 firms in Pakistan affirmed that a huge amount of time and money

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4Third quarterly report for the year 2018-19 of the board of directors of State Bank of Pakistan.
was wasted in many uncertain interactions with insignificant and high level bureaucrats hunting bribes.

Another major problem of Pakistan is continuous dependence on financial aid and massive external debt. Approximately 25% of government revenue is spent on foreign loans and 50% on debt service obligations. About half of the revenue is used and 2/3 of the revenue collected from federal taxes, is used for debt service and defense. In order to manage repayments for foreign and domestic debt, it is essential for Pakistan to improve tax collection in the long-run. In last three years, Pakistan has made meaningful progress in attaining macroeconomic stability. Fiscal deficit has decreased from 8% to below 5%. International reserves have reached $18 billion while growth rate has raised to 5.3% in 2017. The economy of Pakistan has witnessed different ups and downs since its inception and many governments have tried to uplift the economy of Pakistan. In this context, there is a need to investigate which macroeconomic factors (like financial development, fiscal policy, and institutional quality) contribute significantly towards the economic growth of Pakistan. It is essential to measure the impact of financial development, fiscal policy, and institutional quality on the economic performance of Pakistan. This study examines whether institutional quality promotes the functional role of financial development and fiscal policy in encouraging Pakistan’s economic growth.

The rest of the paper is arranged as follows: section 2 presents the literature review; section 3 illustrates data collection and methodology; section 4 discusses results; section 5 concludes the paper.

2. Literature Review

Levine, Loayza and Beck (2000) employ the data of 77 countries from 1960 to 1995 and find a direct causal relationship between financial development and economic growth. Using panel data techniques, they concluded a strong positive association between financial development and economic output.

Christopoulos and Tsionas (2004) investigate the long-run relationship between financial development and economic growth in developing economies. The results from panel co-integration
analysis predict a unidirectional causality from financial development to economic growth.


Bhattacharyya and Hodler (2011) use data of 133 countries, including Pakistan, to investigate whether natural resource revenue hinders financial development. Further, they also examine the role of political institutions in economic development. They find that democratization can assist in increasing financial development in resource-rich economies.

Rehman and Cheema (2013) find long-run co-integration between financial development and real sector growth. The study results support the demand following hypothesis and show that role of commercial banks is more important than monetary authorities in the real sector growth.

Rousseau and Paulwachtel (2011) find a dynamic impact of financial deepening on growth for the time period 1960-1989. They suggested strong impact of financial deepening on growth in sample period. Moreover, they find that in 1980s the countries lacking legal infrastructure accepted financial liberalization. They find that the role of finance decreased as the equity markets emerged as substitute source of funding.

Bettin and Alberto (2011) investigate the interaction between remittances and bank efficiency from economic growth perspective. They use bank efficiency as an indicator of financial development. They find that remittances promote economic growth.

According to Kachoand and Dahmardeh (2017), financial development and institutional quality are the two key factors for economic growth. Moreover strong institutional structure promotes economic growth.

Nazir, Anar, Irshadand and Shoukat (2013) explored the effect of fiscal-policy on economic growth. They find that public policy plays an important role in economic growth process. They
also point out that public policy techniques are more important for long-run growth as compared to short-run, in case of Pakistan.

Asghar, Hafeez-ur-Rehman, and Nadeem (2016) explore the relationship between foreign aid, fiscal decentralization, and economic growth in Pakistan for the period 1980-2014. They used Three Stage Least Squares econometric technique and find positive impact of foreign aid and fiscal decentralization on economic growth. They find bidirectional causality between economic growth and fiscal decentralization. Foreign aid and fiscal decentralization also show bidirectional causality.

Rosa and Looty (2012) apply GMM estimator and find that in case of adverse institutional quality, there is a significant impact on natural resource dependence. The negative response of institutional quality to resource dependence is more severe in the long-run.

Tebaldi, E., & Elmslie, B. (2013) use cross country data and instrumental variable technique to examine the relationship between institutions and innovation. They show that institutional arrangement significantly explains production and that human capital is vital for shaping institutions in the long-run.

A large number of studies investigate the role of financial development, fiscal policy, and institutional quality on economic growth through different ways (Asghar & Hussain, 2014; Ahmad & Malik, 2009; Siddiqui & Ahmed, 2010; Bose, Emranul & Osborne, 2007; Shafique & Haq, 2006; Khan et al., 2005). Ahad et al. (2017) study the impact of financial development on Pakistan’s economy, but consider the industrial sector only. Financial development and institutional quality have play a vital role in the economic growth of an economy. Considering the existing gap in literature, we investigate the following research questions:

I. Does financial development promote economic growth of Pakistan?

II. Does revenue play any role in enhancing economic growth of Pakistan?

III. Does institutional quality hinder the economic growth of Pakistan?
3. Methodology

3.1. Data Sources

This research uses the annual time series data from 1985 to 2016, obtained from the World Development Indicator (2017), International Country Risk Guide (ICRG) and Economic Survey of Pakistan.

We check for the stationarity of data by applying Dickey Fuller (DF) and Augmented Dickey Fuller (ADF) test. If all variables are stationary at level then the model can be analysed using ordinary least square (OLS). We find that the variables are not stationary at level. We therefore use Autoregressive Distributed lag approach (ARDL). We use this approach as it is most appropriate for small sample size as well as it can be applied on series with different unit roots such as I(0) and I(1).

3.2. Model Specification

Based on the objective of the study, following econometric equations are specified.

\[ GDP = f(FD, REV, DA, GE, SE) \]

\[ GDP = \beta_0 + \beta_1 FD + \beta_2 REV + \beta_3 DA + \beta_4 GE + \beta_5 SE + \mu \]

\[ \ln GDP = \beta_0 + \beta_1 \ln FD + \beta_2 \ln REV + \beta_3 \ln DA + \beta_4 \ln GE + \beta_5 \ln SE + \mu \] (1)

- GDP = Gross Domestic Product per capita
- FD = Financial Development
- REV = Revenue
- DA = Democratic Accountability
- GE = Government Expenditures
- SE = Secondary School Enrollment

In the proposed model, GDP is measured as Gross Domestic Product Per Capita. Net domestic credit to private sector is used to proxy financial development in line with earlier studies (Nili & Rastad, 2007). We use total revenue of Pakistan to proxy for revenue. We use expenditures are used to proxy for fiscal policy (Badeeb & Lean, 2017) and the democratic accountability to proxy for the
quality of institutions in Pakistan. We use the secondary school enrolment is used to proxy for human capital.

3.2.1. Measuring the Dependent and the Independent Variables

In this section we discuss and explain the model variables and their units of measurements, used in our research.

_Gross Domestic Product Per Capita:_

The Gross Domestic Product (GDP) is the sum of the gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products.

_Net domestic credit to Private Sector:_

Domestic credit to private sector by banks refers to financial resources provided to the private sector by other depository corporations (deposit taking corporations except central banks), such as through loans, purchases of non-equity securities, and trade credits and other accounts receivable, that establish a claim for repayment. For some countries these claims include credit to public enterprises.

_Revenue:_

It refers to all receipts the government gets, including taxes, custom duties, revenue from state-owned enterprises, capital revenues, and foreign aid.

_Democratic Accountability:_

This is a measure of how responsive government is to its people, the points in this component are awarded on the basis of the type of governance enjoyed by the country in question.

_Government Expenditures:_

General government final consumption expenditure (formerly general government consumption) includes all current expenditures for purchases of goods and services (including compensation to employees). It also includes expenditures on national defence and security, but excludes government military expenditures that are part of government capital formation.
Secondary School Enrollment:

Gross enrolment ratio is the ratio of total enrolment, regardless of age. Secondary education completes the provision of basic education that began at the primary level. Secondary education aims at laying the foundations for lifelong learning and human development, by offering subject or skill-oriented instruction using specialized teachers.

3.3. Order of Integration

The results of ADF and Phillips–Perron (PP) test are given in the following table.

<table>
<thead>
<tr>
<th>Variables</th>
<th>ADF</th>
<th>PP</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>1(1)</td>
<td>1(1)</td>
</tr>
<tr>
<td>FD</td>
<td>1(1)</td>
<td>1(1)</td>
</tr>
<tr>
<td>REV</td>
<td>1(1)</td>
<td>1(1)</td>
</tr>
<tr>
<td>DA</td>
<td>1(1)</td>
<td>1(1)</td>
</tr>
<tr>
<td>GE</td>
<td>1(1)</td>
<td>1(1)</td>
</tr>
<tr>
<td>SE</td>
<td>1(0)</td>
<td>1(0)</td>
</tr>
</tbody>
</table>

The result of stationarity tests show that GDP, economic growth, financial development, revenue, democratic accountability, and government expenditures are the variables that are stationary at first difference I (1) and Secondary school enrolment is stationary at level 1(0).

3.3.1. Selection of Lag Length

Table 3.1.1 shows that variables are stationary at 1(0) and I (1), so ARDL technique is used to examine the co-integration between the independent and the dependent variables. The lag length for the model is selected on the basis of Akaike information criterion (AIC), HQ, and SC with the help of Value at Risk (VAR) method.
Table 2  
**VAR lag order selection criteria**

<table>
<thead>
<tr>
<th>Lag</th>
<th>Log L</th>
<th>LR</th>
<th>FPE</th>
<th>AIC</th>
<th>SC</th>
<th>HQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>30.68</td>
<td>NA</td>
<td>4.27e-09</td>
<td>-2.24</td>
<td>-1.95</td>
<td>-2.17</td>
</tr>
<tr>
<td>1</td>
<td>121.41</td>
<td>123.72</td>
<td>3.38e-11</td>
<td>-7.22</td>
<td>-5.14</td>
<td>-6.73</td>
</tr>
<tr>
<td>2</td>
<td>190.15</td>
<td>56.24*</td>
<td>4.33e-12*</td>
<td>-10.20*</td>
<td>-6.33*</td>
<td>-9.29*</td>
</tr>
</tbody>
</table>

Note: Endogenous variables: LNGDP LNDA LNFD LNGE LNSE LNREV. Exogenous variables: C. Sample: 1985-2016. * indicates lag order selected by the criterion. Lag length of 2 is selected on the basis of AIC.

4. Results and Discussion

4.1. Auto Regressive Distributed Lag Model

Table 3  
**Results of ARDL model**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNGDP(-1)</td>
<td>0.795186</td>
<td>0.105192</td>
<td>7.559369</td>
<td>0.0000</td>
</tr>
<tr>
<td>LNDA</td>
<td>-0.008541</td>
<td>0.004519</td>
<td>-1.889750</td>
<td>0.0813</td>
</tr>
<tr>
<td>LNFD</td>
<td>0.068253</td>
<td>0.026227</td>
<td>2.602339</td>
<td>0.0219</td>
</tr>
<tr>
<td>LNFD(-1)</td>
<td>-0.049631</td>
<td>0.026429</td>
<td>-1.877933</td>
<td>0.0830</td>
</tr>
<tr>
<td>LNFD(-2)</td>
<td>-0.144223</td>
<td>0.026501</td>
<td>-5.442210</td>
<td>0.0001</td>
</tr>
<tr>
<td>LNGE</td>
<td>-0.006092</td>
<td>0.006074</td>
<td>-1.002957</td>
<td>0.3342</td>
</tr>
<tr>
<td>LNGE(-1)</td>
<td>-0.000770</td>
<td>0.008210</td>
<td>-0.093800</td>
<td>0.9267</td>
</tr>
<tr>
<td>LNGE(-2)</td>
<td>0.022622</td>
<td>0.013203</td>
<td>1.713384</td>
<td>0.1104</td>
</tr>
<tr>
<td>LNSE</td>
<td>0.031000</td>
<td>0.019945</td>
<td>1.554233</td>
<td>0.1441</td>
</tr>
<tr>
<td>LNREV</td>
<td>0.130791</td>
<td>0.029549</td>
<td>4.426300</td>
<td>0.0007</td>
</tr>
<tr>
<td>C</td>
<td>1.450598</td>
<td>0.779028</td>
<td>1.862062</td>
<td>0.0853</td>
</tr>
</tbody>
</table>

R-squared 0.997913  Mean dependent var 10.71293

Adjusted R-squared 0.996308  S.D. dependent var 0.140439

S.E. of regression 0.008533  Akaike info criterion -6.386075
The above table is exhibiting the relationship between the dependent and the independent variables through the result of ARDL model. To avoid the disturbance in normality and prevent heteroscedasticity, log transformation is made.

In the table above, the coefficient of Financial Development (FD) is 0.068. As this is a log-log model, the coefficient value implies that one percent increase in financial development will bring 0.068% increase in Economic growth (GDP). The positive coefficient of FD suggests that domestic credit should be extended to Pakistan because it will significantly contribute to the economic development and growth. Higher economic growth will ultimately improve standard of living and economic welfare. This result is consistent with earlier studies (Javed & Gondal, 2014; Kacho & Dahmardeh, 2017).

The coefficient of Revenue (REV) is 0.131. This implies that one percent increase in financial development will bring 0.131% increase in Economic growth (GDP). This indicates that revenue directly benefits economic growth in Pakistan. The result is consistent with earlier studies (Abdon, Estrada, Lee & Park, 2014; Badeeb & Lean, 2017).

The coefficient of (DA) is -0.009. This implies that one percent change in DA will bring 0.009% decrease in Economic growth (GDP). The negative relation of institutional quality with growth depicts that corruption induces political instability in the country. This happens as a result of bad governance which ultimately hinders economic growth. The result is consistent with prior studies (e.g. Kathavat & Malik, 2012).
Government expenditures has a negative coefficient but the result are not statistically significant. The coefficients of financial development, revenue, and the lag of dependent variable illustrate positive association with GDP.

Overall, ARDL model appears to be a good fit because the R-squared is 0.998. It means the independent variables significantly explain the growth in GDP.

4.2. Diagnostic Test

The results of diagnostic test are shown in the table below:

<table>
<thead>
<tr>
<th>Diagnostic tests</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serial correlation (LM)</td>
<td>0.2636</td>
</tr>
<tr>
<td>Normality (JB)</td>
<td>0.734094</td>
</tr>
<tr>
<td>Heteroscedasticity (LM)</td>
<td>0.0541</td>
</tr>
<tr>
<td>Heteroscedasticity (ARCH)</td>
<td>0.2347</td>
</tr>
</tbody>
</table>

Results in the above table show that there is no serial correlation and heteroscedasticity among the error terms.

The above bell shaped graph and the p-values of 0.05 of jarque-Bera test confirm that the data is normally distributed.

4.3. Stability tests

We use Ramsey’s and CUSUM tests to check for stability.
### Table 5

**The stability results**

<table>
<thead>
<tr>
<th>Ramsey RESET test</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>t-statistic</td>
<td>0.5707</td>
</tr>
<tr>
<td>F-statistic</td>
<td>0.5707</td>
</tr>
</tbody>
</table>

The probability value greater than 0.05 indicate that the model is stable at 5% significance level.

#### 4.4. CUSUM Test

![CUSUM Test Results](image)

The graph shows that value of cumulative sum lies between the critical lines, hence indicating stability.

#### 5. Conclusion and Recommendations

Several researchers are of the view that institutional and financial development has a major role in the economic growth of a country. Forming accurate policies is very essential to stimulate economic growth. Financial system plays an important role in the economic growth process. Furthermore, investigating the impact of institutional quality on economic growth is integral to formulating effective economic growth policies.

This study uses ARDL to estimate the underlying relationship because the different variables in the model are stationary at level 1(0) and first difference 1(1).
The relationship between the dependent and the independent variables is investigated through the result of ARDL model. The coefficients of financial development, revenue, and the lag of dependent variable show that financial development and revenue positively affect the Economic growth, measured using GDP.

The findings of this study show that FD has a positive impact on growth. The findings are consistent with earlier studies. Finally, the findings also reveal weak role of institutional quality in enhancing economic growth because of poor governance system.

5.1. Recommendations and Future Research

It is the need of the hour that planned and coordinated endeavors must be made in order to develop financial sector and institutions in Pakistan. Fiscal policy should be well rounded and policy makers should formulate policies which are less likely to rely on foreign aid. Moreover, government spending on education sector should increase to stimulate economic growth. A powerful and trusted framework is required to ensure investment of government revenue in value creating and growth stimulating investments.

The present study uses the annual time series data which is taken from economic survey of Pakistan, State Bank of Pakistan, and World Bank. Future research may use quarterly or monthly time series data to investigate the role of institutional quality in Pakistan’s economic growth. Similarly, future studies may also use panel data of other developing countries to examine the said research question using dynamic or static panel data techniques.

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