



## Major Agents Influencing Inflation in Pakistan

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An econometric analysis of inflation and economic growth in Pakistan from 1995 to 2018 was analyzed in this article. Deficits in government spending and a high money supply contributed to inflation. Inflation is expected to fall as a result of increased GDP. To combat inflation, the money supply is restricted and the exchange rate is regulated to keep prices stable. As a result of the need for lower inflation, imports are less likely to be limited. Economic growth was bolstered by the development of human capital and investment and value-added activities in agriculture and industry. When these factors are considered, the Pakistani economy is expected to do well. It was determined that the inflation and economic growth models had been properly specified and tested. Stability was examined over two time periods. The CPI remained relatively stable in both periods, whereas the second period's GDP fluctuated.

**Keywords;** Agriculture economy, Food supply, Currency exchange.



## Introduction

Economic development has long been a top priority for all countries, but especially so in developing nations. In the 1960s, economic growth was the guiding principle of development policy. Pakistan, like many developing nations, has sought to expand indefinitely. Despite its long history, Pakistan's economy has progressed in stages. At the dawn of the new millennium, Pakistan's economic standing shifted dramatically. Following the global financial crisis in 2007, the escalation of oil prices, the deterioration of security, and the global economic conditions necessitated a thorough examination of macroeconomic policies in developed and developing countries. However, according to the GOP [1], Pakistan's economy was not affected by the global financial crisis; rather, the country faced domestic and foreign challenges, including a struggle against the energy crisis and extremism.

There must be a thorough examination of Pakistan's macroeconomics in light of global trends. Policymakers may be able to rethink and recast their growth and development goals. Economic growth is affected by a wide range of social and economic factors.

All possible forces interact to influence the economy in macroeconomics, which rests on the General Equilibrium concept of macroeconomics. Due to a variety of factors, such as the relative importance and weight of various sources of growth, it is extremely difficult to analyze these elements thoroughly in Pakistan. This article discusses key influences on Pakistan's inflation and economic development.

Economic growth accompanied by rising prices with inflation, investment, and employment, policymakers and politicians have a lot to worry about. A person's quality of life is significantly affected by inflation and unemployment. Price stability and high employment are therefore important priorities for the government. Poor living conditions in developing countries like Pakistan are a direct result of high inflation, which reduces household food intake, according to Alderman [2][3]. Inflation is a major threat to macroeconomic stability, discourages savings, reduces international competitiveness, and thus acts as a sinking weight on export performance and reduces the purchasing power of all, particularly fixed-income groups [4]. Anyone can be a friend or a foe of inflation.

Economic growth is a process that increases a country's fruitful and productive capacity over time, resulting in higher national production levels and a positive impact on the average person's income [5][6][7]. As a whole, Pakistani GDP growth hasn't maintained a consistent pattern over time. When Pakistan's population grew, it couldn't keep up, so it had to look for a new source of income. Recently, Pakistan's economy has experienced a significant decline in output and employment levels. Pakistan's slow economic growth, coupled with high inflation and low investment, is a major economic hardship for the country. Consequently, this article aims to examine Pakistan's inflation and economic growth using macroeconomic models of inflation and economic growth.

The primary goal of macroeconomic modeling is to investigate the empirical behavior of a real-world economy. Models like these are used to understand the workings of national economies. Ex-ante projections under various trials, policies, and scenarios can be evaluated and communicated using this standard framework [8],[9] It is a given that economic theories must simplify abstractions to make them more understandable, which means that econometric models must suffer from problems like incorrect coefficient signs, skewness in estimations, and residual features that hinder sound inference. Granger's claim is not entirely supported by real-world practice and experience. It is possible to gain valuable insights from econometric models despite their flaws.

In the literature on this topic, important findings have been highlighted [10]. Economic growth and inflation were found to have a negative correlation [11]–[13], whereas other studies found a positive and significant correlation [14]–[18]. According to these studies, low and steady inflation is linked to economic growth.

## Materials and Methods

Afzal and Awais[19][20] define inflation as an increase in prices that is both steady and rapid over time. By definition, price rises are not inflation. As a result of the following reasons, inflation is predicted to rise.

As a measure of an economy's overall macroeconomic performance, GDP growth can be used as a proxy for major macroeconomic phenomena like political stability, law, and order, etc. GDP growth can be seen as the root cause of all macroeconomic difficulties because of its effect on the economy's inflation and unemployment rates. Any problems will be taken care of if it's working well. As a result, the impact it has on inflation is well understood.

Additionally, money is a crucial factor in inflation. Inflation is a hotly debated topic among economists. Excessive expansion in the money according to monetarists, is the root cause of inflation and may be prevented by reducing it. Because the money supply appears to be the principal driver of inflation, its coefficient is expected to be positive.

As a result, inflation is influenced significantly by changes in the nominal exchange rate. Macroeconomic stability depends heavily on the stability of the exchange rate. An economy that can maintain a steady exchange rate is likely to be stable in and of itself. Moreover, the Pakistani rupee's recent rapid devaluation validates the claim above. Unbearable levels of the current account deficit and debt service have been achieved. An increase in the cost of imported goods directly impacts the overall cost of living. As a result, inflation is likely to be higher than currently expected.

Imports dominate trade with other countries. The country has a large trade imbalance because of the Pakistani industry's steadfast reliance on imported inputs due to import substitution.[21] Meanwhile, rising oil and food costs have compounded the country's already precarious condition as a net importer. A currency decline has led to increased imports, which has exacerbated inflation. This means that imports are a significant factor in driving up inflation, and their coefficient is almost certainly positive.

There is a problem with the budget. A lack of economic growth in many developing countries, including Pakistan, can be attributed to budget and current account deficits. Because it diminishes national savings and crowds out domestic investment. Deficit reduction efforts were made despite IMF criticism in the 1990s and 2000s, notably by lowering the development budget. From 2000 to 2010, the budget deficit was kept under control, thanks to aid from the international community and the proceeds from privatization. GOP claims that between 1980 and 1990, Pakistan's public debt grew at an average rate of 18% and 15%, which was much faster than the country's nominal GDP growth.

One of the fundamental objectives of development policy in every country is to promote economic growth, according to [22][23]. The fundamental factors of production (labor and capital), advances in technology, and a combination of institutional and sociopolitical forces all contribute to economic growth. In addition, the more modern endogenous growth theory asserts that expenditure on education and health care, both of which contribute to human capital, is critical.

Investments, the social sector, agriculture, industry, and imports all contribute to economic growth in a country. Investment has long been recognized as a key driver of economic expansion. Exports positively impact production since imported capital and industrial equipment will increase output. Native products will suffer due to a growing dependence on foreign goods. As a result of increasing agricultural and industrial output, the issue of low investment can be eliminated. The social sector can also boost economic growth. If education, health care, and rigorous security are supplied, the economy may improve[24].

The natural logarithm is the GDP inflation-adjusted growth rate,  $y = \text{GDP growth}$ . It is a key metric for gauging the state of the economy. The entire value of all products and services produced in standard currency over a certain period is frequently referred to as the economy's size.

Due to measurement problems in many developing countries, gross investment is utilized as capital. The net addition to the capital stock that results from investment is a significant contributor to the growth in national income. Investing requires a lot of money saved up. According to empirical studies, Ample savings has been a major factor in countries' impressive economic growth [25][17]. Economic growth is strongly influenced by investment, which plays an important part in increasing the economy.

GDP-adjusted agricultural value added is equal to more than 70 years of vigorous modernization, agriculture remains a major source of GDP, employment, and foreign exchange revenues for the country's economy. By providing raw materials and a market for industrial products, the agricultural sector also contributes to economic growth. Farming employs 40% of the workforce and 60% of the rural population, who are either directly or indirectly involved in the industry [26][27].

The growth and development process is used to indicate or measure the structural change in industrial production. The amount of labor and capital that has been transferred from agriculture to industry can also be gauged by looking at industrial production, which can serve as a proxy for investment rates in previous years. Pakistan's GDP is heavily influenced by its agricultural, industrial, and service sectors. Their percentage of GDP has shifted over time. Agricultural, industrial, and service sectors presently contribute 20.9 percent, 22 percent, and 57.9 percent of GDP, respectively. There was no additional explanatory variable for services due to their dependence on agriculture and industry for expansion. If both are running smoothly, the services sector will also grow [28].

Human capital is far more important than physical capital. Talent and education and the ability to learn new things are examples of human capital. On-job training and formal education all contribute to the formation of human capital in the workplace. Human development indices including life expectancy, infant mortality, and literacy have not been used in economic growth studies [29]. This research has not taken into account the socioeconomic factors that influence growth and the institutions that govern the economy. Therefore, human resource development is measured by the amount of money spent on health and education services.

## Results

Inflation, unemployment, and economic growth are major macroeconomic issues in Pakistan because of the country's history. That's why the study's dependent variable is inflation. There are various expenses associated with uncertainty, and it looks to be a significant one. People, families, businesses, and even governments find it difficult to plan for the future securely. As a result, one of the most coveted macroeconomic goals is maintaining price stability. As a measure of inflation, the CPI was utilized. Many people would argue that a greater inflation rate was preferable. It was attempted, however, the estimation findings were unsatisfactory or unreliable. All estimates were smoothed using logarithms; this didn't help. In order to improve estimation outputs, CPI has been used in a variety of applications. According to this macroeconomic measure of economic activity, inflation and deflation are considered when calculating the real GDP. An economy's genuine growth isn't accurately reflected in GDP because of inflation.

As [30] points out, a country's ability to maintain a steady price and currency rate is compromised. As expected, the coefficient results are large. The link between GDP and inflation is negative. According to traditional financial knowledge, Modest inflation should promote GDP growth; as incomes rise, so will the demand for money rise. Due to the fact

that excess money supply will diminish if the money supply develops at a slower rate than demand, the rate of inflation will drop. Thus, income increases while prices fall, resulting in a negative correlation between inflation and growth. When GDP increases, inflation decreases. As measured by GDP growth, anti-inflationary measures are taken to improve economic performance. There is a short-term impact on inflation, according to researchers [11]. Suppose you can distinguish between consumption and real money balances. In that case, inflation has a positive impact on investment and a negative impact on consumption, but it has no impact on output in the short term. According to the findings, inflation has a negative impact on output in the short term.

Exchange rates are expected to have a favorable impact on inflation. Currency appreciation (in terms of foreign currency) is inflationary, as is a decline in the exchange rate. For every unit increase in the exchange rate, inflation rises. ' As a result of Pakistan's currency devaluation, inflation is on the rise. Economics and past studies have shown that the exchange rate has a substantial impact on inflation; therefore, monetary policy decisions, such as whether or not to use a fixed or flexible exchange rate, must consider the associated costs and advantages of doing so [31].

The money supply coefficient is highly positive, which supports that inflation is primarily a monetary issue. Classical economics stated that money was neutral in both the short and long term. Even according to Friedman's theories, the short-term impact of money on output is not zero. On the other hand, the money supply is an effective inflationary lever. In order to counteract inflation, the money supply is kept under control. Long-term outcomes confirm Sidrauski's super neutrality of money, but the short-term findings cast doubt on Sidrauski's concept of separable utility functions.

Exports into Pakistan could also be a contributor to inflation, according to some estimates. To a great extent, its coefficient is decisive. Increased imports cause inflation to rise. With Pakistan's currency recently depreciating sharply, the country's inflation and trade imbalance have both risen. Import growth has outpaced export growth in recent years. There has been little or no change in exports over the past decade.

The budget deficit is also to blame for rising costs. The administration has few options. Borrowing from other countries, increasing taxes, or creating money are all options. No matter how much damage it does to Pakistan's macroeconomic health, the government has been borrowing money from banks and printing it for the last decade. All of this is fueling inflation. With political compulsions, the GOP looks incapable of decreasing the BD and current account deficits because of widespread corruption and money laundering. According to research [28], Pakistan's inflation is directly linked to the country's budget imbalance. According to these findings, monetary expansion, the federal deficit, import prices, and the weighted average lending rate all significantly impact the CPI. However, imports and the budget deficit can be reduced to prevent inflation. According to the authors, the anti-inflationary approach requires fiscal restraint and monetary policy tightening.

Exports are the only negative coefficients, highlighting the crucial importance of human resource development, investment, and the additional value that agriculture and industry provide. This suggests that the Pakistani economy will run smoothly provided policymakers pay close attention to these aspects. Exports are also a factor in the growth of the economy. Exports haven't had much of an impact on the economy since the Korean War and the sharp devaluation of the dollar in 1972. It is true that exports contribute to economic growth, however, the history of Pakistan's economy shows that exports have had little impact. Growth in GDP did not inevitably lead to increases in exports based on historical evidence. The export-to-import price ratio growth rate to examine whether growth increases in response to improved trade terms [26]. For Pakistan's economic

development, exports and imports are equally important [32]. Growth in the economy has a considerable effect on both imports and exports.

Agricultural value added has a significant impact on economic growth in agricultural economies [33]. This study employed a multi-regression model to evaluate the relationship between foreign direct investment (FDI), state investment, private investment, and gross domestic product (GDP). According to the data, public and private investments are strongly linked to GDP, whereas FDI is not. With public investment having a greater impact on GDP than any other independent component, it may be concluded that investment boosts Malaysian economic growth.

There are no significant negative coefficients that show that agriculture and industry's value-added activities (such as training workers and investing in the capital) are vital to the economy's overall health. This suggests that the Pakistani economy will run smoothly provided policymakers pay close attention to these aspects. Exports are also a factor in the growth of the economy.

### Conclusion

An econometric analysis of inflation and economic growth is presented in this article. With inflation, investment, and employment, policymakers, and politicians have a lot to worry about. It was found that the main factors behind inflation in Pakistan were money supply, imports, currency exchange rates, and the budget deficit.

The link between GDP and inflation is negative. Predicted increases in GDP are expected to reduce inflation. Controlling the money supply and the foreign exchange rate are two ways of preventing inflation. For economic needs, the government will not likely limit imports to combat inflation.

Economic growth was bolstered by the development of human capital and investment and value-added activities in agriculture and industry. When these factors are considered, the Pakistani economy is expected to do well. It was determined that the inflation and economic growth models had been properly specified and tested. Although GDP was not, the Consumer Price Index was stable in both eras.

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