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The Effects of Financial Development on Economic Growth in Pakistan

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Abstract: *The aim of the present study is to analyses the relationship between Pakistan's financial development and economic growth. Annual data are used by the study from 1985 to 2017. Ordinary least square methodology is utilized by the study. The result indicates that there is a positive and important impact of domestic investment on economic growth. The interaction effect of trade openness can create the strong relationship among financial development (Broad money supply and Domestic credit provided by financial sector) and economic growth (GDP).*

Keywords: Financial Development, GDP, Granger Causality.

1 Introduction

The unsustainable trend in economic growth is complex issue for policy makers, professionals. High inflation, increasing foreign debt, weak foreign demands for Pakistan products, political unsustainability, and low level of human capital causes the economic growth unsustainable. Economic growth is measured on the basis of gross domestic product (GDP). GDP is measure on the basis of local currency that should be constant. GDP per capita is obtained by dividing midyear population. All producers that are produced products which adds the value in the economy and addition of product taxes take place. However, subsidies products are not included. The accumulative value of products which adds the value of the economy is the GDP. It is obtained without concerning the depreciation of assets, depletion, and without degrading the natural resources.

The opinions are given by the economists about the importance of financial development which boost the economic growth. The backbone of the economic growth is the development of financial system. Financial intermediary's boosts economic in many ways. Financial intermediaries play vital role in stimulating the economic growth. Levine (1997) argue that financial sector fosters the economic growth through five ways by reducing transaction and information cost, improving the abilities for allocation of recourses, enhancing saving rates, support the development of markets, provide efficient payment procedure. Levine (2005) argue that both banking sector and security market stimulate the economic to grow by providing the several facilities e.g. goods and services are exchanged on the basis of payment procedure regarding the services, taking the excess money from the depositors which are saved by them and provide the access to finance for borrowers who need for this excess money, funds are provided for most beneficial investment, monitoring investment, diversifying risk.

Patrick (1966) proposed the direction of causality among the development of financial sectors and economic growth which are the contribution of financial development toward leading growth hypothesis and the contribution of growth toward leading financial development. The contribution of financial development toward leading growth hypothesis admit the causality runs from financial sector development toward economic growth that are achieved through the development of financial intermediaries and markets which enhance the availability of the financial sector services that return to real economic growth. Investors and savers avail the new opportunities that opens through innovation and creation of financial services which are beneficial for enhancing the GDP.

The creative capacity and growth of financial sectors can increase the real capital accumulation this leads the economic growth boost positively. Growth lead finance hypothesis admit the causality from the economic development to financial sector expansion. When demand for the services that are facilitated by the financial sector is increased than creation of financial sector is increased that real economic development is grown. Financial sector development follows the demand for financial services.

Rajan and Zingales (2003) provide the two reasons that explain the differences between the different countries in their level of financial expansion but at the same level of economic growth. The reasons are the absence of the demand and structural hindrance. The arisen of the opportunities in the economy create the crucial markets and institutions because these markets and institutions meet the financial requirement that are arisen through the opportunities. The different structural aspects are the government nature, the degree of checks & balances on the law system, the level of legal system motivate the innovation. These aspects are the causes of the dominant interest group in the economy. The interest group create the hindrance for the financial development which boost the economic growth. Cross-border trade and capital openness brings the competition in the economy that reduce the opposition of powerful people against the financial development.

2 Literature Review

Calderón and Liu (2003) investigate the financial development and GDP relationship by utilizing the Geweke decomposition test. Study covered the data from the periods 1960 to 1994 for 109 developing and industrial countries by taking ratio of broad money (M2) and credit that are given by banks to private sector as measures of financial development. Findings reveal that financial developments are the driver of the economic growth. Bidirectional causality runs among financial development and economic growth. The contribution of financial extending causality is more in developing nations. However, contribution of financial deepening is less in industrial countries. When the sample interval is larger than the influences of financial on economic development is also larger. Financial deepening stimulates growth by capital accumulation and productivity.

Hypothesis of Patrick (1966) are tested by the study that states the causality direction between financial development and GDP fluctuations over the development. Data are used by the study among the period 1946-2011 for Barbados financial system by Vector Error Correction Mechanism (VECM)/Vector Autoregression (VAR) models. One-directional causality runs from growth development to financial development in short-run. Findings also show that there is bidirectional causal flow in the long-run (Carby et al., 2012)

Goswami (2013) analyzed the connection between economic progress, openness to international trade and economic growth through the use of the system of panel co-integration and causation. Study covered the period from 1985 to 2010 for five South Asia countries. Findings reveal that financial development, trade openness stimulate economic growth. Between financial development and economic growth, two-directional causal relationships lie. Between the openness of trade and economic development, there is a two-directional causal link.

Balago (2014) investigates the finance growth nexus by using Johansen Multivariate Co-integration Test, OLS Regression and VEC in Nigeria. Study used time series data that are covered from 1990 to 2009. Findings reveal that well-developed financial sector stimulate the economic growth.

Menyah et al (2014) analyze the causality among financial expansion, trade openness, and GDP for twenty-one SSA republics among the period 1965 to 2008. The study used panel approach to causality. Study finds that growth lead finance is supported in one country (Nigeria) only and finance led growth is supported in three countries (Benin, Sierra Leone and South Africa). One-directional causal association exist between financial expansion and openness of trade in five countries (Burundi, Malawi, Niger, Senegal and Sudan.) while the causality between openness of trade toward financial development supported in one country (Gabon) only. There is not causality exist between financial growth, trade openness and GDP in remaining countries. Findings reveal the limited support toward finance-lead growth and trade lead growth. Study confirms that financial development and trade don't have influences on economic growth.

Study used pooled mean group estimations to analyze the relationship among financial development and economic growth for the panel of fifty-two middle income states during the period 1980-2008. The findings reveal that the connection among financial growth and GDP is U-shaped in the long time. Findings also show that finance exert

negative effects on growth of middle-income countries when finance is exceeded the optimal level (Samargandi et al., 2015).

Hamadi and Bassil (2015) utilized GMM techniques to examine the financial growth sector (Stock market, Banking sector) and GDP for the Middle East and North African (MENA) states. Study covered the data from the period 1988–2009. Findings reveal that stock market and banking sector play positive and crucial role in stimulating the GDP when the periods are stable.

Agyei (2016) utilized the Cointegration and VECM to analyze the causality among financial development and GDP in Ghana. Findings reveal that uni-directional causality exists among financial development and economic growth. Findings show that financial development (Credit that are provided to private sector) play positive role in stimulating the economic development. However, one-directional causality runs from economic development to financial development (M2).

Jahfer and FHA (2016) applied Johansen Co-integration Technique and VECM to analyze the relationships among financial development, human capital investment and GDP in Sri Lanka. Study covered the data from the period 1961 to 2015. Findings reveal that financial development and human capital development plays positive role in increasing the GDP. Findings also show that one-directional causality run from financial development to human capital development.

Muhammad et al (2016) analyzed the causality among financial sector development and economic growth during the period 1975 to 2012 for GCC countries. Research used four estimation methods to examine the causality among financial sector development and GDP. Findings reveal that financial sector development play positive role in enhancing the economic development.

Pradhan et al (2016) analyze the interactions among financial development, innovation and GDP by using panel vector auto-regressive model. Study used the data from 18 Eurozone countries among 1961 and 2013 to measure the relationship between variables. Findings reveal that increased in innovative capacity and financial sector development boost the economic progress of the Eurozone states.

Nyasha and Odhiambo (2017) analyze the influence of financial sector which are banking sector and stockmarket sector on Kenya economic growth by utilizing auto-regressive distributed lag approach. The study covered the data from the period 1980 to 2012. Study result reveal that security based financial sector development play significant positive role in boosting the economic growth of Kenya.

Study analyze the influence of capital account and stock markets depth on economic growth of Africa. The study analyzes the panel data of 15 African countries during the period 1995-2010. Findings show that portfolio flows and foreign direct investment are positive significant influence on economic growth under security market capitalization (Assefa & Mollick,2017).

The influence of financial sector development which are banks and stock market are analyzed by the study on the economic growth of Zimbabwe among the period 2005-2013. Study utilized the VAR to measure the relationship between variables. Study finds that security market influence positively on economic growth in short time and long time. However, interest rates negatively influence on economic growth (Maposa & Muma, 2017).

Ketyenya (2017) investigates the relationship between bank performance for commercial banks and economic growth in EAC countries. Using cross country of 100 commercial banks during the period 1997-2011. Findings reveal that there is significant positive effect exist between economic growth and performance proxies.

The contributions of the investment portfolio of both insurance companies and commercial banks to economic growth of Nigeria are analyzed. Study used the data that are covered under period 1996 to 2011. The research hypotheses are tested by the multiple linear regression method. The findings of the study reveal that investment portfolio of insurance sector play positive role in enhancing economic growth. However, investment portfolio of insurance sector plays no

significant role in boosting economic growth. The findings also show that investment portfolio of commercial banks positively and significant influences on economic growth of Nigeria (Joseph, 2017).

The interdependence between capital market system and economic growth are analyzed by the study in Serbia by using time series data. Causality approach is applied. The study confirms that supply-leading hypothesis is supported by the study and capital market plays a positive contribution toward stimulating the economic growth of Serbia (Radjenovic & Rakic, 2017).

Hicham and Belmokaddem (2017) use panel co-integration techniques, panel VAR model and causality (1996) to examine the causality among financial development, openness of trade and economic growth for sixteen MENA countries. The study covers the period from 1980 to 2014. Findings found that there is no causality among financial development and economic growth. Findings also reveal that there is no causal relationship among trade openness and economic growth.

Ofori-Abebrese et al (2017) examined the relationship among financial development and economic growth in Ghana under the period 1973 to 2013. Study utilized ARDL approach and Granger causality approach. Findings reveal that domestic credit to private sector play positive role in boosting the growth growth. However, domestic deposits play no significant role in boosting the economic growth. There is uni-directional causality exist among economic growth and domestic credit.

3 Methodology

This research uses data for the period from 1985 to 2017 from an annual time series. The data for current study was collected by the World Bank national accounts data. Ordinary least square methodology is utilized by the study. The present study chooses the economic growth to analyze the relationship of economic growth with financial development in Pakistan. The study starts with decisive works, endogenous growth model introduced by Romer (1994).

$Y = F(K, L)$

$Y = \alpha_0 + \alpha_1 M2 + \alpha_2 DC + \alpha_3 TO + \alpha_4 DI + \alpha_5 TO*M2 + \alpha_6 TO*DC + \varepsilon$

Where:

Y = GDP

DI = Domestic Investment

M2 = Broad Money Supply

DC = Domestic Credit

TO = Trade Openness

ε = error term

4 Results and Discussion

The three measurements of the central tendency of a random variable are the descriptive statistics of data often used describe the basic characteristics of the dataset, such as mean, median, and mode.

Table: 1 Descriptive Statistics

	GDP	DI	DC	M2	TO
Mean	2.808643	4.195182	48.63523	47.39775	4.093374
Median	2.708129	4.089553	49.51576	47.15023	4.029508
Maximum	3.18973	4.690905	57.78607	58.86769	4.487128

Minimum	2.524847	3.756317	37.21553	38.5947	3.511394
Std. Dev.	0.219522	0.286045	5.332042	5.710868	0.28121
Skewness	0.409111	0.210561	-0.570518	0.148363	-0.2586
Kurtosis	1.66746	1.686109	2.600677	2.052579	2.091099
Jarque-Bera	3.362084	2.617525	2.009456	1.355273	1.503696
Probability	0.18618	0.270154	0.366144	0.507816	0.471494
Sum	92.68523	138.441	1604.963	1564.126	135.0813
Sum Sq. Dev.	1.542076	2.618299	909.7815	1043.648	2.530525
Observations	33	33	33	33	33

Source: E-views 9.0

For all variables the mean is within minimum and maximum value. The variables are trade openness and domestic credit show negative sign of skewness. Multicollinearity is the assumption of classical linear regression model. Classical linear regression model investigates the nature of the relationship that exist among two or more variables. The multicollinearity can be measured through correlation matrix and variance inflation factor. The value of correlation matrix should be less than 0.9. The value of variance inflation factor should be less than 10. The values of all variables are less 0.9 and also less than 10 which indicate the no multicollinearity. Auto-correlation is removed in the present study by applying HAC standard errors & covariance. Heteroskedasticity is not exist in the study.

Table: 2 Least Square Method

Variable	Coefficient	t-Statistic	Prob.
DC	-0.0017	-2.788055	0.0096
DI	0.323233	3.167319	0.0038
M2	0.000268	0.212485	0.8333
TO	-0.050012	-0.760757	0.4534
TO*DC	0.001308	2.2073	0.0363
TO*M2	0.001852	3.070723	0.005

Source: E-views 9.0

The result represent that the probability value of domestic investment is 0.003 which is less than significance level 0.05 indicate that it is significant. The coefficient value of domestic investment is 0.323233. The domestic investment (DI) is a positive and significant effect on the economic growth. The probability value of broad money supply (M2) is 0.8333 which is higher than significance level 0.05 that gives the indication for insignificant. The coefficient value of broad money supply (M2) is 0. 000268.The broad money supply is a positive but insignificant effect on the economic growth.

The probability value of TO*M2 is 0.005 which gives the indication for significance. The coefficient value of TO*M2 is 0.001852. The result represents that trade openness make the relationship between broad money supply and economic growth is strong. The probability value of TO*DC is 0.03 which is less than significance level 0.05 that gives the indication for significance. The coefficient value of TO*DC is 0.001308. The result

represents that trade openness make the relationship between domestic credit provided by financial sector and economic growth is strong.

According to Rajan and Luigi Zingales (2003), when the economy opens the door for foreign trade than it brings opportunities and also bring competition by the foreigner into domestic market. The foreign new comers have the ability to reduce the monopolistic power of the powerful people and firm than the domestic new comers. In other means, the domestic producer competes in large world market without the opposing domestic entrants. Foreign new comers create the pressure for the domestic people to develop their well-financial developed sector. So, these result support the Rajan and Luigi Zingales theory.

5 Conclusion and Future Work

In recent years, financial analysts and scholars as well as policymakers have seen a lot of interest in the relationship between financial developments, considering the tumultuous experiences of the financial world and its accompanying implications. The broad money supply (M2) is a positive and insignificant effect on economic growth. However, the trade openness is a negative but insignificant effect on economic growth. The domestic investment is a positive and significant effect on economic growth. Trade openness make the relationship between broad money supply and economic growth is strong.

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