Financial Development and Economic Growth; A Comparative Analysis of Autocratic and Democratic era of Pakistan

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Abstract

This paper conducted co-integration and causality tests among real GDP per capita (RGDP) and financial development index (FDI), openness of trade, real interest rate, gross capital formation, and two political regimes using annual time series data from 1958 to 2018. We used real GDP per capita as dependent variables whereas the financial development index and political regimes (Dummy variable) are our focused variables and rest trade openness, real interest rate, and gross capital formation are our control variables. We employed the ARDL bound testing approach and Johansen test to check co- integration or predict long term relationship and (VECM) Vector error correction model Granger-Causality test to check the relationship direction among variables. Our results show that only trade openness is significantly impacted economic growth whereas rest variables such as financial development index, real interest rate, gross capital formation, and political regimes impacts are insignificant so accordingly we can provide little support to the view that financial sector growth in two different political regimes leads economic progress. We also do not find considerable evidence of a bi-directional and unidirectional relationship between financial segment growth and economic progress in both political regimes. This research highlights a new dimension for future research and gives new insight for policymaking.

Keywords:
Financial Development; Economic Growth; Political Regime; Autocracy; Democracy;

1. Introduction

Does financial development play a significant role in improving economic growth in two different political regimes in a country like Pakistan?" as far as the political regime is concern Pakistan history faced two regimes one is autocracy and the second is a democracy. Democracy refers to a political system where nations of the country are allowed to take participation in selcting governmnet of the country through an elect representative in government. The studies illustrate and support theories of negative, positive, and no association between democratic government and economic growth. Lipset (1959) and Barro (1999) found a positive relationship. Basu, D., Mitra, S., & Purohit, A. (2020) studied the impact of democratic government on economic growth and foreign investment and they found a positive linear association between them. They also explained that democracy attracts multinational entities. Colagrossi, M., Rossignoli, D., & Maggioni, M. A. (2020) did the meta-analysis to find the association between democratic government of the country and economic growth. Their findings suggested that democratic government has a positive and direct effect on economic growth. Whereas Alesina and Rodrik (1994) initiate an adverse association between democratic government and economic growth and Sirowy and Inkeles (1990) found no or conditional connection between them.

An Autocracy refers to a political system where the political command is held by a single person or government. Similarly, studies support three different theories of the relationship such as negative, positive, and no association between autocratic government and economic growth (EG). Landau (1986) concluded that autocracy is healthier for economic growth (EG) than democracy. Stockemer, D., & Kailitz, S. (2020) considered the effect of economic development of the country on the survival of autocratic government. They found that economic development of the country contribute in endurance for both democratic and autocratic government. Emery, T., Spruk, R., Gilchrist, D. J., & Garoupa, N. (2020) tried to find out the answer to the question that, "Do autocracy leaders hamper economic growth"? Results indicated that yes they do but subject to some conditions. Haan and Siermann (1996) said that the form of government does not impact economic growth (EG).

If broadly says economic development is one of the most pertinent and stimulating sub-area of economics. The problem of slow economic growth is a key concern for every country because this is what indicates and measures the overall well-being of the country and its residents. Various countries have grown rapidly

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like in the western Europe region, while some others still struggling for rapid growth like in some parts of Asian and African regimes. These dissimilarities in countries' growth rates generate a huge gap between countries' national income per capita and living standards of the population of the countries. Economic growth has the power to reduce this gap as demonstrated by the experiences of countries like Japan, Singapore, and most recently China. Thus the small percent increased in the growth rate of the country can have a huge impact on the living standard of their population and national income of the country. Finally, economic growth becomes a large empirical field where more researchers have initiated to investigate answered of new questions.

As compared to the previous era thanks to the innovation in technology now we have rich-information and multiple ranges of data on the distance of a single click, to investigate the underpinning process of economic progression. Economic progress refers to the increase in the market value of goods and services, that must be inflation-adjusted, produced by an economy of the country over time. Economic progress generally can be measured with the help of the gross domestic product (GDP) of the country. Real Gross domestic product (RGDP) is the more frequent way to measure the economic progression of the country because it eliminates the effect of inflation and measures the actual increase in goods and services produced within the country. Whereas some studies used real GDP per capita which reflects the inflation-adjusted average level of national income per person and measure the living standard of the population. It contains all goods and services, must be finished, produced within the country for sale either locally or export to the international market it doesn't comprise those parts manufactured or produced by the country to make finished goods. It doesn't make any difference whether they are sold domestically or overseas what matters is they need to be produced within the country to be taken in GDP.

Usually, economic growth has two phases or periods, the best phase is economic expansion when economic activities of the country are on a rising path, but when inflation intervene in the economy and does not control or absorb by the economy it overheats the economic activities and creates assets bubble such as happened in back 2005-2006 to the housing sector of the United State. This is like when too much money chasing too few goods and services. The Second phase comes when more people prefer to sell than buy and then the economy starts contracting and becomes recession such as happened during "The Great Depression of 1929". In both phases, the financial sector plays an important role because if the financial sector does not work efficiently it may deteriorate the economic condition of the country whether it is economic expansion phase or contraction phase such as a stock market crash in 1929 that further collapsed banking system and resultantly reduction in lending by banks and purchasing power of people cause less and fewer spendings. But usually, the prominence of the financial sector growth to any economy is subject to the conditions.

From 1947 to the end of 1980 Pakistan's financial sector was controlled where the interest rate was set administratively. Direct allocation of credit to government priority sectors without considering their profitability was the primary tool of monetary policy. Entire financial sector assets, investment, and deposits were significantly held by state-owned financial organizations including both financial institutions whether it is banking or non-banking sector. The money market of the country was under the process of development and the bond market as well as the equity market were almost absent. If we talk about the Pakistan banking system until 1970 it consisted of private banks and in 1971 Pakistani government nationalized them, but later in 1980, the government reprivatized most of them. From 1991 financial liberalization policy was initiated, the objective behind these financial reforms was to make a more efficient and market-based monetary and credit mechanism that was previously administered and control by the government. Unlike various studies conducted in Pakistan in respect of the financial growth and economic progress relationship but in this study, we chose a different path of analysis, this study is an effort to see the effect of two different nature of variables simultaneously on the economic growth such as political regime and financial sector growth of Pakistan.

An effectively functioning financial market and efficiently working financial system can be reflected as the basic substance on which persistent economic progress can be constructed Ahad, M., Dar, A. A., & Imran, M. (2019). It takes extensive time to construct a sound and efficient financial system by enabling access to long term loans in order to grow major sectors that significantly contribute to the country's economy. Similarly, saving takes many years and efforts to convert into effective investment opportunities. A well-organized financial structure deals with not only risk management but also ensure the efficient allocation of funds. Development in the financial sector of the country may cause in increased savings and consequently, the prospect of extraordinary returns. Development in the financial sector has been widely considered in the literature. Katircioğlu, S., & Zabolotnov, A. (2020) argued that development in the financial

sector is a significant driver in economic progression. Wu, C. F., Huang, S. C., Chang, T., Chiou, C. C., & Hsueh, H. P. (2020) found a positive bi-directional relationship between economic growth and financial development. Belazreg, W., & Mtar, K. (2020) found a unidirectional association between development in the financial sector and economic progression.

We can measure financial sector progression in various ways, for instance, we can do it by considering different dynamics relevant to the financial sector growth, some of the major aspects that can be assessed such as the magnitude of the sector, deepness of the sector, access to the financial sector, and accuracy of the financial system. Another way to measure is by studying the various activities of banks, regularity bodies, and stock exchange markets. Out of these major considerations, many are relevant to the economic progress in both direct or indirect way and most of them has been considered in the literature. Chaudhry, I. S., Sabir, & Gulzar, F. (2019), they studied financial development impact on economic growth along with technology and human capital and found their impact on economic growth positive and significant. Similarly, Wang, N., Haroon Shah, M., Ali, K., Abbas, S., & Ullah, S. (2019) studied the impact of the financial structure along with misery index, which contains two variables, and interest rate prevails in the country, openness of trade of the country, and remittances of the country, on the economic progression of Pakistan. Their results indicated the existence of a long term association between them.

Dolgopolova (2011) considered the connections between financial progression and economic progress in the context of China. Their outcomes endorse the long run association among financial development index (FDX) and economic progress. This is obvious that economic progress is connected with investments, capital allocations. The above-mentioned functions are considered while savings and investment choices made by investors. King and Levine (1993a) argued that financial sector growth stimulates economic progress with the help of increasing the capital accumulation rate. He proposed ways through which the development in financial segment affects economic progression of the country. They are, selecting a business with higher-quality and less risky for financing, external finance mobilization for them, diversification of activities with a high risk of innovation. Gerschenkron (1962) argued that countries with developing economies need a more efficient and active financial system to provide fuel to the economic engine.

This study is a small effort to probe the financial growth-based economic progress in Pakistan while considering the comparison between autocratic and democratic era. The seventy-two years of Pakistan history faced many seesaws between democracy and autocracy government rules. There are different types of autocracy and democracy prevailed in the world however Pakistan confronted military takeover as autocracy and parliamentary government as a democracy. Since the inception (1947) Pakistan's political instability affects economic growth due to the existence of different economic policies and priorities in two different government rules (Autocracy and Democracy). The first eleven years (1947 to 1958) were the years of settling down the Pakistan economy and was the era of development of economic policies and planning some people refer that period “The teething years”. Pakistan predominantly had an agrarian economy in 1947 evident by the 53% contribution in GDP and 99.2% in exports. This period is not covered in this study because it is neither a perfectly democratic nor autocratic era.

Pakistan's sixty-year history from 1958 to 2018 can be split between autocracy and democracy periods. The first Autocratic period (Autocracy-1) starts from the end of 1958 and remained till the end of 1971 that consist of thirteen years of autocracy (1958-1971). This era is known as a golden era in terms of economic growth and industrialization the annual average growth rate of real GDP was 6.8% and that is achieved with the significant contribution of the Manufacturing sector 9.9% and agriculture sector 5% growth rates. Zaidi (2005) Pakistan was considered a model capitalist economy. Pakistan also faced the Indo-Pak war in this era. But interestingly Pakistan's annual average real GDP per capita growth rate was 4.35 percent while the financial market was immature and facing restrictive financial policies that remained till the early 1990s.

Similarly first democratic period (Democracy-1) begins from 1971 to the mid of 1977 that consists of six-year democracy (1971-1977), which was elected via public voting. This period is considered to be the second significant period in terms of social and economic reforms there main goal was to increase the quality of life of the people and self-sustaining economic growth. This government took nationalization measures and all banks were nationalized in 1974 that badly affect small and private industrial firms and discourage private investors. The annual average real GDP per capita growth rate was 1.17 percent. Two major events occur in this period that further deteriorates the situation, first is known as the fall of Dhaka where the country was divided into two separate states i.e. Pakistan and Bangladesh, and consequently

trade balance distorted due to loss of exports from East Pakistan. The second was the Arab-Israel conflict that rose inflation to the level of 20% due to raised oil prices.

The second Autocratic period (Autocracy-2) starts from late 1977 to mid of 1988 that consists of eleven years of Autocracy (1977-1988). The yearly mean growth rate of real GDP was 6.6% and that is achieved with the significant contribution of the Manufacturing sector 8.8% and agriculture sector 5.4% growth rates. In this period reversal of nationalization occurred that restore the private sector investment in the economy. Correspondingly second democratic period (Democracy-2) begins once again from 1988 to 1999 that consists of eleven years of democracy (1989-1999). In this period four general elections were held and two political parties came into power twice, the annual average real GDP per capita growth rate was 1.14 percent whereas major financial reforms take place during this period.

The third Autocratic period (Autocracy-3) starts from 1999 to remains till the end of 2008 that consists of nine years of autocracy (2000-2008). The yearly mean real GDP per capita growth rate was 2.21 during this period. Likewise third democratic period (Democracy-3) arises from 2008 and this study cover to 2018 that consists of ten years of democracy (2009-2018). The yearly mean real GDP per capita growth rate was 1.93 during this period. Resultantly as per the study covered period which starts from1959 to the end of 2018 Pakistan faced a total of thirty-three years of autocracy and a total of twenty- seven years of democracy.

1.1 Research Problem

In contemporary globalization of the world, it does not doubt that economic progress of the country performes an important role in the overall progress of the country and provides a competitive edge concerning the rest of the world. To increase in economic upgrading, is financial growth needs to be the major concern among other issues of the country? Or if a country's financial system is not efficient to allocate available funds to available opportunities, is the economic activities of the country will slow down? And what are the Pakistan experiences and learnings concerning the progress in real gross domestic product (RGDP) per capita and financial sector growth from a history of sixty years that swings between democracy and autocracy government rules and what are the concerning causes that hamper the economic progression of the country?

“Does financial development play a significant role in improving economic growth in two different political regimes in a country like Pakistan?”

Research Questions

1- What is the impact of development of the financial sector on the economic growth of Pakistan?
2- In Which political regimes, autocracy or democracy, financial developments contribute more to the economic growth of Pakistan?

1.2 Study Objectives

- To find the impact of financial growth (FDX) on the economic progress (EG) of Pakistan.
- To identify in which political regimes, autocracy or democracy, financial developments contribute more to the economic growth of Pakistan.

1.3 Financial Growth and Economic Progress

One of the significant causes that captured the attention of many scholars is the financial sector development of the country. This is because more developed countries have the more developed financial sector, therefore we can argue that government policies directed to develop the financial sector of the country may hold powers to spur economic growth as well but in the same time, more financial deepening may cause inflation and financial liberalization that might create financial crises as happened in past. So the point of concern is that we can hold this assumption that anyhow the financial sector growth impacts economic progress whether it is in a positive direction or a negative direction but this assumption is subject to the inherent problems of the economy that varies country to country. Thus governments need to ensure the development of sound and stable policies for their financial segment and at the same time ensure the well-functioning of the financial sector.

Financial development occurs when the financial segment of the country is functioning well enough and enables effective allocation of funds and conversion of individuals saving into profitable investment

opportunities. This is why many economists hold consensus and theories supported by empirical evidence that financial segment growth is positively related to economic progress. In contrary to that some economist suggests the different direction of this relationship. The debate about the direction of causality between financial segment growth and economic progress is still progressing. The significance of financial segment growth for economic progress can be found back from 1873, where Bagehot (1873) claimed that the financial sector is a vital facilitator in the development of the industries of England through smoothing in channelizing and ensuring a large number of funds for "massive" work.

In the modern era Schumpeter (1911) similarly argued that a the financial segment well functioning can encourage industrial modernization by not only identifying and selecting the needs of financing but also ensure that their finance needs are fullfills and benefits those capitalists that would be expected to successfully implement their products and productive processes but limited by funds. In other words, financial intermediation services are fundamentals for economic growth. Well if we discuss some recent studies it includes King and Levine (1993), they did cross country analysis and see the pre and post-financial reforms effect on economic progress, they found a major positive association between the financial system of the country and economic progress, they claimed that improved financial system increase likelihood of successful innovation and accelerate economic progress. But at the same time, any distortion can also reduce economic growth by hindering effective innovation. They suggest a mechanism by which the financial system impacts economic growth. In their mechanism, they claimed that the financial system affects entrepreneurial activities in four ways that further lead to economic growth.

In other wards developed financial system must have at least four features; the first financial system must be able to select quality entrepreneurs with most promising investments opportunities, second enables effective mobilize of resources to finance those opportunities, third enables investors to diversify their risk, and fourth reveal the potential profit-related with the uncertain business of innovation. Similarly, Rousseau (1998), Zingales (1998), and Okedokun (1998) all established that a positive association between financial segment growth and economic progress exists. Studies supported the same conclusion also conducted on Asian countries such as Md. Qamruzzaman & Wei Jianguo (2017) studied Bangladesh, they selected credit to domestic private sector as the ratio of GDP, and Broad-to- Narrow money as the ratio of GDP as financial innovation proxies from 1980 to 2016 and gross capital formation and openness of trade as economic progress proxies.

They adopted the two statistical techniques, first is known as "Autoregressive Distributed Lag (ARDL) bound testing" to capture long term co-integration and second is the Granger causality Error Correction Model (ECM) to capture the directional association between them. The test of co-integration satisfied the presence of long term link between financial innovation and economic progress. They found a optimistic and statistically significant coefficient of innovation in financial segment. Similarly Madhu Sehrawat and A. K. Giri (2017) studied on India's economy, he constructed a FDI for the Indian economy and try to find its impact on economic progression along with the openness of trade. The study covers periods from 1982 to 2014. Through employing principal component method (PCM) they selected four financial development indicators.

All indicators are taken as a ratio of GDP. These indicators included a loan to the domestic private sector, market capitalization of the listed companies, the entire bank deposit, and broad money. Whereas openness of the trade is measured through total imports of the country plus exports of the country as the ratio of GDP and economic progress is measured through real GDP per capita. This study also incorporated the real interest rate of the country as a control variable. This study used two methods, one is the "Autoregressive distributed lag (ARDL)" approach to co-integration to check the long term association between variables and second is the Granger-causality test to check the causality direction. The results suggested the presence of long term association among variables and financial growth has unidirectional causality with economic progress however causality test among openness of trade and economic progress shows bi-directional causality effect. Adnan Hye and Dolgopolova (2011) studied China and Ang and Mckibbin (2007) studied Malaysia.

These studies used pure time-series data and were based on country case studies. There are some cross country studies as well such as Mckinnon (1973), who studied seven countries and taken the post World War II period to investigate, he also concluded the same relationship between financial growth and economic progression. He said that the liberalization of financial segment deepens the financial market and resultantly promotes economic progression. He also claimed that money and capital are complementary therefore positive relationships exist between financial depth and level of output.

As far as a country like Pakistan is concern Jalila (2011) inspect the relationship of financial sector growth with economic progress, they cover a large period that is from 1975 to 2008 and used economic progress proxy which is real GDP calculated through dividing Nominal GDP by GDP deflator and used following variables as a proxy of financial sector growth, all variables were taken as a ratio of nominal GDP, first one is liquid liabilities calculated through M2 minus currency in circulation, second is a loan to the private sector that particularly measure financial depth, the third one is an asset held by a commercial bank to the sum of assets held by both commercial and central bank, that particularly measures the effectiveness of financial intermediaries which is how effectively they are channeling savings into investment. They also take real interest rates calculated by subtracting the Lending rate from inflation rate, capital-stock, and openness of trade as control variables. Resultantly through applying statistical techniques such as the "Autoregressive distributed lag (ARDL) bound testing approach to co-integration, they suggested the presence of an affirmative and substantial connection between financial growth and economic progress. Similarly, another case study of Pakistan that documented a positive connection, Wang, Haroon Shah, and Ali, (2019). They cover a period from 1987 to 2017 and take annual real GDP per capita in constant dollars as the measure of economic progress and use principal component analysis (PCA) to construct financial growth index which included capitalization of the market, local loan to the private sector, overall bank deposit, M2, a local loan provided by the financial segment as a GDP ratio.

They developed an index and labeled that index is a misery index that is the grouping of unemployment and inflation rate to capture the economic aspects of the country. Further personal remittances, the openness of trade taken as a ratio of GDP, and real interest rates are taken as control variables. This study also used a simple linear autoregressive distributed lag (ARDL) bound testing methodology of co-integration to measure both short and long term association among variables. They concluded the existence of long term associations between variables. Few other studies such as Khan et al. (2005), investigated the period from 1971 to 2004 using the "Autoregressive distributed lag (ARDL) technique". The results concluded that financial deepness and the real interest rate have a optimistic impact on the economic progress of Pakistan in both the long term, and in the short run, they still have a similar positive but in contrast insignificant impact on economic progress. Khan and Qayyum (2007) have also explored the financial sector growth association with Pakistan's economic progress.

However, if we talk about the other side of the picture, there are some scholars standing on the opposite side of the road and present different conclusions contrary to the above conclusions such as Robinson (1952) who is one of them and argued that economic progress leads the financial segment growth but this is not the case when consider vice versa situation and Lucas (1988) is one of those scholars those argued that some economist badly overstresses the importance of financial sector growth concerning economic progress. Even literature provides us some studies that concluded the adverse association between financial expansion and economic progress such as Kuznets (1955), Friedman (1963), and Lucas (1988). In the middle of two extreme sides, some scholars talked in favor of a bidirectional relationship between financial sector growth and economic progress such as Demetriades and Hussein (1996) and Rousseau and Vuthipadadorn (2005). Some research did similar studies but they split the financial sector into two parts one is a banking based and second is a non-banking based system to considerably investigate them separately such as banking based financial structures in countries like Japan and Germany and market based financial structures in countries like U.S and U.K. The stock market and banks are two alternate sources for corporate finance. Recently financial deepening literature incorporated the stock exchange as a measure of financial segment growth. Thorsten Beck and Ross Levine (2004) investigate the independent impact of the stock exchange of the country and banking sector on economic progress using panel data set of forty countries from 1976 to 1998. Similarly, Philip Arestis, Panicos O. Demetriades, and Kul B (2001) compared the banking based financial structure and stock exchange based financial structure of the country to promote economic progress and found that both are absolutely related to economic progress. Whereas Barth, Caprio, and Levine (2000) suggest that instead of comparison between banking and market based financial scheme, a legal environment need to establish that protect investor rights is more important because both banking and markets have optimistic implication for economic progress.

1.4 Financial Sector Reforms in Pakistan

Pre-Reform Structure

Before financial reform Pakistan financial sector was greatly controlled by the government, high government's borrowings due to budget and fiscal deficit, interest rate control through the introduction of

the floor on deposit rates and ceilings on lending rates that cause negative real interest rate and discouraged saving, the government directed allocation of credits on subsidies rates to their priority sectors and intervention in loan recovery decision caused large non-performing loans and further, deteriorate the profitability of banks, government holding ninety percent of total assets and deposits of banking sector due to nationalization, and financial sector supervisory authorities were divided between three bodies that created conflict between bodies, were the major causes of controlled financial sectors. As far as the equity market is a concern, it remained small, restrictions of foreign exchange movement, restrictions on investments by foreign nationals, the supervisory conflict between bodies, lack of proper infrastructure for trading and settlements, corporate sector was relayed on development finance institutions (DFIs) for financing need, cost of equity was significantly higher than interest on loans, and information disclosers were the key factors hampered equity market developments.

Post-Reform Structure

The major reform was as follows: Privatization process initiated through 1974 Nationalization Act amendments that allowed the central government to sell share capital of nationalized commercial banks through a stock exchange that significantly helped to developed equity market and increased market depth, Introduction of fresh banking and non-banking financial institutions to increase competition and efficiency in financial market but in 1995 introduction of new banks was freeze however in contrary to that, nationalized banking sector that were restricted to introduce new branches and to must close branches those were unprofitable, private and foreign banks branch policy was eased, the introduction of interest rate based on market where interest rate is determined through demand and supply conditions within the market of the country. Similarly, the introduction of open market operations as an instrument of monetary policy.

Establishment of the Securities and Exchange Commission of Pakistan, that proactively streamline capital market activities and protect investor's interest. To increased market activities and modernized settlement processes, the central depository company of Pakistan was created by the stock exchange that facilitates the stock electronic transfer. To encourage capital inflows foreign national and overseas Pakistanis citizens were allowed to invest without prior approval that improved inflow of foreign capital and overseas Pakistanis were also allowed to open foreign currency account with facilities like, income and wealth tax exemptions, freely transferable to abroad, loan in rupees can be obtained against those foreign currency accounts, and no questions regarding foreign currency sources to be asked. Adoption of exchange rate system based on market that applicable floating inter-bank exchange rate to all foreign exchange rate transactions.

1.5 Research Methodology

1.5.1 Data and Variables

In this study, we attempt to investigate the long-run association between our focused variables such as financial development and political regime (autocracy and democracy) with the economic growth (EG) of Pakistan. This study is based on annual time series data casing the period from 1959 to 2018 (Sixty Years) collected from World Development Indicators (WDI) and State Bank of Pakistan (SBP).

The covered period is subdivided into two sections the first section contains three autocracy eras of total thirty-three years defined as (Autocracy-1) from 1959 to 1971 thirteen years, (Autocracy-2) from 1978 to 1988 eleven years, and (Autocracy-3) from 2000 to 2008 nine years. Similarly, the second section contains three democracy eras of total twenty-seven years defined as (Democracy-1) from 1972 to 1977 six years, (Democracy-2) from 1989 to 1999 eleven years, and (Democracy-3) from 2009 to 2018 ten years. And according to this, we defined a dummy variable (Dum) in our model to capture the effect of both regimes on real GDP per capita. We defined 0 for autocracy and 1 for democracy. In this context, our null hypothesis is that the autocracy or democracy era significantly affects the economic growth of Pakistan.

The motivation behind this null hypothesis is that whether financial policies developed in any of both regimes significantly influence economic growth or not. Based on theoretical assumptions about the relationship of the variables with gross domestic product supported by various researcher empirical results we can define the relationship between Real GDP per capita (RGDP) proxy for economic growth, financial development index (FDX) proxy for financial sector growth, real interest rate (RIR) proxy for cost of capital, trade openness (TOP) proxy for trade liberalization and trade openness with rest of the world, gross capital formation (GCF) proxy for investment and dummy variables as follows:

RGDP = f (FDX, TOP, GCF, RIR, Dum,) …… …… (1)

Whereas the linear equation used in empirical estimation is as follows:

$$RGDP_t = \alpha o + \beta 1\ FDX_t + \beta 2\ TOP_t + \beta 3\ GCF_t + \beta 4\ RIR + \beta 5\ DUM + \varepsilon t \quad \ldots\ldots (2)$$

Where αo is a constant that represents the expected mean value of RGDP when our independent variables are equal to zero and β represents the coefficients that indicate the direction of correlation between each independent and dependent variable. As per the standard practice by King and Levine (1993a,b) and Gelb (1989) RGDP is our dependent variable which is the annual growth rate of real GDP per capita at constant local currency from 1959 to 2018. We have two focused variables which are financial development index (FDX) and dummy variable (Dum).

The null hypothesis concerning the second focus variable (FDX) is that financial development does not significantly affect the economic growth of Pakistan. The rationale behind this null hypothesis is to check whether financial development significantly explains variation in economic growth or not. The basic reason behind the construction of financial development index is that single proxy can not appropriately measure the development in the financial sector, therefore we use the financial development index as a single measure of overall financial sector development that includes three financial development indicators selected based on principal component analysis (PCA). The first component was selected because it explains 66 percent of variance with eigenvalues of 2.644.

This component contains three financial development indicators taken from 1960 to 2018, first indicators is the growth rate in private loan by deposit money banks and other financial institutions to GDP ratio (TPC), the second indicator is the growth rate in financial systems deposits to GDP ratio (FSD) which is the time, demand, and saving deposits of both deposit money bank and other financial institutions, the third indicator is the growth rate in bank deposits to GDP ratio (BD). For robustness purposes, we included control variables to capture the effect of other macroeconomic factors on economic growth. We included real interest rate (RIR) which is calculated through 12-month treasury bills rate minus inflation rate is taken from 1960 to 2018, trade openness (TOP) which is calculated through additions of both export and imports growth rates taken from 1959 to 2018, together it represents an overall growth rate of trade openness that measures the economy openness concerning to the rest of the world, a growth rate of gross capital formation (GCF) taken from 1961 to 2018. DUM is a dummy variable that is defined as 0 for autocracy and 1 for democracy. ε is an error term.

1.5.2 Methodological Framework

Initially, we used (PCA) to select the most favorable indicator used to develop the financial development index. In this study, we used time series data that contain unit root so we used method, augmented Dickey-Fuller (ADF) unit root test, to check the stationarity of the variables. Vector Autoregression Estimates (VAR) is used for the lag order selection.

Further based on ADF test outcomes we decided to use both the “Autoregressive Distributive Lag” or ARLD bound testing approach and Johansen cointegration test approaches to check and determine the long term co-integration among variables of the model. A co-integration technique known as the “Autoregressive Distributive Lag” or ARDL bound testing hosted by Pesaran and Shin (1995) and (1997) has been applied to check co-integration among variables. The reason for selecting the ARDL approach is its advantages over conventional techniques. The first advantage is that it can be applied or appropriately use regardless of the nature of variables that are purely stationary at a level I(0), I(1), or a mix of both.

Secondly, it’s performance is better than conventional techniques with small samples. Thirdly, we can say that its automatic or appropriate selection of the sufficient number of lags for the model. Finally, it provides information about structural breaks in time series data. Lastly, we used a Vector Error Correction Model Granger-Causality (VECM) test to find the direction of causation among variables.

2. Data Analysis and Findings

According to the Quattara (2004), employment of test known as “unit root test” is necessary to find the order of integration of the variables because ARDL holds the assumption that none of the variables in the model are integrated in order of I(2) or beyond because it can cause invalid computation of F-statistic, therefore, we chose to apply unit root test. For this purpose method, augmented Dickey-Fuller (ADF) unit root test, is applied. Where the null hypothesis of this test is that variables in equation 2 contain a unit root

and the alternative hypothesis is that variables in trend stationery. Table 1 presents the ADF test, according to the results entire variables are stationary at the level I(0) at the 5 percent level of significance. These results allow us to apply the ARDL bounds testing approach to find co-integration between variables. Before the bound test approach to co-integration, we determined the optimal lag length of our model through Vector Autoregression Estimates (VAR) lag order selection criteria based on the Akaike information criterion (AIC) because Lutkepohl (2006) suggested that AIC is superior to others lag length criteria for the small sample data set. Therefore, we follow AIC for the rest of the estimations. The optimal lag length is observed to be one for the model because it has the minimum Akaike's Information Criteria (AIC) value now we can use an observed lag structure for the rest of the estimation.

Table 1- Unit Root Test Results

Variables	Augmented Dickey-Fuller test statistic t-Statistic (At Level)	Augmented Dickey-Fuller test statistic P-Value (At Level)	Test critical values at 5% level
RGDP	-6.305973	0.0000	-3.487845
FDX	-5.632524	0.0001	-3.487845
TOP	-7.473428	0.0000	-3.487845
GCF	-3.972844	0.0153	-3.487845
RIR	-3.867005	0.0197	-3.487845

Table 2 demonstrates the outcomes of the ARDL bound test that rejects the null hypothesis that says that no long run link exists among variables because F-statistic is higher than the upper bound critical value at a 1 percent significance level. Therefore, we can conclude that a long run link exists between RGDP and FDX, TOP, GCF, RIR, and Dum from 1959 to 2018. In terms of RGDP and FDX results are consistent with McCaig and Stengos (2005).

Table 2- Test Results of ARDL Bounds

F-statistic	10.95267	
Critical Value of Bounds		
levels of Significance	Lower Bound	Upper Bound
10%	2.45	3.52
5%	2.86	4.01
2.50%	3.25	4.49
1%	3.74	5.06

To perceive the robustness of the results, we also apply the Johansen Test for Co-integrating. According to statistics mentioned in table 3, we may conclude that there is a long run co-integration between variables of equation 2, based on P-value of trace and max eigenvalue test and their statistics are more than 5 percent critical value thus we can reject the null hypothesis of no co-integration at a 5 percent significance level.

Table 3- Johansen Test for Co-integrating Results

Tests	Hypothesized No. of CE(s)	Eigen-value	Statistic	0.05 Critical Value	P-Value
Trace Test	None *	0.624767	161.3010	69.81889	0.0000
Max-eigenvalue test	None *	0.624767	56.85209	33.87687	0.0000

Table 4 discloses the effect of explanatory variables on the real GDP per capita in the long run. We find that the openness of trade (TOP) has a progressive and statistically significant influence on economic progression at 5 percent levels of significance; results predict that 1 percent growth in trade openness contributes 7.7 percent growth in real GDP per capita of Pakistan. Darrat (1999), Levine (1997), and Shaw (1973) whereas other control variables such as GCF and RIR found to be statistically insignificant.

This predicts that growth in both gross capital formation and real interest rate does not move together with growth in real GDP per capita in the long run. Our focus variables such as FDX and DUM are also found statistically insignificant therefore we can conclude that growth in financial development in alternate political regimes does not affect real GDP per capita of Pakistan as Demetriades and Hussein (1996) and Husain, I. (2009) suggested the same conclusion about finance-led growth.

The rationale behind the results is that financial developments in both political regimes of Pakistan do not play a significant role in financing the agriculture activities which constitutes a significant portion of Pakistan's gross domestic product. Instead, agriculture financing extensively relies on “curb market” or informal financial markets.

Table 4- ARDL Model (1, 1, 2, 0, 0) Long Run Coefficients of Dependent Variable: RGDP

Regressor	Co-efficient	Standard Error	T-Statistic	P-Value
Constant	1.767283	0.548094	3.22442	0.0023
FDX	0.153329	0.366473	0.418391	0.6775
TOP	0.077348	0.029026	2.664743	0.0105
GCF	0.039185	0.024059	1.628722	0.1099
RIR	-0.053169	0.048983	-1.085459	0.2831
DUM	-0.622539	0.595691	-1.045071	0.3012

Similarly, table 4 discloses the outcomes of the short term coefficients of the ARDL model. Error correction term (ECT) points to an adverse sign and significance p-value at a 1 percent level of significance which is a desirable condition to place reliance on the interpretation of results based on the ECT coefficient. The ECT coefficient indicates the speed of convergence of variables toward long run equilibrium from short run disequilibrium, in other words, it suggests that the deviance from long run economic progression is corrected by 94 percent over each year.

Results of the short term observations are consistent with the long run results, there is only trade openness that significantly affects real GDP per capita but the marginal impact is 4.8 percent which is less than 7.7 percent in the long run. Other variables are found to be insignificant in a short span of time. The rationale behind the insignificance of our focused variables (FDX and Dum) in the short run is that financial activities and government policies take time to produced results than those results take additional time to be reflected in macroeconomic variables.

Table 5- ARDL Model (1, 1, 2, 0, 0) Error Correction Representation of the selected Dependent Variable: RGDP

Regressor	Coefficient	Standard Error	T-Statistic	P-Value
FDXt-1	-0.433956	0.300318	-1.444991	0.155
TOPt-1	0.048996	0.013274	3.691211	0.0006
TOPt-2	-0.028554	0.013283	-2.149685	0.0366
GCF	0.036866	0.023344	1.579258	0.1208
RIR	-0.050023	0.045892	-1.090006	0.2812
DUM	-0.585703	0.581364	-1.007464	0.3188
ECT(-1)	-0.940829	0.126221	-7.45383	0.0000

To find the causality direction, we used the (VECM) Granger-causality test under the Granger-causality context because our variables are co-integrated with each other and this satisfies the precondition of VECM. Results presented in Table 6 displays that we are impotent to reject the null hypothesis of no causation at 5 percent level of significance for financial development index, real interest rate, and political regime, whereas openness of trade and gross capital formation are statistically substantial and have a unidirectional and bidirectional association at ten percent and five percent significance level respectively. Therefore we may conclude that real GDP per capita has a unidirectional relationship with trade openness (TOP) and bidirectional relationship with gross capital formation (GCF) only.

Table 6- Results of VECM Granger-Causality

Dependent variable: D(RGDP)			
Variables	**Chi-sq**	**df**	**P-Value**
D(FDX)	0.027163	1	0.8691
D(TOP)	3.273792	1	0.0704
D(RIR)	1.387867	1	0.2388
D(GCF)	7.355669	1	0.0067
D(DUM)	1.416306	1	0.2340

Sensitivity Analysis and Stability Tests

The outcomes of heteroskedasticity, normality, and serial correlation (sensitivity analysis) are present in table 5 respectively. A Lagrange Multiplier test (LM) is performed to examine the serial correlation in the residuals. We have no evidence of serial correlation on both, first and second orders. Observed R-squared probability value is 0.74 which is higher than 0.05 hence we are unable to reject the null hypothesis that there is no serial correlation.

These results demonstrate that the model passed three diagnostic tests and found no serial correlation and heteroskedasticity and the error term is also proved to be normally distributed. Finally, the cumulative sum (CUSUM) and cumulative sum of square (CUSUMSQ) are employed to investigate the steadiness of long run and short run factors in the model. The graphical presentation of (CUSUM) and (CUSUMSQ) is shown in fig 1 and 2 respectively. To be stable coefficients, the plot of their statistic needs to be within critical boundaries at a five percent significance level. We found that CUSUM and CUSUMSQ statistic stays within the range of critical bound of a 5% level of significance. Hence we can conclude that the coefficient of the regressor that affects real GDP is stable.

Table 7- Sensitivity Analysis

Diagnostic Tests	Statistic	P-Value
Lagrange Multiplier (LM) Test	0.103724	0.7474
Jarque-Bera	1.086116	0.5809
Heteroskedasticity Test	10.95054	0.2791

3. Discussion

Based on the findings we can answer our research questions that in any political regime financial progress has no substantial impact on the economic progression of Pakistan. The results contradict the claims of many scholars who suggested a substantial association between financial progress, political regime, and economic progression. Although most of the studies conducted using these variables separately which makes this study unique as we tried to see the combined impact of both variables on economic progression. But still, our results are consistent with these studies such as in terms of political regime Sirowy and Inkeles (1990) Haan and Siermann (1996) in terms of financial progress Mahmood, A. (2013).

4. Conclusions and Recommendation

According to the empirical evidence of this study, we may conclude that financial development in different political regimes is not the principal cause in the process of economic progress, therefore, we cannot accept the view that financial expansion has a substantial impact on economic growth in any political regime. Evidence also supports the view that financial reforms commenced under wider macroeconomics structural in the early nineties did not make any significant differences. Because the primary focus was the enhancement of regulatory and profitability of the banking sector rather than ensuring easy finance to individuals SBP Financial Sector Assessment Report, 2000.

There might be many other reasons for this insignificance impact but some of them are related to the inherent factors of the specific economy such as Pakistan. Pakistan “undocumented or hidden economy” is one of them, according to many research the hidden economy of Pakistan is approximately 36 percent of its overall economy which is not taken into consideration while calculating the gross domestic product. Another issue that promotes this hidden economy is “Black money” and government amnesty schemes endorsed the existence of this issue in Pakistan.

Based on this factors, we may argue that significant finance generated from Black money contribute indirectly in the economy of Pakistan without being documented and skip banking channels so it can be assumed that we are studying white money impact on total economic growth generated by both sources black and white money rather than studying total finance impact including both black and white money. There are so many motives that promote hidden economy and Black money such as tax avoidance. To avoid this significance issues government need to develop strong and stable policies regarding the motives behind these issues.

Similar to the above issue another justification that supports the results of this study is that the sector-wise structure of Pakistan GDP. Agriculture contributes approximately 26 percent in GDP and agriculture financing extensively relies on “curb market” or informal financial markets Tressel T. (2003). In this regard, government policies should be specifically designed after getting a deep understanding of the sector-wise structure of GDP and only concentrate on the significant contributor to the GDP. As far as the insignificance role of political regime is concern it can be assumed that policies developed by any government reflect mix effects due to the required time of transformation of results in macroeconomic variables. Probably favorable policies design and implemented by one government give results in another government tenor and consequently, the second government enjoys benefits or vice versa.

Both favorable and unfavorable external and natural factors are beyond the control of governments such as Security concerns, natural disasters, energy crises, and worldwide economic rescission. However, these assumptions and rationales suggested in favor of this study outcomes highlight a new dimension for future research work. Thus we can conclude that the economic development of Pakistan does not evolve around financial development and political regimes some other broader issues influenced economic growth as well.

APPENDIX-A

Fig. 1. A (CUSUM) Cumulative Sum of Recursive Residuals plot

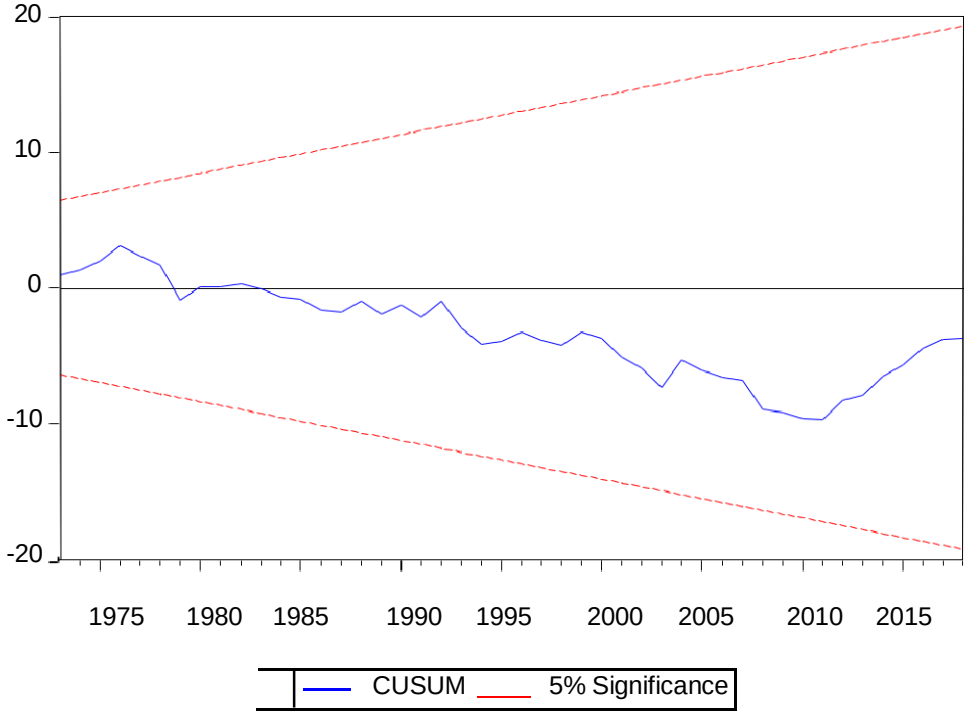
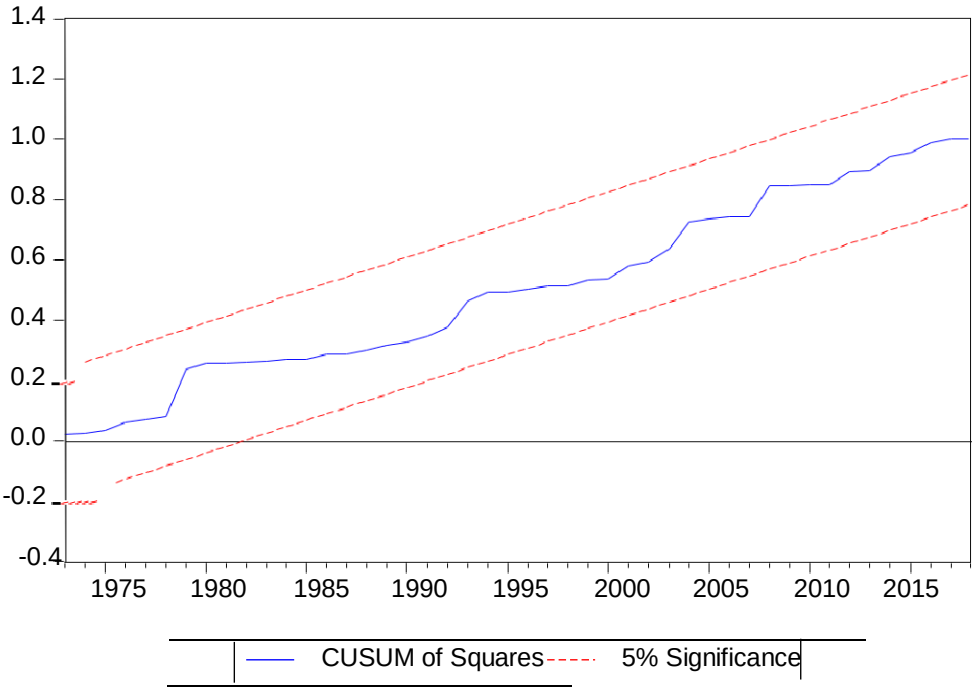


Fig. 2. A (CUSUMSQ) Cumulative Sum of Squares of Recursive Residuals plot



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