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Influence of Financial Development on Economic Growth: A Case study of Pakistan Economy

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Abstract

Although the relationship between finance and growth is receiving more attention, little is known about how financial development affects growth. Financial development is the multidimensional phenomena the study check the impact of financial development by using the proxy of domestic credit on private sector Education, Private Investment, Government Spending and Term of Trade. The study check the impact of financial development on economic growth during the time of 1980-2022 from Pakistan. The VECM results also suggest the existence of short run association among the selected variables (financial development, economic growth, government spending, education, private investment and term of trade).The outcome of the Johansen's Cointegration test indicate that the financial growth positively related with economic evolution. The findings of Augmented Dickey-Fuller shows financial develop

Keywords: Economic growth, financial development, Johansen cointegration

1. Introduction

Finance is a well-known process to accumulate funds to start or enlarge a business activity. The financial development relationship with economic growth has been analytically treated in the empirical and theoretical literature. (Kirkpatrick et al., 2000) analyses that economic growth has positively affected by the financial sector development and negatively affected by the poverty in developing countries. They have argued that financial establishment is a necessary condition for established and efficient financial development. (kargbo & Adamu 2009) suggest the size of financial institutions to supply funds and economic growth raised by the financial development through increased the flow of investment. 10% the ratio of investment to GDP positively and statistically significant. (Ayadi et al., 2013) indicate that economic growth negatively linked with bank deposits and credit to the private sector because lake of supervision of financial system and not proper credit allocation. Aric (2014) empirically estimates that 1 percent increase in financial development causes 0.7 percent decrease in growth because the financial

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development not proper lead to economic growth areas. Financial development effect on economic growth is negative in contrast with the theory.

A study shows the economic growth strongly associated in the long run with financial development in developing countries. Karlsson & Mansson (2015) study show the financial development positively linked with economic growth in the long run period but also hold negative association between economic growth and financial development in short run period. Bozovic & Smolovic (2016) finds that banking sector and financial development are most important for economic development. Financial crises has been disturbing the economic development. (Iheanacho et al., 2016) estimates that financial development insignificant negatively linked with economic growth in long run period and significant negatively association between economic growth and financial developments in short run period from Nigeria (Asghar & Hussain 2014)

1.1 Statement of the Problem

In this study the research problem is that the financial development not only depends on only banks. It is very important to measure financial development by other instruments and institutions to contribution in economic growth of Pakistan. In this study, investigate the domestic credit to private sector to measure the financial development contribution in economic growth of Pakistan. The study of the literature exposes an interesting association between financial growth and economic evolution in the European Union (Arıc, 2014). In this study, we have discussed the significant association between financial development and economic growth of Pakistan.

1. To empirically estimate the role of financial development towards high growth achievements in Pakistan for the period of 1980-2022.
2. Based on empirical results the study will suggest the policy recommendations.

1.2 Organization of the Study

The II section is presented a particular literatures review of the financial development association with economic growth. Model specified and variables description in the III section. The IV section take a brief arrangement of used data and techniques. In the V section, the empirical results of the model estimating association between extricated principal elements and economic growth in Pakistan. The IV section is present the conclusions of this study

2. Literature Review

There are the different study the explained the effect of financial development on economic growth Ai-Zubi et al., 2006) Conduct a Hausman specification test for the examination of fixed and random effects on the panel data. The results clearly show that financial indicators are not significant and have no impact on economic growth.(Lal et al., 2009) Describe how the financial structure is positively related to economic growth. The results also declared that the transmission mechanism channel of financial development growth is efficient, but not in terms of investment volume. ARIC 2014)Panel method data is used in this study for the analysis and to find a relationship between economic growth and financial development in the European Union.(Lipovina et al., 2016) Introduce a technique that gives more general measures related to financial development as compared to individual variables for both band and store market development. The results described that it is very difficult to classify the specific components of the financial system that are related to economic growth. (Ansari et al., 2021) This research explores and investigates the various factors that affect the loans of microfinance, which were not prevalent in Pakistan during the COVID-19 pandemic time period. (Ahsan et al., 2022) The study introduces a negative long-run relationship between power consumption and energy use and considers 19 cases during the lockdown period. This research also introduces the partial and targeted lockdowns conveyed by nationwide mass vaccination programs that can navigate the economy with the

power sector with no impact during the COVID-19 time period.(Akunand et al., 2023) This research result shows the significant positive impact of intensity on exposure effectiveness in the textile sector. As a result, Pakistan should increase its encouragement and spending on a culture of development and research to meet changing market requirements (Alam et al., 2022). The outcome of this research is very limited and suitable for oman but totally opposite from non Gcc and Gcc countries (Ali et al., 2022). This research is basically a test attempt in the making of an assessment for sustainable economic growth and domestic debt in Pakistan's economy (Ashfaq et al., 2022). The main purpose of this study is to examine the economic measures considered by the government of Pakistan to withstand the recessionary pressure during the COVID-19 time period.(Gupta et al., 2022) The finding of this research basically evaluates the regulatory impact of absorptive capacity on foreign investment using the time period between 1995 and 2019. (Li et al., 2023) This research describes different management strategies for growing development and reducing the associated environmental, urban, and economic difficulties for government authorities. (Shah et al., 2022). This research basically analyses the strong impact of unemployment on the continuous growth in Pakistan from 1974 to 2020. (Shaikh et al., 2021). This research, based on the argument between economic indicators, shows that Chinese loans and Pakistani loans expose a chance of defaulting on repayments, which have a very high interest rate. (Tiwari et al., 2022). The main objective of this research is to conduct experiments and examine the impact of market equity development and the various supplementary variables of FDI, economic growth, and trade openness on energy consumption among 16 economies in Asia using data from 1990 to 2019.

Khaled et al. (2006) found that economic growth of Arab countries is positively associated with growing financial sector scoop and improvement in financial sector achieving the high economic growth. They have used the panel data for the period of 1980-2011 in 11 Arab countries. Their study found the random and fixed effect in panel data by used the Hausman's test. The outcomes indicates that the financial key are insignificantly association with economic growth. The adjusted model indications that only pubic credit has a positively significant consequence on economic growth

(Guksun & Oktayer 2009 found the association of financial development with economic growth relatively for developing and developed countries. They have used the panel data set of 16 settled and 21 evolving countries for the time period 1975 to 2006 to analyzed the influence of stock markets and banks on economic growth by Appling GMM technique developed for dynamic panel. The results indicates the banks and stock market positively impact the economic growth with the econometrics evidence relevant to developing countries, only stock markets positively impact the economic growth with econometrics evidence relevant to developed countries.

(Sofia et al., 2011) investigated the empirically relationship of financial sector with sustainable economic development in Pakistan. They have used the time series data from the period of 1973-2017. This study aim to examine the long run association of financial development with sustainable economic development by the applied ARDL approach for cointegration method. The conclusion of this study was that strong financial development play a vital role in the economic development of Pakistan.

(Saqib et al., 2013) examined the efficiency of the financial sector and growth impact on economic evolution by used the cross-sectional data from the period 2005 to 2009 in developing countries. The results indicate that the influence of financial sector efficiency and financial development on the economic growth was highly positively significant in specific developing countries. The main purpose of this study to check the financial sector efficiency and financial sector development promotes the economic growth in specific 50 developing countries. Their study also suggest that no matter to uses of other variables in the basic model the relationship remain significant and positive.

(Ayadi et al., 2013) analyzed the new quantity and quality determine of financial development to assess prospective relationship with economic growth. They used the panel data method and refreshed

range of data from 1984-2010. It incorporates nations from both the developing and developed regions, with a special reference to the southern Mediterranean countries. Their model uses institutional variables & financial development. The bank deposits and private sector are negatively connected with growth, it means that the credit assignment in the region and feeble financial procedure and supervision are very difficult.

Aric (2014)) explore the association of financial growth with economic development of 27 European Union economies. The study investigation hold the panel data for the period between 2004 and 2012. It concluded that adjustment in the rate of Domestic Credit (DC) to Private Type Sector (DCPS) as % of GDP negatively effect on economic evolution. The reason for these surprised results was that the domestic credit to private sector was not fully utilized in the developed areas. The use of data in the study collected from world development indicator.

(Kyophilavong et al. 2014) studied the association of financial growth with economic development in Laos. This study results indicate that existence of long run association. They have used the ARDL bounds test approach to cointegration for the estimation of these results. In case of Laos the demand for financial services was very important to promote the financial development and to maintain high economic growth. The elevation of financial sectors lead the high economic growth at similar time, economic growth also the reason for financial development.

(Asghar & Hussain, 2014) explore the causal association of financial Development with economic growth by used of panel data for the period of 1978 to 2012 in developing countries. They have applied panel unit root tests for stationarity, panel causality tests and panel co integration for long run relationship. The findings show a long-term, significant association between financial development and economic growth that is positive and significant. The trade openness has impact on the financial development with respect to all developing countries. It is concluded that the enhancement of external finance is lead the private investment more productive.

(Abida et al., 2015) found the association of financial development with economic growth by used the panel data of three North Africa for the period of 1980-2012.they have used the Generalized Method of Moment (GMM) estimator for linear panel data dynamic models. Their consequences indicate that the financial development has positively impact the economic growth by used the proxy for measure of financial development. The estimation also show that the financial sector have strong need to developed for better efficiency of these countries.

(Fu et al., 2022) examined the indication of association between economic growth and financial development by used the panel data of 10 Asian countries for the period of 1971 to 2013. They have applied unit panel unit root test for stationarity issues. The purpose of this study to examine the difference on the relationship between developed and developing countries in Asian region. The estimated results show that the financial development has impact on the economic growth of developing and developed Asian countries (Naseem et al., 2022) . The results also indicate that financial development and economic growth relationship is positive in long run and negative in short run.

(Hassan & Barua 2015) examines the association among economic growth and financial development for five South Asian developing countries Sri Lanka, Pakistan, India, Bangladesh and Nepal. They have used the cross sectional dependence, time fixed effect and cointegration for the selected model in this study. They have also used the Serial Correlation and Heteroskedasticity for fitness of the model. They have used the panel data for the period of 1974-2012 and collected from the world development indicator. Their estimated results show that the domestic saving and total debt has significant impact on economic growth of these developing countries.

(Iheanacho et al., 2016) empirically analyzed the association of financial sector development with economic growth of Nigeria by used the time series data from 1981-2011. This study analyzed the co integration by the used ARDL approach. The expected results show that financial development has a short-term, significantly negative impact on economic growth but insignificantly negative effect on economic development in the extended run with reference to Nigeria economies. The financial system could not properly lead to economic growth in the long run with reference to Nigeria economies (Chishti et al., 2021). The financial system could not properly lead to economic development.

Alghfais (2016) explores the association between economic growth and financial sector development in Saudi Arabia non-oil sector. This study have used the time series data for the period of 1985-2015. Autoregressive Distributed Lag (ARDL) method used for model fitness. The basic conclusion of this study that financial sector development has significantly positive influence the total economic growth of the Saudi Arabia non-oil sector. The study suggest the financial development can be greatly improved by easing credit constraints on the Medium-sized Enterprises and Small-sized Enterprises can recover the distribution of capital, thus fast-tracking economic growth.

Naceur et al. (2017) investigated the financial development affects the causes of growth productivity and investment by used panel data of 145 countries for the period of 1960-2011. They employ a scope of econometric path, focusing on the CCA and MENA countries. The investigation shows without financial measure to capture the entrance, capability, establishment, and openness scope of financial development. Financial development can give rise to externalities that enfeeble economic growth, expressly respecting the provision of scare resources.

(Ibrahim & Alagidede et al., 2018) examined the effect of financial expansion on the economic evolution of in sub Saharan 29 African countries in the time period between 198- to 2014. The study used the Generalize Movement Method (GMM) to empirically estimate the impact of financial development on Economic evolution. The results shows that the elasticity of change in growth due to financial development in high in these countries. However, the study also reflect that the high credit growth has the some consequences of high financial risk that coupled with the consumption fueling inflation. The research Suggest that the financial development has the positive Impact on economic growth but crucially depends on the simultaneously growth of real sectors.

(Ehigiamusoe et al., 2021) investigated the financial development affects the causes of growth productivity and investment by utilizing panel data of 145 countries for the time period of 1960-2011. They employ a scope of econometric path, focusing on the CCA and MENA countries. The investigation shows without financial measure to capture the entrance, capability, establishment, and openness scope of financial development. Financial development can give rise to externalities that enfeeble economic growth, expressly respecting the provision of scare resources.

Chowdhury et al. (2022) analyzed the role of financial expansion on economic evolution in Sub-Saharan African emerging economies. The empirical estimation is done in different region at different time periods, first group time period was 1990-1999 from pre-Millennium Development Goals (MDGs) while the period of 200-2017 was the Millennium Development Goals. The study used the system generalized movement method on 45SSA Countries. The long run effect shows that the era of pre-MDGs and MDGs are the positive growth period. Furthermore, the study also suggest that the SSA region should be focus on the intuitional quality and the foreign direct investment as a mediation of growth.

3.Model specified and Variables Description

(Kiprop et al., 2015) study the financial growth link with economic evolution to measure the financial development by using proxy the credit to private sector The regression outcomes indicate that financial

growth positively impact on economic growth of Kenya. Explanatory variable Private investment was also positively impact on economic growth and other explanatory variables (term of trade, openness to trade and government size) negatively impact on economic growth of Kenya.

In this study searched out the model of Kenya which is worthy and admirable. This study is applying the same model in Pakistan but openness to trade drop because term of trade is already exist in the model and contribution is the involvement of education. This study a strong need of education in this model. In this model included education and this study is going to apply it in Pakistan to check the relationship of financial development with economic growth.

$$Y = \beta 0 + \beta 1\ CPS + \beta 2\ INV + \beta 3\ TOT + \beta 4\ GS + \beta 5\ EDU + \mu$$

Where Y = GDP per capita

CPS = Private Sector Domestic Credit (financial development)

INV = Private Investment

TOT = Term of trade

GS = Government spending

EDU = Education

μ = Error term.

3.1 Variables Description

GDP Per Capita

GDP per capita is calculate to divide the gross domestic product by total population. Aggregate demand conditions in a country catch by this variable. To account the effect of Population by this variable. This data gathered from the world development indicator.

Financial Development

In this study domestic credit to private sector (CPS) used as a proxy of financial development to see its effect on economic growth and CPS is basically the percentage of GDP. This variable accurate measures the financial development for investigate the relationship with economic growth. Financial development have expected significant positively effect to economic growth. The data obtained from world development indicator

Private Investment

Private investment increases the productivity of a country which lead to increase the gross domestic product. In this study, investment have expected positive effect to economic growth. The data will be obtained from hand book of economy statistic State Bank of Pakistan.

Term of Trade

Term of trade is also important factor of economic growth of Pakistan because it shows the external shock to the economy. The data collected from the world development indicator.

Government Spending

Government spending is another explanatory variable in this study. Government spending is the sum of all current expenditure for services and goods purchased by government. Government spending also includes the security and national defense expenditure and excludes the expenditures of government military which are the part of capital formation. Government spending also expected the positively effect to economic growth of Pakistan. The date collected from world data bank.

Education

High school education enrolment by kids is also important to achieved high economic growth. Education have expected significant positively effect to economic growth of Pakistan. The data will be obtained from handbook of economy statistic State Bank of Pakistan.

Error Term

Error term shows the effect of other explanatory variables, which was not included in this selected econometric model.

4. Methodology

In order to examine the association of financial development with economic growth, this study is applying the following three steps.

1. In this step we have checked the stationarity of all the variables used in current study.
2. Johansen's Co integration is used to know about the long run association between financial development and economic growth.
3. Vector error correction model (VECM) is used to know about the short run association among the variables.

The detail of these tests are given below.

4.1 Unit Root Test

Mostly used the two types of unit root test to classify the stationarity problems of the variables. First, is Phillips-Perron (PP) and second is Augmented Dickey-Fuller (ADF) test. Dickey-Fuller test after further improvements become Augmented Dickey Fuller. ADF test is used to remove autocorrelation by taking the additional lagged terms of the dependent variables. The error may be serially correlated under ADF test Assumption and lagged value of dependent variable also added. PP test advantage is to capture the fundamental interruption in the data and detention the short run activities of the data. The Null hypothesis is excluded against the alternate hypothesis is recognized due to the t-statistic value is less than the MacKinnon acute values.

4.2 Co integration and Vector Error Correction Model

In this study after checking stationarity of the time series data chooses johensan co integration test. Financial development and economic growth relationship establish to attempt suitable econometric technique is to employ co integration test. (Johansen et al., 1991) method of co integration to determine their order of integration. Cointegration occurs when equilibrium is applied to 1(I) and multiple variables stationary at 1(I) then cointegration valued. Cointegration deal with the long run relationship among variables and not deal to short run relationship. For authentic results we discussed the long run and short run relationship between variables. To estimate the short run relation this study need to develop vector error correction model. Now the criteria is if there is cointegration or long run relationship among variables then estimates vector error correction, if there is no co integration among these variables then VAR estimates. In this study co integration exist means that long run relationship among variables, in case this model estimated by error correction method.

5. Empirical Findings

The study has used PP test and ADF test to check the stationarity of time series data. Table 5.1 represent the results of PP and ADF test. GDP is stationary at first level with 5 % intercept level of significance while the trend and intercept with 10 % level of significance in the ADF test. CPS is stationary at first difference with intercept and also significant with trend & intercept at 1 % level of significance with in the ADF test. At the 5% and 1 level of significance in the ADF test, INV is stationary

at first difference with intercept and with trend & intercept, respectively. In the ADF test, GS is stationary at the first difference with intercept, intercept & trend, and 1% level of significance. In the ADF test, TOT is stationary at the first difference with intercept, intercept & trend, and 1% level of significance. EDU is stationary at first level with intercept & trend at 1% level of significance in the ADF test.

TABLE 5.1

Phillips-Perron (PP) and Augmented Dickey-Fuller (ADF) Test Results

Tests	Augmented Dickey-Fuller test				Phillips-Perron			
Variables	At Level		At First Difference		At Level		At First Difference	
	Intercept	Intercept & Trend	Intercept	Intercept & Trend	Intercept	Intercept & Trend	Intercept	Intercept & Trend
GDP	0.012	-2.694	-2.951**	-3.207***	-0.161	-2.091	-2.951**	-3.907***
CPS	-0.711	-1.542	-3.639*	-4.252*	-1.041	-1.763	-3.639*	-4.252*
INV	0.258	-2.131	-3.710*	-3.548**	0.722	-1.474	-3.710*	-3.548**
GS	-1.375	-1.843	-4.717*	-4.662*	-1.586	-1.970	-4.725*	4.672*
TOT	-2.079	-3.087	-6.218*	-6.151*	-2.079	-3.184	-6.220*	-6.235*
EDU	1.775	-2.067	-3.800*	-4.011*	1.373	-1.172	-3.789*	-3.887**

*stationary at level of significance 1 percent, **stationary at level of significance 5 percent and ***stationary at level of significance 10 percent

After vector error, correction estimation results obtained are reported in Table 5.2. Increase in the financial development lead to high economic growth in Pakistan. The coefficient of proxy as used for financial development has significant positive impact on the per capita GDP in the short run and long run. Financial system of Pakistan is working properly to promote the economic growth. Education has positively impact on per capita GDP because education is an important factor for any institution development. Theoretically, government spending positively impact on GDP, now in this study results also shows the positive impact of GS on per capita GDP. Private investment has also positive influence the economic growth. Private investment have been increased the business productivities in Pakistan when supply of goods increases then the export is also arise. Term of trade also positively influences on per capita GDP. The term of trade increased by the reduction of imported goods or increase the goods of exports. This study result compare with the (Kiprop et al., 2015) study ,their study government spending and term of trade negatively impact on per capita GDP of Kenya but this study all included variables positively highly impact on per capita GDP of Pakistan

TABLE 5.2

Vector Error Correction Estimates Represented GDP is Dependent Variable

Variables	Coefficient	Standard Error	t-Statistic
CPS	5.817605	0.33944	-17.1386
EDU	0.000137	5.3E-06	-26.0676
GS	10.39212	0.56125	-18.5160
INV	4.711964	0.43485	-10.8360
TOT	3.036527	0.14725	-20.6215
C	159.4389	-	-

R^2 = 0.64, Adj. R^2 =0.39, F-Statistic = 2.57, Mean Dept = 16.41 and S.D Dependent = 14.76

6. Conclusion

This study empirically examines the relationship between financial development and economic growth in Pakistan. The unit root tests, Philip-Perron and Augmented Dickey-Fuller have been used to deal with the issue of stationarity. Johansen's Cointegration test is use to examine the long run relationship. The long run vector indicates that financial development positively influences the economic growth. The VECM has been used for the short run analysis, which is very similar to long run relationship. In this study, other factors of economic growth education, government spending, private investment and term of trade are also used. Their impact is also positive on economic growth. It can be concluding that, the financial system is working properly to promote the economic growth in Pakistan. Government should increase the credit facilities to the urban areas for the development of financial system to achieve high economic growth and government must to be moved credit from non-performing to performing economy, which helped the Pakistan economy grow. Government should also improve the financial system by increasing the credit flow toward productive activities. Private investment should promote the small business activities through advancement of microfinance, which is lead to economic growth. Therefore, government should adopt policies in favour of microfinance to enhance the small and medium business activities. On the basis on empirically estimation government spending positive effect to economic growth, so government should also adopt fiscal policy, which is also lead to high economic growth of Pakistan. Government should increase the term of trade by reduction in imported items, which is costly and increases the domestic items for more export.

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