

# Impact of Inflation on Economic Growth in Pakistan

Zaib-un-nisa

*Bahauddin Zakariya University, Multan, Pakistan*

*Znisa5214@gmail.com*

***Abstract***— The main objective of this study is to re-examine the existence of an inflation-growth relationship in the Pakistani economy and empirically analyze the impact of inflation on the GDP growth of the economy. It is also a matter of investigating whether it encourages or hurts economic growth in a uniform way or behaves differently at different levels. The analysis is performed using the ordinary least squares (OLS) method.

It has been found that there is a negative and significant relationship between inflation and growth in the economy of Pakistan. The results of the study show that prevailing inflation is harmful to the GDP growth of the economy after a certain threshold level. Based on descriptive and econometric analysis, we may suggest policy makers and State Bank of Pakistan to keep inflation below 7% level and keep it stable. So that it may exert its positive effects on the economic growth of the economy.

***Keywords:*** *Inflation, Economic Growth, Threshold level of Inflation, Pakistan*

## **Introduction**

High and sustained economic growth with low inflation is the central objective of macroeconomic policy makers. Thus, inflation has been one of the most researched topics in macroeconomics in recent years because it has serious implications for growth and income distribution. The factors that determine inflation rates have also been widely debated around the world. Inflation, from the increase in aggregate demand, is called "demand-pull inflation", while supply shocks are supposed to cause "cost-pull inflation". This is assumed to have a strong positive correlation with the output gap. If actual output is below the potential output (i.e. negative output gap) and there is sufficient spare capacity available to handle with the demand pressures. When actual output becomes equal to potential output, there remains no spare capacity, and the economy is working at full employment, any further increase in growth comes at the cost of rising inflation. If demand continues to grow at this stage and production capacity is not expanded, there is a danger

of a rapid increase in the general price level in the long run without further growth in production. This phase of rising inflation can have severe consequences for the economy.

High inflation is always related to increased price variability, which can lead to uncertainty about the future profitability of investment projects. This leads to more conservative investment decisions than would otherwise be the case. Ultimately, it will lead to lower levels of investment and economic growth. Inflation can also affect an economy's balance of payments by making its exports relatively more expensive. Furthermore, inflation can interact with the tax system to disturb borrowing and lending decisions. Firms may have to allocate more resources to dealing with the effects of inflation. This study aims to consider all these situations in the context of the Pakistani economy. It is to re-investigate inflation and growth the relationship with the last 30 years data of the economy.

The remainder of the document is organized as follows: Section II presents a brief review of previous studies. The objectives of the study have been classified in section III. The structure and trends of inflation and growth in Pakistan have been discussed in Section IV. The data and methodology are briefly mentioned in section V. The econometric specification of the model is presented in section VI. Section VII is reserved for results and discussions. Finally, the conclusions and policy recommendations are presented in section VIII.

## **Review of Literature**

II. Several studies have been presented on the subject of inflation and growth. Most of this research work has been done internationally. We have critically reviewed some of these important empirical studies to develop goals in the context of Pakistan and analyze them further to draw some important conclusions and policy recommendations.

III. Barro (1995) examines this issue and finds a significant negative relationship between inflation and economic growth, considering constant variables such as fertility rate, education, etc. The study contains a large sample of data from more than 100 economies for the period 1960 to 1990 and to evaluate the effects of inflation on growth, a system of regression equations is used, in which many other determinants of growth are held constant. growth. This framework is based on an expanded view of the neoclassical growth model stated by Barro and Sala-i-Martin (1995). Various studies have been presented on the issue of inflation and growth. Most of this research work has been done internationally. We have critically reviewed some of these important empirical studies to develop

objectives in the context of Pakistan and, further, to analyze it to draw some important conclusions and policy recommendations.

The study indicates that there is a statistically significant negative relationship between inflation and economic growth. More specifically, an increase in average annual inflation of 10 percentage points per year reduces.

Bruno and Easterly (1995) address the problem of inflation and growth and find no evidence for a consistent relationship between these variables up to a certain level of inflation. They estimate that growth declines sharply during discrete crises of high inflation, above 40%, and recovers after inflation has fallen. His empirical analysis shows that there is a temporal negative relationship between these two variables beyond the 40% cut-off level. They conclude that there is no permanent damage to economic growth due to discrete mild high inflation crisis.

Sarel (1996) explores the possibility of non-linear effects of inflation on economic growth and finds a significant structural break occurring at an average annual inflation rate of 8%, in the function relating economic growth to inflation. Their results show that below this structural breakdown, inflation has a slightly positive effect on growth, but after an inflation rate of 8%, it has a powerful negative effect on growth. These results were obtained using the OLS technique after constructing a joint panel database by collecting annual information from 87 countries for the period 1970-1990. Using annual time series data for 1971-1995, Khan and Qasim (1996) estimates key determinants of inflation in Pakistan. They disaggregate inflation into food and non-food inflation and suggest an important role for the money supply in accelerating inflation in Pakistan. Other factors causing inflation, studied by the researchers, are currency devaluation, value added in the agricultural sector, the support price of grain, import prices and the price of electricity. Real GDP growth between 0.2 and 0.3 percentage points per year. Ghosh and Phillips (1998) address the short-term consequences of rapid disinflation and find it from lower inflation rates; rapid disinflation is associated with a decline in GDP growth. They use a large panel dataset covering IMF member countries over the period 1960-1996. They find two important non-linearities in the inflation-growth relationship. With very low inflation rates (around 2-3% a year or less), inflation and growth are positively correlated. Otherwise, inflation and growth are negatively correlated, but the relationship is convex, such that the drop in growth associated with a 10% to 20% rise in inflation is much larger than that associated with a rise 40% to 50% inflation

Nell (2000) examines the question of whether or not inflation is always detrimental to growth. Taking data from the South African economy for the period 1960-1999 and dividing it into four episodes, using the Vector Auto Regressive (VAR) technique, their empirical findings suggest that inflation within the single-digit zone may be beneficial to growth, while inflation in the double-digit area seems to impose costs in terms of growth slowdown.

Faria and Carneiro (2001) investigate the relationship between inflation and output for the Brazilian economy, where a permanent inflationary shock has been observed in recent years. They use a bivariate vector auto regression composed of output growth and the change in inflation to test the hypothesis that inflation has a long-term impact on output. They also use data for the same period 1980-1995 to estimate the short-run relationship between inflation and real output. His findings confirm the superneutrality of Sidrauski's money, which can be defined as inflation that has no real effect on output and productivity in the long run. Their results suggest that inflation has real effects on output in the short run. Using co integration and error correction models, Malik and Chowdhury (2001) find a positive long-run relationship between GDP growth rate and inflation for four South Asian countries. Supporting the view of the structuralists, their results also suggest it.

Gillman, Harris, and Matyas (2002) present an economic model with the characteristic that the inflation rate reduces the return on capital, by collecting two masters of countries of the OECD and APEC during the years 1961-1997. The rate of inflation is included as a central variable and the theory relates to the concept of equilibrium across the path of balanced growth which implicitly includes forces of transition to the balanced growth rate. The results, consistent with Khan and Senhadji (2000), show that the effective is negative and significant to low inflation rates for the OECD. When the inflation rate ranges from 0-10 per cent to a range of 0-5 per cent, the coefficient is doubled in magnitude and continues to be very important

Gokal and Hanif (2004) reviewed various different economic theories to develop a consensus on the relationship between inflation and growth in the Fijian economy. Its results show that there is a negative correlation between inflation and growth, while the change in the product gap has a significant influence. The causality between the two variables was unidirectional, from the growth of the PIB until inflation.

Sweidan (2004) examines the relationship between inflation and economic growth for the Jordanian economy and finds a structural quiet point at an inflation level of 2 percent.

Another theme that the study includes is proving the effect of inflationary uncertainty on the growth and evolution of the economy. The result implies that the effects of inflation on growth are stronger in comparison with the effects of uncertainty and the variability of inflation. Moderate inflation is good for growth and faster economic growth affects inflation. Thus, the authors recommend moderate inflation for growth in the economies of Bangladesh, India, Pakistan and Sri Lanka.

Khan and Senhadji (2001) examine the threshold effects of inflation on growth separately for industrial and developing countries. The data set covers 140 countries from both groups using non-linear least squares (NLLS) and conditional least squares methods. The empirical results verify the existence of a threshold above which inflation has a negative effect on growth. Significant thresholds have been found at inflation levels of 1 to 3% and 11 to 12% for developed and developing countries. This study strongly supports the view of low inflation for sustainable growth. Ahmed and Mortaza (2005) explore the relationship between real GDP and CPI and find a threshold at the 6% inflation level for the Bangladeshi economy. Empirical evidence shows that there is a statistically significant long-term negative relationship between these two variables.

Mubarik (2005) estimates the inflation threshold level in Pakistan using annual data for the period 1973 to 2000. The empirical findings of his study suggest an inflation threshold level of 9% for the Pakistani economy, above of which inflation is very unfavorable for economic growth. . The study follows the work of Khan and Senhadji (2001) in which they calculate the threshold level for both developing economies, including Pakistan, and developed economies. They use panel data for 140 developing and developed economies for the period 1960 to 1998 and suggest cut-off levels, 1-3% and 7-11%, respectively for both groups of countries

Hussain (2005) does not find a definite threshold level of inflation for Pakistan and only suggests that the inflation range of 4 to 6% is tolerable for the Pakistani economy. This study shows similar results with Singh (2003), who recommends an inflation range of 4 to 7% for India. The researcher contradicts Mubarik (2005) as the 9% threshold for Pakistan appears to be very high. It also follows the methodology used by Khan and Senhadji (2001) and Singh (2003) and advises central bank authorities to keep inflation low and stable, regardless of any threshold level.

Khan and Schimmelpfenning (2006) construct a simple inflation model by taking data from the Pakistani economy for the period January 1998 to June 2005 and find that monetary

factors determine inflation in Pakistan. They examine the long-term relationship between the CPI and private sector credit, and their findings show that there may not be a trade-off between inflation and growth in the short run, but it certainly exists in the medium to long run. Their estimated results suggest a 5% inflation target for sustained economic growth and macroeconomic stability of the economy.

Kemal (2006) finds that an increase in the money supply in the long run becomes the source of inflation and thus tests the quantity theory of money. The findings of Khan and Schimmelpfenning (2006) have also been tested to the effect that over the long run, excess money supply is the main culprit of inflation in Pakistan. This study contradicts Hussain (2005) as his findings imply that inflation in Pakistan is a monetary phenomenon. Munir et al. (2009) analyze the non-linear relationship between the level of inflation and the rate of economic growth for the period 1970-2005 in the Malaysian economy. Using annual data and applying the new endogenous autoregressive threshold (TAR) models proposed by Hansen (2000), they find an existing inflation threshold for Malaysia and test the view that the relationship between the inflation rate and economic growth it is not linear. The estimated threshold regression model suggests 3.89% as the structural breakpoint for inflation above which inflation significantly affects the real GDP growth rate. Furthermore, below the threshold level, there is a statistically significant and positive relationship between the inflation rate and growth.

### **Objectives of the Study**

Taking into account the research presented above, we have classified the following study objectives:

The main objective of this study is to analyze the impact of inflation on GDP growth in Pakistan. It is used to evaluate the trend of GDP growth and evaluate the historical trends of inflation in Pakistan. Determine and examine the feasible threshold level of inflation for GDP growth. It is necessary to explore whether or not inflation in the time series has caused a reduction in the growth of the economy.

To state the policy implications, keeping in view the statistical significance of the estimated results on the inflation-growth relationship and its effects on the Pakistani economy.

### **The Structure and Trends of Inflation and Growth in Pakistan**

Much of the inflation in Pakistan is due to rising food prices. It may be due to lower productivity in the agricultural sector or it may be a result of "assumptions" Shortage of goods and services in the developed economy by the "giants" of the manufacturing sector. Various supply and demand side factors may also be responsible for rising inflation in Pakistan. Inflation could be the result of shocks in the supply of some foods and in global oil markets. Furthermore, the fluctuating price of oil on the world market could also be, owing to the rigid wage and price structure, another cause of the increase in the general price level of almost all other commodities.

Rising import prices have also been seen as an important factor influencing inflation. The depreciation of the exchange rate in this scenario may also put upward pressure on the price level. Similarly, some people have

Blamed excise taxes as the main cause of inflation. The support price of wheat has also been estimated to be a major driver of inflation in Pakistan. Inflation, the result of any factor, hurts the poor the most as more than half of the poor's budget is spent on food. It also redistributes income from fixed income earners to asset owners and high and variable income earners, such as earnings (Hasan et al. 1995 and Khan and Qasim 1996). Excess money supply is the main factor responsible for inflation in the long run, however, at the same time, other factors; including structural problems also affect the rate of inflation (Khan and Schimmelpfennig, 2006). This discussion indicates that inflation and different sectors of the Pakistani economy are interrelated. Inflation can increase the productivity of the economy, but at the same time hyperinflation damages growth in all sectors of the economy.

In this section, we are interested in examining the historical pattern of inflation and the GDP growth rate during the study period. Several severe fluctuations in CPI inflation and GDP growth rate have been observed for the Pakistani economy during the period 1972-73 to 2009-10. No negative GDP growth rate has been observed in any fiscal year, while at the same time we cannot report it as a constant growth rate for the economy.

## **1. Data and Methodology**

are taken from Pakistan Economic Survey (various issues), Ministry of Finance, Fifty Year Economy of Pakistan (SBP) and World Bank. An adequate data source and the construction of variables are necessary not only for empirical analysis but also for research validity. A number of studies regarding inflation and growth studies have been conducted

over the past fifty years to assess the impact of inflation on growth. The OLS estimation technique has been used in most studies to analyze this relationship; while the data sources were mainly based on secondary data. The methodology and variables for the present study were selected taking into account their relative importance on theoretical and empirical grounds. An attempt is also made to include the variables that most determine the level and rate of growth of the Pakistani economy. The choice of variables is consistent with the choice made by other researchers (Sarel 1996, Bruno and Easterly 1996, Ghosh and Phillips 1998, Khan and Senhadji, 2001, Mubarik 2005, Hussain 2005, Li 2006).

## 2. Econometric Specification

To examine the impact of inflation on GDP growth, we specified the following two econometric equations. These equations were estimated using the ordinary least squares (OLS) method. The autocorrelation of regression errors in the equations of these models was tested with the help of Durban Watson's (DW) statistical test. All results have been organized in Table 3

$$GDPG_t = \beta_0 + \beta_1 CIN F_t + \beta_2 OPNS_t + \beta_3 INVG_t + \beta_4 LFPR_t + \beta_5 LPOP M_t + \varepsilon_t \quad (\text{Equation} - 1)$$

$$GDPG_t = \gamma_0 + \gamma_1 CIN F_t + \gamma_2 OPNS_t + \gamma_3 INVG_t + \gamma_4 LFPR_t + \gamma_5 LPOP M_t + \gamma_6 INF7_t + \mu_t \quad (\text{Equation} - 2)$$

Where

$\dot{GDPG}$  = Gross Domestic Product Growth  
 $CINF$  = CPI Inflation  
 $OPNS$  = Trade Openness  
 $INVG$  = Investment Growth Rate

$LFPR$  = Labor Force Participation Rate  
 $LPOP M$  = Log of Population in Millions  
 $INF7$  = Inflation Level  $\leq 7$  Percent as Dummy Variable  
 [1 = Inflation Level  $\leq 7$  Percent, 0 = Otherwise]  
 $\varepsilon_t, \mu_t$  = Error Terms  
 and

$$\beta_2, \beta_3, \beta_4, \gamma_2, \gamma_3, \gamma_4, \gamma_6 > 0$$

$$\beta_0, \beta_1, \beta_5, \gamma_0, \gamma_1, \gamma_5 < 0$$

## 3. Results and Discussions

### i. Elementary Data Analysis

Elemental data analysis plays an important role in understanding the study. It helps the researcher and the viewer prepare their minds for a more detailed explanation of the econometric analysis of the specific model of the study. Table 1 shows that the median



value of GDP growth (GDPG) is 5.17, which is an encouraging indicator for the developing economy of Pakistan. The maximum growth rate was observed at the level of 8.7% and the minimum level remained at 1.2%. The standard deviation is calculated at the level of 1.97 which is a signal that there are fewer deviations from the mean GDP value.

If we look at the CPI inflation values, it has some different outcomes than GDP growth. It has a mean value lower than the median value, indicating that the distribution of CPI inflation is positively skewed; it is also supported by positive measures of asymmetry. These descriptive statistics explain that the distribution of CPI inflation is not symmetrical. The standard deviation, 5.78, of CPI inflation indicates that there is a large dispersion in the data supported by the high value of the kurtosis measure of 6.98, indicating that the distribution of CPI inflation values is leptokurtic. The maximum value reached by CPI inflation is 30 per cent, with a minimum value of 3.0. This shows that the CPI inflation range is having a large dispersion in the data.

*Table 1* Descriptive Statistics of the Variables Regarding GDP Growth and CPI Inflation in Pakistan

	GDPG	CINF	OPNS	INVG	LFPR	LPOPM
<b>Mean</b>	5.17	9.72	0.32	16.23	29.69	4.71
<b>Median</b>	5.16	9.51	0.32	12.81	29.61	4.73
<b>Maximum</b>	8.71	30.00	0.36	56.91	32.81	5.12
<b>Minimum</b>	1.21	3.11	0.24	-3.61	27.51	4.18
<b>Std. Dev.</b>	1.96	5.78	0.02	12.16	1.37	0.27
<b>Skewness</b>	-0.16	1.86	-0.06	1.63	0.62	-0.24
<b>Kurtosis</b>	2.12	6.98	2.67	5.89	3.09	1.82
<b>Jarque-Bera</b>	1.38	46.82	0.18	29.76	2.51	2.58
<b>Probability</b>	0.51	0.00	0.92	0.00	0.27	0.26
<b>Observations</b>	39	39	39	39	39	39

Note: All the calculations are carried out by E-views

Investments in different sectors of the economy increase the development of the economy. It's very important for the economy to revive it. variable data investment growth rate (INVG) shows that the overall investment growth rate holds up 16.34 percent on average. The maximum growth rate of investment in the economy remained at 56.90%. The data also shows that negative investment growth in the economy remained at the level of -3.60%. The standard deviation value is quite high at 12.29% with a positive skewed distribution. The kurtosis measure for this variable shows that the data distribution is leptokurtic.

To see the impact of growth of population over the economy's GDP growth, the variable log of population in millions is used in the model. The descriptive statistics of the data indicate that the population distribution is negatively skewed with extreme values of 4.71 and 5.12. These population proportional change values describe that there is not much variation in population trend. The value of the kurtosis measure of population proportional change shows that the distribution of this variable is platycurtic, having most of the values dispersed around the mean.

## ii. Correlation Matrix of the model

The correlation matrix in Table 2 explains the association of GDP growth (GDPG) with some other desired variables. The estimated results are almost according to expectations of

the study. Our main focus is on GDP in relation to other relevant variables. The results from the time series data indicate that GDP is not correlated to the extreme level with any predicted variable. It means that you are not having perfect or zero correlation with the independent variables of the model.

Table 2 Correlation Matrix of the Variables Regarding GDP Growth and CPI

Variables	GDPG	<u>Inflation in Pakistan</u>				
		CINF	OPNS	INVG	LFPR	LPOPM
<b>GDPG</b>	1.00					
<b>CINF</b>	-0.09	1.00				
<b>OPNS</b>	0.16	-0.15	1.00			
<b>INVG</b>	0.17	0.53	-0.26	1.00		
<b>LFPR</b>	0.05	0.16	-0.52	0.00	1.00	
<b>LPOPM</b>	-0.32	-0.32	0.16	-0.37	0.07	1.00

Note: All the calculations are carried out by E-views

The results describe that there is a weak negative association between GDP and CPI inflation (CINF). This explains why both variables depend on each other in a negative and less sensitive way. Any increase in CPI inflation has an inverse impact on GDP growth. Another negative interdependence was found between GDP and the proportional change in total economy population (LPOPM). The result implies that the level of negative association between PILG and LPOPM is moderate. Indicates that any increase in population will cause a decrease in GDP and vice versa. The rest of the explanatory variables are positively correlated with GDP. Table: 2 shows that openness (OPNS), investment growth rate (INVG) and labor force participation rate (LFPR) are positively associated with GDP. LFPR is weakly correlated with GDP, as the correlation coefficient between these two variables is only 0.07

### iii. Econometric Analysis

The results of the estimated model (Equation 1 and Equation 2) are arranged in Table 3, which explains that our specified model performed quite well in terms of the F statistic. Based on our assumption that all variables are jointly significant, the results describe that our model is highly significant. Although the size of R<sup>2</sup> is moderate in the present model, we simply do not observe the size of R<sup>2</sup>. It is a coefficient of determination that explains how much linear relationship the dependent variable has with the independent variables. The value of R<sup>2</sup> in Equation 1 is 0.33, which explains that 33 percent of the variations in GDP growth are explained by the researched independent variables, while its value is 0.35 in Equation 2. These moderate values of R<sup>2</sup> also show that none of the independent variable is strongly correlated with the GDP growth variable (GDPG). Therefore, there is

no chance of multicollinearity occurring in the model. When considering the DW statistic, its value falls outside the rejection region/critical region. In this case, the DW statistic has a value within the acceptance range. Thus, we can accept the null hypothesis that autocorrelation is absent from the regression errors.

Now, as regards the trend of the single regression coefficients, we find that the estimated coefficients are in agreement with the theory. The negative intercept in the GDP growth function indicates that controlling for all independent variables in the model, as the level of CPI inflation increases; has a negative impact on GDP growth as predicted by theories. Our estimated model shows that setting these independent variables to zero will hurt GDP growth. Analyzing the regression coefficients individually, the results indicate that the CPI inflation coefficient is negative and significant at the 5% level. This shows that a percentage increase in CPI inflation will cause an approximately 0.13 percentage point decrease in the economy's GDP growth.

*Table 3 Parameter Estimates of Estimated GDP Growth Model (Dependent Variable is GDP Growth Rate)*

Independent Variables	Equation (1)	Equation (2)
Intercept	-9.053 (-0.842)	-13.07 (-1.125)
CPI Inflation (CINF)	-0.131 (-2.151)**	-0.098 (-1.434)
Trade Openness (OPNS)	33.841 (2.663)*	37.722 (2.828)*
Investment Growth (INVG)	0.058 (1.981)**	0.055 (2.112)**
Labor Force Participation Rate (LFPR)	0.578 (2.258)**	0.559 (2.425)**
Log of Population in Millions (LPOPM)	-2.774 (-2.472)*	-2.726 (-2.412)*
Dummy Variable for Inflation $\leq$ 7 Percent (INF7)	-----	0.664
R-Squared	0.332	0.34
Adjusted R-Squared	0.21	0.221
D W Statistic	1.96	1.93
Sample Size	39	39

Note: The t-Statistics (in Parenthesis) significant at 1% and 5% levels are indicated by \*, \*\* respectively. All the estimations are carried out by E-views 3.1 (Quantitative Micro Software).

Therefore, we accept the null hypothesis that CPI inflation has a negative impact on GDP growth. This result supports the results estimated by Fischer (1979), Gosh and Phillips (1998)

and Faria and Carneiro (2001), while Sidrauski (1967) and Malik and Chowdhury (2001) estimated the opposite result for these two variables.

Trade openness plays an important role in boosting GDP growth, as suggested in our analysis. The variable openness to trade ratio (OPNS) reveals the fact that it has a significant positive impact on GDP. The coefficient is significant at the 1% level, so we accept the hypothesis that an increase in trade openness increases GDP growth. The trade openness coefficient is high, indicating that a 1% change in trade openness will generate positive changes of 33.2% in GDP growth. This result reconciles with Gosh and Phillips (1998). As for the investment growth variable (INVG), its coefficient has a very low and significant value at the level of 5%. The investment growth rate coefficient indicates that GDP is less sensitive to changes in investment growth but has a positive impact on GDP. Mubarik (2005) has also estimated similar results for investment growth. A 100% change in investment growth generates only a 5.9% change in GDP. The labor force participation rate (LFPR) has a higher sensitivity than the investment growth rate; both variables have the same level of significance. The LFPR coefficient explains that a change of about 10% in the labor force participation rate has a positive impact of about 5.8% on GDP growth. Another explanatory variable, the logarithm of population in millions, is included in the model to see its impact on GDP. This variable resulted in a highly significant result in the model as expected. In the study, the logarithm of the population in millions was taken only to scale the variable. The result explains that the population level in Pakistan has a very significant and sensitive relationship with the GDP. A rough 1 percentage point increase in population decreases GDP growth by 2.77 percentage points. This result is also significant at the 1% level. This result is consistent with Sarel (1996) and contradicts Mubarik (2005) and Hussain (2005). Now another explanatory variable (INF7) is introduced into the model (Equation 2) to analyze the impact of inflation on economic growth. To find an optimal and feasible inflation floor for growth, we took this inflation dummy below or equal to 7% inflation levels. The positive impact of this variable on GDP growth is assumed. It is also assumed that the sum of the squared residuals of this inflation level is minimized in this estimated equation. INF7 is a dummy variable that sets the condition '1' for inflation below or equal to the 7% level and '0' for the condition where inflation in the economy exceeds the 7% level.

The results of econometric equation 2 are described in Table 3, implying that all other explanatory variables respond in the same way as in equation 1, except CINF. We view this level of inflation as a threshold for the economy, our results reveal that up to a certain level (7% in this model), inflation increases GDP growth in the economy. This result is statistically insignificant but the positive coefficient shows its positive association with GDP. The R2 value

also increased from 0.33 to 0.34, but the negative impact of CINF was not significant across all time series.

### **Conclusion and Policy Recommendations**

This study was an attempt to examine the inflationary situation in Pakistan with special emphasis on its impact on GDP growth. The second objective is to re-examine the existence of an inflation-growth relationship in the Pakistani economy. We focus on the fundamental question of whether the negative relationship between inflation and growth exists in the economy or whether the situation is different. This study uses simple descriptive statistics and regression analysis to accomplish the task.

The results of the study are evidence to conclude that an offset between inflation and GDP growth has been found for the time-series data studied. Inflation in the Pakistani economy is detrimental to GDP growth. This statistically significant result indicates that the persistent increase in the general price level harms economic growth. The study also finds the feasible threshold level of inflation that slows down GDP growth. This threshold was found at the 7 percent inflation level. Inflation below this level has a positive impact on economic growth. But after this level, it seriously harms the growth of Pakistani economy.

Based on this study, it can be recommended to keep inflation below the 7% level in the economy. Therefore, policymakers and the State Bank of Pakistan should focus on those options that keep the inflation rate stable and below the level deemed useful for achieving sustainable economic growth. Moderate and stable inflation is also helpful in minimizing fluctuations and uncertainties in the financial sector of the economy, which in turn, stimulates capital formation activities in the country. So that it can exert its positive effects on the economy. Therefore, maintaining price stability will ultimately be the best policy recommendation to achieve stable and sustained economic growth of the economy.

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