



Role of Growth Policies and Institutional Quality in Agriculture Sector of Pakistan

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Abstract: - Growth policies are strongly associated with the Agriculture sector. The primary purpose of fiscal and monetary policies might be effective in enhancing agriculture growth. Growth policies executed through institutional qualities and performance that accelerate economic growth. The agricultural sector acts as the substance that accelerates the pace of structural transformation, broadens the economy. It enables the country to utilize its factor endowment optimistically, depending less on the foreign agricultural product and raw materials for its economic growth, development, and sustainability. This study analyzes the relationship between growth policies and institutional quality in the agriculture sector during 1981-2016 in Pakistan. The results elaborate that growth policies and institutional quality typically have significant effects on the agriculture sector in Pakistan.

Keywords: Growth Policies, Institutional Quality, Agriculture Sector, 2SLS

I. INTRODUCTION

It is a commonly recognized concept that the key objective of a growth policy is to accomplish high and continual economic growth. The attainment of macroeconomic objectives, specifically; full employment, price stability, and trade balance, from ancient times, has been a policy priority of every economy, whether developed or developing (Akanni and Osinowo, 2013). Institutional quality has a significant role in achieving these targets. Institutional quality eventually enhances the performance of different sectors of the economy as agriculture.

Growth policies (Fiscal and Monetary) have a fundamental role in getting growth targets. Fiscal policy tools as government expenditures and Taxes have an influential role in acquiring growth objectives (Ali, S. R., 2020). Fiscal strategy deals with thoughtful government actions in consuming money and applying taxes with a vision to impelling macro variables towards a preferred direction. Fiscal policy involves the administration of the economy via the handling of its two primary sources, income and expenditure supremacy, to achieve actual anticipated macroeconomic goals midst which is growth (Medee and Nembee, 2011).

There are two different centers for policy makers as fiscal and monetary actions to achieve this policy goal (Abbas, S. K et al., 2019). Monetary policy is the central banks' responsibility and endorsed by complete changes in the money supply, interest rate, loans, corporate bond rate, and investment decisions. The central bank of any country has the freedom to undertake financial operations. Monetary policy regulation has contributed to controlling inflation, raising the mark of obligation, and decreasing inflationary preference and inflation potentials. Monetary policy is the primary tool of economic performance through its effect on financial variables. The growing significance of monetary policy and its efficiency in manipulating growth has a vital role for economies (Nkoro, 2005).

From the last two decades, economic studies have gradually reached an undisputed settlement on conveying an effective institutional and constitutional structure for growth which is helpful for economic and social improvements. North (1990), active institutions increase the benefits of supportive keys or costs of defects. The decrease in transaction and manufacture costs per exchange so that possible improvements are attainable.

Institutional quality strongly and positively correlated with economic development (Peluso, 2011). Better institutional quality endorses the economic agents to improve economic growth. There are two shortcomings in institutional quality: the role of corruption to change the government intentions for governance system is an essential element that is not simple to capture (Awan, N.W., et al., 2021). A primary cause of all this is terrible governance (Molinari 2014).

The institutional quality depends upon many factors like voice and political risk, political rights, Regulatory quality, and civil liberties (Murshed, M., et al., 2021). Institutional quality can be accessed by considering these factors in a country's environment (Paul, F. H., 2018). Institutional quality brings freedom of connotation and communication as well as a systematized civil society (Zaheer R., et al., 2021).

Institutional quality mirrors proper, lawful contexts that imposed independently. Implementation of laws should be neutral, and policy should be moral (Ali S. R., 2021). Institutional quality significantly enhances the performance of the economy's different sectors (Agriculture, Manufacturing).

Agriculture is one of the most capable instruments for dropping the deficiency of the economy (Zaheer R., et al., 2021). One of the acute conditions essential for the substantial performance of the agricultural sector is to guarantee a sound governance system and effective implementation of growth policies (Khan S, Ali SR. 2019). Most agriculture-related countries in the world are to be found frequently in transition economies and poor economies. However, these countries ranked regarding governance at the lowermost and, in few cases, negative. Good governance has much scope: just as political stability, the rule of law, voice and accountability, effective governments, regulatory quality, and control of corruption (UNEP, 2008).

The agriculture and industrial sector interlinked in most developing countries. The linkage idea has a vital role and arranges significant help towards supervisory the suitable policies for future economic expansion (Khan, S.D. et al., 2019). In the same way, the manufacturing sector is the backbone of the economy for development. Pakistan's agriculture sector employs people and pays a portion of the country's foreign exchange profits (Kumar, B., et al., 2021). Cotton, wheat, sugarcane, rice, fruits, vegetables, milk, meat, mutton, and eggs are Pakistan's main agricultural products (Mustafa, K., & Ali, S. R., 2018). Pakistan's irrigation system is the world's most extensive irrigation system for supporting farm output. More efficient use of resources, particularly land and water, is the key to increasing production (Murshed, M., et al., 2020). Previous research shows that the agricultural sector of Pakistan has the potential to be a frontline sector in boosting economic growth and reducing rural poverty, Haque UI (2002); Rehman et al.,(2015). In Pakistan, mainly the agricultural area has the low institutional quality and poor infrastructure. There is a terrible condition of civil liberties and political risks law and order in rural areas. However, growth policies and institutional quality have a significant role in enhancing the production of the agriculture sector.

II. LITERATURE REVIEW

There are several studies regarding the relationship between growth policies, institutional quality, and sectoral performance. Benson et al. (2012) and Haizhou and Wei (2006) examined the impact of growth policies and institutional support on the agriculture sector in Nigeria. This study found that growth policies and institutional support had positive relation and were most effective in the agriculture sector in Nigeria. Sharmistha and Grabowski (2006) empirically analyzed the agriculture sector, state effectiveness, and economic growth. However, the agriculture sector had been a significant and positive relationship with institutional quality. Agriculture productivity

played a positive role in long-run economic growth. At the same time, Evert and Gardebreek (2015) found that the relation between agriculture and economic development was not direct. It depends on many economic contexts. Agriculture developments affect economic performance in

developing countries, not in minimum developed countries from 52 countries of Africa. Bernardo and Mueller (2016) analyzed the impact of institutional policies on the agriculture sector. While institutions were effective and supportable, growth policies (fiscal and monetary) were desired targets in Brazil. Cleomar and Vieira (2016), H. A and Mobolaji (2010) empirically examined the relationship between fiscal and monetary policy and found that monetary policy was more effective than fiscal policy in continual growth in the case study of Nigeria.

Azam et al. (2014) investigated the relationship between institutional quality and the agriculture sector in Pakistan. The result shows that the agriculture sector and institutional quality were negatively related to economic development. While Alexiou et al. (2014) empirically examined the relationship between institutional quality and economic growth in Sudan and found the relationship between institutional quality and economic growth in Sudan's economy. This study originates that there was a positive relationship between institutional quality and economic growth. Monchi and Meng (2008) evaluate the relationship between governance and agriculture productivity. The research based on better governance improves the agriculture sector and found that better governance brings higher productivity in agriculture from empirical results. Mostly in developing country investment in government bring development in productivity. It was a panel data analysis from 127 countries.

Chandio et al. (2016), Thakur Prashad (2016), Akeem A et al. (2015), Ebere and Kemisola (2014), and

Femi Edun (2013) analyzed the relationship between government expenditure and the agriculture sector. It found that government expenditure had a positive and significant impact on the agriculture sector while developed economies spend in the short run to get more economic development. And agricultural output has enhanced the growth.

Iganiga and Unemhilin (2011) empirically analyzed government expenditure and the agriculture sector relationship and found a negative effect. At the same time, K. N. Selvaraj (1993) investigates the effect of reducing government expenditure in the agriculture sector on the development of the manufacturing sector and economic reforms and found that government expenditure had been a significant effect on the agriculture sector.

Kelimak and Henning (2017) evaluated the structural changes as a path-dependent response to neoliberal turn from 1990 in the food industry of Norway and Denmark. Norway adopts market protection and institutional reforms in 1990, and Denmark's food industry was export-based. Two trajectories combine there was first, path dependency theories and, second, varieties of capitalism. The findings of this study were that two different path-dependent expansion (1) for Denmark a self-reinforcing (2) for Norway breaking point.

III. THEORETICAL FRAMEWORK

Before showing an empirical analysis, it needed to recognize the link among the variables. This relationship leads us to the ways through which variables might be affecting each other. Government expenditure, money supply, and institutional quality are the variable which positively or negatively affects agriculture performance.

Economies have multiple desired goals, and macroeconomic policies conduct the framework to achieve economic objectives. These policies are influential with their actions for achieving desired financial targets, while Keynes focuses on fiscal and monetary policy. Economic thinkers as classical economists, never support government interaction in growth policies before the 1930s depression (Oseni 2013). Economists now support government intervention in economic policy decisions (Anthony et al., 2015). Keynesians also focus on the role of government. According to their ground realities for achieving the desired economic goals, the government and central bank of countries provide different fiscal and monetary policies (Thanabalasingon, 2013).

In the 1930s' John Maynard Keynes developed the theory against classicist ideology; holding money among individuals and no interest rate affects demand for money, and money is not only a medium of exchange. Classicists believe money is only a facilitator for transactions, and it is not a real variable for production. The supply of money never affects the economic activities;

however only affect the prices and wages. Classicists believe on free economy and do not consider significant role of monetary policy. Then, Keynesians present their thoughts through liquidity preference theory. Keynes's liquidity preference theory proposes three objects for holding money: transactions, second precautionary, and third speculative.

Monetarists focused that interest rate has little effect on demand for money and need for cash has the role of permanent income and money is the main factor of aggregate expenditure. Monetary policy affects the money supply. Money supply has a vital role in economic performance (chinwube et al., 2015).

North (1990) proposed that changes in institutions through time and conditions brought changes in economic performance. Therefore, economic performance improves by only well-organized institutions. Besides this, a political institution is helpful for an economic institution—the long-run economic growth based on the nation's social infrastructure. Institutions and policies are complementary to each other. Institutional quality factors are Political stability, government effectiveness, and the rule of law play an essential role in sectoral performance (Peter 2014). Institutional quality is significant for economic development.

For generations, agriculture has been the focal point of activity. This industry comes close to meeting humanity's actual needs. Food, work, and industrial input are all provided. In developing economies, still, large populations rely on this sector. This sector is providing a significant share of employment. The agricultural sector is essential for developing countries to increase the GDP. Most developing countries are agrarian-based. The agricultural sector contributes a considerable share in GDP in Pakistan and India (Ahmed et al., 2015). The development of the agriculture sector has a positive impact on the economy. Mainly in developing countries, the agriculture and industrial sectors save interlinked. The planning for

the agriculture sector in developing countries established three features: theoretical base, second quantitative design, and third assortment and planning at sector level.

IV. DATA SOURCE AND DEPICTION

The main purpose of this paper was to find out the effectiveness of organizational culture on teachers performance in public and private secondary schools at district Malakand, Khyber Pakhtunkhwa, Pakistan. A quantitative research methodology was used to answer the research questions. The research design of the study was co-relational and survey type. Two questionnaires were used to collect the data. One questionnaire was used to collect principal perception about different characteristics of school culture. The other was used to collect students' rating about the five aspect of their teachers' performance i.e. pedagogical skills, classroom management, and student's achievements, inter personal relation and professional responsibilities. Population of the study includes all the 197 secondary schools principals (public =78, private =119) and the 10th grade students enrolled in these schools for the academic year 2015-16, of District Malakand. To reduce the sampling error a representative sample were selected. Stratified random sampling technique has been used to select 60% of secondary schools to get their principal perception. The homogenous purposive sampling technique has been used to select four students from each selected school. Therefore sample for this quantitative study was 118 principals (public=47, private = 71) and 482students (public =188, private =284) of class ten. SPSS 21 has been used to analyze data using mean, standard deviation, Pearson correlation, multiple regression and t-test statistics.

The study empirically examined the impact of growth policies and institutional quality on the agriculture sector using time series data from 1981 to 2016. The core and control variables were collected mainly from World Development Indicator (WDI) and freedom house.

The study's primary purpose is to perceive the role of growth policies (Fiscal and Monetary) in the agriculture sector. General government final consumption expenditure (constant 2010 US\$) is the proxy of fiscal policy. General government final consumption expenditure contains all current government expenditure for acquisitions of goods and services. And monetary policy is consisting of the proxy of (M2) Broad money (% of GDP).

The effect of institutional quality (Civil Liberty and Political right) focused on the agriculture sector. Civil liberty is an index accessible at freedom house indicators to measure human rights. And political rights are also an important indicator collected from freedom house.

However, Civil liberty and Political risk variables may reason the endogeneity (Falcetti, 2002). In the same way, the data on policies may cause multicollinearity. Therefore Principal Component Analysis (PCA) is used to reduce the multicollinearity and dimensionality in the data. Preisendorfer and Mobley (1988) explain that Beltrami (1873) individually established the singular value decomposition (SVD) from this approach, they build the current PCA. PCA is a statistical process that is an appropriate use of observes relations between various quantitative variables.

There are two basic ways to estimate simultaneous equations through least square and two-stage least square methods. The first technique is the OLS Fixed coefficient effect referred to by Pooled Ordinary Least Square in this study. Pooled OLS is a simple approach for estimation. It gives us unbiased results; however, in panel data, heterogeneity and autocorrelation may also exist. 2SLS is the next extension of the OLS method. It is mainly applied when the error term of the dependent variable correlated with the independent variable. For solving the simultaneous equations, mostly the two-stage least square (2SLS) method is commonly used. Theil established two SLS methods (1953a and b) individually. Basman (1957) and Sargan (1958) added a lot to the 2SLS. The endogenous variable of one equation may appear as an exogenous variable in the further equation. Endogeneity is a cause of irregularity of the least square.

V. ECONOMETRIC MODEL SPECIFICATION

This study evaluates the role of growth policies, institutional quality and the agriculture sector. The fiscal response accessed by government expenditure and monetary is money supply (M2). At the same time, institutional quality is the index of civil liberty and political rights index.

$$\log AGR_{it} = \alpha_0 + \alpha_1 \log GEC_{it} + \alpha_2 \log M2_{it} + \alpha_3 \log INQ_{it} + \alpha_4 \log GDP_{it} + \alpha_5 \log CAP_{it} \\ (+\alpha_6 \log SAV_{it} = \alpha_7 \log INC_{it} + \alpha_8 \log TRD_{it}) + \mu_{it} \dots (1)$$

$$\log GEC_{it} = \beta_0 + \beta_1 \log AGR_{it} + \beta_2 \log M2_{it} + \beta_3 \log INQ_{it} + \beta_4 \log GDP_{it} + \beta_5 \log POP_{it} \\ (+\beta_6 \log SAV_{it} = \beta_7 \log INC_{it} + \beta_8 \log TRD_{it}) + \mu_{it} \dots (2)$$

$$\log M2_{it} = \gamma_0 + \gamma_1 \log GEC_{it} + \gamma_2 \log AGR_{it} + \gamma_3 \log INQ_{it} + \gamma_4 \log GDP_{it} + \gamma_5 \log EXR \\ (+\gamma_6 \log SAV_{it} = \gamma_7 \log INC_{it} + \gamma_8 \log TRD_{it}) + \mu_{it} \dots (3)$$

Where: LogAGR is log of the agriculture sector, LogGEC is log of government expenditure, LogM2 is log of broad money, LogINQ is log of institutional quality, LogGDP is log of gross domestic production, LogSAV is log of saving, LogINC is log of inflation, LogPOP is log of population and LogEXR is log of the exchange rate. μ = error term. The specification β_0 is the intercept (constant) term of the model, t is the time period (years) ranging 2005-2015, and i shows the no of lags used.

VI. EMPIRICAL FINDINGS

The study's primary goal is to discover an empirical link between economic growth policies, institutional quality, and agricultural success. Aside from OLS and 2SLS data, there is a high association between growth policies, institutional quality, and agricultural success. The results of OLS and 2SLS are presents in the table 1.

Table 1: Growth Policies, Institutional Quality and Agriculture Sector

| VARIABLES | OLS | 2SLS |
|-----------|----------------------------------|--------------------------------|
| LogGEC | (0.013)* -0.1225 (0.059)** | (0.019)* -0.1473 (0.562) |
| LogM2 | 0.0231 (0.060)** | 0.0113 (0.344) |
| LogINQ | .0742 (0.000)* | 0.0522 (0.000)* |
| LogGDP | 1.0334 (0.000)* | 1.0139 (0.523) |
| LogCAP | 0.029 (0.000)* | -.0818 |
| LogSAV | -0.1969 (0.293) | |
| LogINC | -0.0133 (0.623) | |
| LogTRD | .0404912 | |
| Auto | 0.7724 | |
| Hetro | 0.4685 | Endogeneity 0.000 |
| Ramsay | 0.1916 | VIF 13.33 |

Note: The values in parenthesis are P. Values, *, ** and *** show the level of significance at 1%, 5%, and 10%, respectively

In the table 1, there are some findings to summarize the model. Government expenditure (GEC) is significant in both models when government expenditure increases in the agriculture sector. Monetary

policy and institutional quality are significant in OLS and insignificant in 2SLS. However, monetary policy has no significant role in the agriculture sector. At the same time, gross domestic production (GDP) has a vital role in the agriculture sector. Capital has negative relation with the agriculture sector in 2SLS. Mainly capital promotes the industrial sector.

The autocorrelation and heteroskedasticity do not exist in this model, and the Ramsay value is also insignificant. There is no issue of multicollinearity. Saving (SAV) used for the endogenous variable. Inflation (INC) and Trade (TRD) use as an instrumental variables. For endogeneity, a robust test was performed, which elaborates that endogeneity exists.

In the table 2, the results elaborate that fiscal policy (government expenditure) positively and significantly relates to the agriculture sector. However, monetary policy has no significant role in agriculture growth. The population has a substantial and negative relation because Pakistan is a developing country and has no control over population growth from 1981 to now.

The autocorrelation and heteroskedasticity do not exist in this model, and the Ramsay value is also significant. There is an issue of multicollinearity exist. Saving (SAV) used for the endogenous

variable. Inflation (INC) and Trade (TRD) use as an instrumental variables. For endogeneity, a robust test was performed, which elaborates that endogeneity exists.

Table 2: Fiscal Policy, Institutional Quality and Agriculture Sector (Dep)

| VARIABLES | OLS | 2SLS |
|-----------|-----------|-------------------|
| LogAGR | (0.042)* | (0.045) |
| | 0.6031 | 0.5619 |
| | (0.381) | (0.406) |
| LogM2 | -0.0312 | -0.0319 |
| | (0.001)* | (0.003) |
| LogINQ | -0.3644 | -0.3928 |
| | (0.000)* | (0.000) |
| LogGDP | 3.5763 | 3.2317 |
| | (0.000)* | (0.001) |
| LogPOP | -4.2147 | -3.6395 |
| | (0.117) | |
| LogSAV | 0.2339 | |
| | (0.122) | |
| LogINC | -0.0657 | |
| | 0.408 | |
| LogTRD | 0.2297 | |
| Auto | 0.7791 | |
| Hetro | 0.9835 | Endogeneity 0.000 |
| Ramsay | 0.0107 | VIF 98.73 |

Note: The values in parenthesis are P. Values, *, ** and *** show the level of significance at 1%, 5%, and 10%, respectively

In the table 3, the results elaborate on the negative relationship between monetary policy and the agriculture sector. The annual reports of the state bank of Pakistan (2008-09) show that an increase in money supply brings down the agriculture sector.

A rise in money supply is primarily supportable for industry because institutional quality has insignificant. At the same time, institutional quality does not play a vital role. However, monetary policy accelerates the gross domestic production (GDP) positively. The exchange rate significant and positively related to the agriculture sector.

The autocorrelation and heteroskedasticity exist in this model, and the Ramsay value is also insignificant. There is no issue of multicollinearity. Saving (SAV) used for the endogenous variable. Inflation (INC) and Trade (TRD) use as an instrumental variables. For endogeneity, a robust test performed, which elaborates that endogeneity exists.

Table 3: Monetary Policy, Institutional Quality and Agriculture Sector

| VARIABLES | OLS | 2SLS |
|-----------|-----------|-------------------|
| | (0.101) | (0.162) |
| LogAGR | -0.01874 | -0.0159 |
| | (0.849) | (0.775) |
| LogGEC | 0.0262 | 0.0383 |
| | (0.020)** | (0.114) |
| LogINQ | 0.2271 | 0.1959 |
| | (0.010)* | (0.012)** |
| LogGDP | .8864055 | .7606023 |
| | (0.004)* | (0.009)* |
| LogEXR | -0.4506 | -0.3788 |
| | (0.174) | |
| LogSAV | -0.1423 | |
| | (0.275) | |
| LogINC | -0.0339 | |
| | (0.438) | |
| LogTRD | 0.1384 | |
| Auto | 0.0233 | |
| Hetro | 0.0588 | Endogeneity 0.000 |
| Ramsay | 0.5521 | VIF 42.55 |

Note: The values in parenthesis are P. Values, *, ** and *** show the level of significance at 1%, 5%, and 10%, respectively.

VII. CONCLUSION AND POLICY IMPLICATION

The study examines the effects of growth policies and institutional qualities on agriculture performance. Three models are used to evaluate the relationship among growth policies, institutional quality, and agriculture performance. Pooled OLS and 2SLS techniques are applied by taking the data from 2005 to 2015 of 84 economies of the world. Sectoral performance always has a strong positive effective on any economy. However, developing countries got more benefits from agriculture performance with the help of better institutional quality and effective policies. Bad Institutional quality and ineffective policies are the features of the persistent problem of the developing nations. At the same time, the agriculture sector's progress is related to growth policies. Policies have the backbone of the economy, institutions will power, and institutional quality is the soul of the economy. In contrast, a healthy economic body has brought solid economic progress in any country.

The results indicate that fiscal policy has a significant role in increasing the performance of the agriculture sector; in the same way, the part of monetary policy is also negative and significant to accelerate the performance of the agriculture sector. Growth policies have an influential role in the agriculture sector.

However, institutional quality has no strong position in the growth of the agriculture sector. The result can again attribute to Azam et al. (2014) the institutional has no substantial impact on the agriculture sector. Because Pakistan is a developing country, that's the primary reason for low institutional quality. In a developing country, the institution has many problems, just like corruption, accountability, and especially the rule of law. Keeping the current study results, some imperative problems of Pakistan highlighted, and recommendations made. The government of both developed and developing economies should focus on increasing expenditure in the Agriculture sector. Monetary policy should focused on a priority basis. However, the central focus should be given to the agriculture sector, as institutional quality is not up to the mark in the agriculture sector. The governments should focus on improving the exports of their economies.

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