

Impact of Inflation and Unemployment on Economic Growth of Pakistan

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ABSTRACT

This paper aims to identify the influence of inflation and unemployment on the economic growth of the country. This study recommends some essential policies about unemployment and inflation in the economic growth of Pakistan. In this study, the “Ordinary Least Square (OLS)” method is used with different diagnostic tests for determining the fitness of data for the investigation; and the data is collected from 1980 to 2018. The econometric results suggest that the time series is stationary because the values of t-statistic are more than t-tab and sig value is also significant. The error term on ADF is significant and that ensures that there is long term association. The results of ECM indicate that inflation and unemployment are away from the value of equilibrium. The results of multiple linear regression models indicate that inflation and unemployment are statistically insignificant, and the overall model is also statistically insignificant. There is no multicollinearity and there is no heteroscedasticity as per White test. By running the Ramsay Reset test, the researcher concludes that the model is not specified because the sig value of the t-test and f-test is significant.

Keywords: Economic growth, Gross Domestic Product, Inflation, Unemployment.

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I. INTRODUCTION

The Gross Domestic Product (GDP) is the worth of all the goods and services that are formed in a country for one year. Unemployment means that the people are interested in getting a job, but they are not able to get it. As per the “International Labor Organization (ILO)”, the meaning of unemployment is that the people are looking for a job for last four weeks but are not able to find work. The enhancement in the level of pricing of different goods and services in a particular period is called inflation. Generally, there are two kinds of inflation that include demand-pull and cost pull inflation. When the accumulated demand of different goods and services is more than the accumulated supply, it is called demand-pull inflation and when the inputs cost such as raw material accelerates, then it is known as cost pull inflation. Inflation and unemployment are variables of macroeconomics that are essential for the growth of the country. It is stated that developing nations wish to accomplish a greater rate of monetary growth in the least time. These nations obtain progressive technologies from developed nations but accept inappropriate policies for accomplishing higher economic growth, which results in unemployment [13].

Inflation and unemployment are two complex concepts. There have been a lot of economists who have made efforts to interpret the association between unemployment and inflation. It is perceived that two probable clarifications of this association are long term and short term [10]. In short term association, there is an opposite association concerning

two variables. This association can be explained better through the Phillips curve. This curve occurs in the short term occurs to be a decreasing curve. In the long term, inflation and unemployment are not related. On the other hand, Keynesians consider inflation as an outcome of a money supply that increases with time. They deal with different established calamities that are faced by people when the prices of firms tend to increase. The firms make profits by enhancing the prices of goods and the government also increases money supply for meeting the demand that helps the economy to function properly.

Most of the studies related to econometrics have used the “ordinary least squares (OLS)” method that is a kind of method used for the approximation of unidentified parameters in a model of linear regression. OLS selects the parameters based on linear function for the setting of explanatory variables based on the principle of least squares and minimizes the differences of the sum of squares between the detected dependent variable in a dataset that is foreseen by a linear function.

It is examined that different developing nations have implemented capital intensive policies, and these types of policies cannot be useful in making a competitive market [13]. The distortion in these policies is the primary reason for failure for achieving higher economic growth. Further, it is stated that the performance of Pakistan was not steady from 1947 due to weak governmental policies. From 1960 to 1970, the growth of Pakistan economic-wise was very rousing from 1960 to 1970 with the figures of 6.7% and 6.1% respectively. In the initial years of 1970, Pakistan was facing the unemployment rate of 0.52%, but in the year 2000, it was

enhanced significantly to 3.41%. This paper has used the data of the time series of 35-years starting from 1980 to 2015 for estimating the influence of unemployment and inflation on the growth of the country [13]. In this paper, the economic model used is “Cobb-Douglas Production Function” considering economic growth as the dependent variable and unemployment and inflation as independent variables. In an econometric model, the researcher has used the “Augmented Dickey-Fuller test (ADF)” for the stationary, co-integration test, error correction.

A. Objectives of the Study

The following are the research objectives of the study:

- to identify the influence of unemployment on the economic growth of the country;
- to identify the influence of inflation on the economic growth of the country;
- to recommend some essential policy about unemployment and inflation in the economic growth of the country.

B. Scope of the Study

Inflation enhances the pricing level of a country and creates more financial issues in increasing the commodity and service prices and some other factors [11]. It is identified that inflation is the main reason that raises the level of price of various commodities. The part of inflation in the economy is based on the reason for the decline in the money's value. Inflation has created a lot of problems in increasing the level of pricing and decreasing the value of money. With time, the increase in inflation's value has to be evaluated concerning the unemployment for determining the phenomenon of association statistically. This research has evaluated the transforming role of inflation with time in the economy and its association with unemployment.

II. LITERATURE REVIEW

There has been prior work done on international and national levels for the estimation of the impact of inflation and unemployment on the growth of the country. This section discusses the literature review by focusing on the theoretical framework and empirical framework.

It is examined the impact of unemployment and inflation on the country's evaluation. The researchers used the “Gallup world poll data” which included the data from different countries. The data included 70,000 individuations in seventy-five nations. Initially, in that study, the researchers used “Ordinary Least Square (OLS) method” based on the personal characteristics and the outcomes of the study demonstrated that the country or personal satisfaction was not demonstrated by personal characteristics. Then, the researchers tested OLS on the country level and those results exhibited the effect of well-being from a 1% alteration in either unemployment or inflation. The overall outcomes of this research demonstrated that unemployment and inflation adversely affect personal valuation [4].

The author conducted the “Multivariate Time Series Analysis” through the correlation between the employment rate and inflation rate with GDP. The researchers used time-series data from the year 1982 to the year 2006 of Malaysia

and used different econometric methods for the estimation like Co-Integration Test, Unit Root Tests, and Granger Causality Test. The results demonstrated that by conducting a test of unit root, all the variables were stationary on the first difference. Johansen Co-integration showed that the explanatory variables and GDP went carefully for achieving the equilibrium of the long run. The overall outcomes depicted that unemployment and inflation were unidirectional with GDP in the short run [13].

It is identified the influence of inflation on the development and growth in the economy of Nigeria. The researchers used the data of time series starting from the year 1970 to the year 2010 from “Central Bank of Nigeria”. The researchers used the test of Granger Causality and test of Unit Root to assess the influence of inflation on financial growth. The findings of a test of Unit root demonstrated that all the variables were stationary on the first difference and the findings of a test of Granger Causality showed that there was the causation of one way flowed from GDP to inflation [15].

It is identified the impact of inflation and unemployment on the pays in the country of Nigeria. The OLS technique primarily used t-statistics to show that unemployment influenced the rate of wage. The test of Durbin-Watson also showed that the model was unauthentic. The results of the test of Unit Root revealed that there was stationary in all the variables at 1%, 5%, and 10%. The results of Granger Causality showed that inflation and unemployment base the rate of wage. These results specified that the causation of one-way not flowed from inflation to rate of wage and flowed from unemployment to wage rate. As per the results, the variable of unemployment had a constructive influence on the rate of wage, but inflation did not have an impact on the rate of wage [8].

It is identified the influence of inflation and unemployment on the GDP of Jordan. The researcher used time-series data from 2000 to 2010. The data was gathered from the database of the global bank. The researcher used the method of linear regression for the estimation of the link between independent and dependent variables. The result indicated that with the rise of inflation by 0.906%, the GDP will also increase by 1%. On the contrary, when the unemployment declines by 0.697%, then GDP enhances by 1%. The findings of the study stated that unemployment and GDP had an adverse relationship, while inflation and GDP had a robust positive association [7].

It is evaluated a clear association between unemployment and the financial growth of Pakistan. The researchers used the data of the time series from the year 1972 to the year 2006. The researchers used the test of Augmented Dicky Fuller (ADF) to assess Unit Root in which all the variables were stationary at first level difference. The researchers then also used “Johansen Co-integration” for the identification of a long-run association between the variables. The co-integration test indicated that the progress of GDP, labor, capital, unemployment, and trade openness had an association that is in the long run. The overall findings suggested that the progress of GDP had an adverse association with unemployment [6].

A. Conceptual Framework

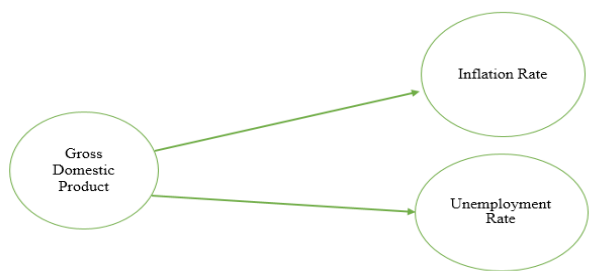


Fig. 1. Conceptual Framework.

B. Hypothesis

The following are the hypothesis of the study:

Ho: Unemployment does not affect the economic growth of Pakistan.

H1: Unemployment has a significant effect on the economic growth of Pakistan.

Ho: Inflation does not affect the economic growth of Pakistan.

H1: Inflation has a significant effect on the economic growth of Pakistan.

III. MATERIALS AND METHODS

A sufficient basis of data and formulation of different variables are essential not only for experimental examination, but they are also important for the researcher’s legitimacy. The current research is based on the experiential relationship of GDP on inflation and unemployment on Pakistan's economy. Based on this purpose, the researcher has obtained data from the website of the “International Monetary Fund (IMF)”. The data was gathered from the period of 1981-2018. The data of thirty-nine years is analyzed because it will give a clear economic position of Pakistan by assessing the key economic indicators that include unemployment rate, inflation, and GDP. In this research, the researcher has used the method of OLS estimation that can be used in different studies for examining the relationship and the data sources were secondary. The variables and methodology of the current study have been obtained considering the relative significance on an empirical and theoretical basis. It also helps the researcher to include those variables that are determined mostly based on growth rate and level of financial growth of Pakistan [2].

IV. RESULTS AND DISCUSSION

A. Descriptive Statistics

In this section of the study, the researcher has run descriptive statistics for checking the normality of data. For checking the normality of data, it is important to assess the values of kurtosis, skewness, and the Jarque-Bera test. The values of skewness of all the three variables are around zero, the figure of kurtosis is around 3, and the figure of Jarque-Bera (JB) is more than 0.10. These values show that the data is normally distributed; hence the hypothesis of no normality is rejected. The estimations of the JB test give a strong justification of zero mean and limited variable covariance ensuring that there is normal distribution in the data.

TABLE I: DESCRIPTIVE STATISTICS

	GDP	Inflation	Unemployment
Mean	4.883077	8.084872	3.919487
Median	4.840000	7.690000	3.980000
Maximum	10.21000	20.29000	7.830000
Minimum	1.010000	2.530000	0.400000
Std. Dev.	2.070722	3.865536	2.142244
Skewness	0.220140	0.746790	-0.005271
Kurtosis	2.768897	3.692181	2.198864
Jarque-Bera	0.401791	4.403582	1.043135
Probability	0.817998	0.110605	0.593589
Sum	190.4400	315.3100	152.8600
Sum Sq. Dev.	162.9398	567.8100	174.3900
Observations	39	39	39

The above table can be expressed with the help of a normal distribution graph:

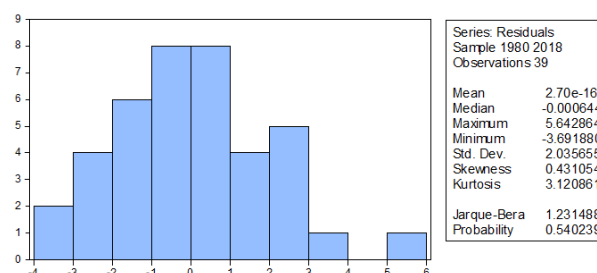


Fig. 2. Normal Distribution Graph.

B. Pair-wise Correlation

The correlation matrix describes the relationship of GDP with inflation and unemployment. The below Table III demonstrates the pair-wise correlation of GDP with inflation and unemployment:

TABLE II: PAIR-WISE CORRELATION

	GDP	Inflation	Unemployment
GDP	1	-0.17	0.11
Inflation	-0.17	1	-0.44
Unemployment	0.11	-0.44	1

Based on the above table, the estimated results are around as per the expectations of the researcher. The results of data of time show that GDP is not associated with a high degree with other variables. The highest correlation values are between inflation and unemployment i.e., 0.44 and these results also indicate that data does not have zero and perfect correlation with other independent variables. The outcomes of the above table also indicate that GDP with inflation and unemployment has weak associations. This means that GDP is dependent on inflation and unemployment but in a less thoughtful manner. The rise in inflation possesses a negative relationship on GDP because of its negative value, whereas the increase in unemployment has a positive association with GDP. The correlation results are strongly supported by the results of the past study in which the association between unemployment and inflation is constructive with the value of 0.477 and the association between rate of unemployment and GDP is also found as weaker with an unimpressive figure of 0.196 [14]. The findings demonstrates that rates of inflation with obtained data are found inconsequentially correlated with unemployment and GDP.

C. Econometrics Results

1) Testing of time series (stationary or non-stationary)

The tools of econometrics are considered as widely cooperative in measuring the monetary occurrences and they also offer a basis for quantitative inquiry based on economic theory. There are several factors of macroeconomics including time trends that make the series non-stationary and that give unpredictable results of the regression. It is identified that the variables of macroeconomics own the problem of the unit root when there is data related to time series [9]. In the study, it was concluded that the appearance and non-appearance of unit root might help the researcher to assess the authenticity of the process of data generation. The data that is stationary and the data that is non-stationary comprise of various elements. The data that is based on stationary time series have provisional tremors that might vanish with time and the series also go back to their mean value that is of long-run. The shocks are considered as permanent in the time-series data that is non-stationary. In this study, for checking whether the data of time series is stationary or non-stationary, the ADF test is used and the outcomes of ADF are shown below:

TABLE III: ADF TEST

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP (-1)	-0.55	0.14	-3.908928	0.0004
C	3.06	1.08	2.832303	0.0076
@TREND ("1980")	-0.02	0.02	-0.893927	0.3775

Based on the above results of ADF, it is examined that by calculating τ statistic of the projected coefficient and compare it with the critical values of ADF, the τ statistic calculated value is more than τ critical value, and also the null hypothesis is rejected. It states that there is a unit root and data is non-stationary. This hypothesis is rejected because t-cal is -3.90 that is greater than t-tab i.e., -3.19 at a 10% level of significance and in this case, the data is stationary. This finding is advocated by the study in which they tested the variables of the inflation rate, unemployment rate, and interest rate of Pakistan from the year 1974 to the year 2013. In that study, the data was stationary as well that strongly supports the results of this study [1]. The results of ADF can be explained with the help of the below chart that indicates that there is no trend among the variables and there is no persistence in the dataset. The graph is moving upward and downward direction that shows the time series data is stationary.

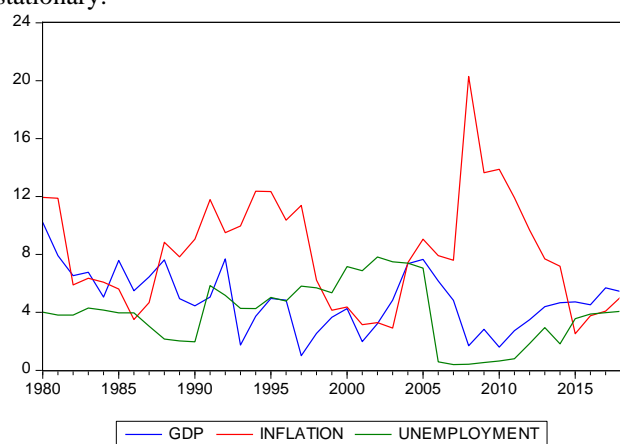


Fig. 3. Stationary Time-series Graph.

2) Co-integration test

At times, there is an exclusive situation where the regression is not considered as spurious in the non-stationary time series, and that situation is known as co-integration. If there is more than one time series that have stochastic movements, then the regression of those time series might withdraw those stochastic trends and recommend that there is an association that is long-term between the variables. For assessing whether the time series is co-integrated or not, the researcher has conducted an ADF test on the error term. The results of the test of ADF on error term are shown below:

TABLE IV: CO-INTEGRATION TEST

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.087662	0.0138
Test critical values:		
1% level	-4.219126	
5% level	-3.533083	
10% level	-3.198312	

The test of unit root on residuals indicates that the residuals are integrated at lag zero. It shows that there is a stochastic trend, but it also shows that there is a linear amalgamation that abandons stochastic movements in the time series. It concludes that the two constructs are co-integrated and possess long-run association.

3) Error Correction Model (ECM)

ECM was renowned by the “Engle and Granger test”. There is a key theorem that is regarded as the theorem of Granger representation that explains that if there are two constructs that are co-integrated, then the association between those constructs is stated as ECM [12]. ECM has a lot of benefits, initially, it integrates short as well as long-run impacts showing that apprehensive constructs are co-integrated. Moreover, if there is co-integration, it means in the model all the terms are stationary and the regression tool is effective. The results of the ECM are shown below:

TABLE V: ERROR CORRECTION MODEL

Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	0.09	0.277	0.326963	0.7458
D (Inflation)	0.06	0.08	0.764456	0.4500
D (Unemployment)	0.02	0.20	0.132701	0.8952
ERR (-1)	0.60	0.19	-3.173509	0.0033

The above table demonstrates that there is a presence of an association between inflation, unemployment, and GDP in the short-run. The estimated coefficient of ECM is significant at a 10% significance level and also possesses a minus sign. This indicates that inflation and unemployment are away from the value of equilibrium. The term error-correction is -0.60 that indicates that 60% of the modifications are taken place towards short-run equilibrium. It signifies that there are changes in the growth rates of Pakistan within one year.

4) Multiple Linear Regression (MLR) Model

The method of “Ordinary Least Square (OLS)” does not reduce the total of the error term, but it reduces the error sum of squares. For getting the value of regression coefficients, the derivatives are taken into account the regression coefficients that are equal to zero. MLR is a statistical method that practices different explanatory constructs for the prediction of the outcome of a response construct. The MLR is used in this study because there are two independent

variables i.e., inflation and unemployment and one dependent variable i.e., GDP. The outcomes of “multiple linear regression model” are depicted in the following table:

TABLE VI: MULTIPLE LINEAR REGRESSION MODEL

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.36	1.30	4.113739	0.0002
Inflation	-0.08	0.09	-0.849538	0.4012
Unemployment	0.04	0.17	0.277616	0.7829

In the above table of OLS, while running the regression model the researcher came up with the following regression equation.

$$Y = 5.36 - 0.08(X1) + 0.04(X2) + \mu$$

where,

Y= Gross Domestic Product;

X1 = Inflation;

X2 = Unemployment;

μ = Error term.

In the above model, the value of R-square is 0.33 that shows the explanatory power of the model is 33%. The value of R-square also indicates that 33% of the variation in GDP is caused by variation in inflation and unemployment rate. All the variables are insignificant because all the t-values are greater than the 10% significance level. The f-value is also 0.54 which is more than 10% level of significance that indicates the model is insignificant and also a figure of f-statistic is 0.62 that is less than 4. The intercept indicates that if there is no inflation and unemployment, the value of GDP is 5.36%. The value of X1 indicates that if inflation increases by 1% then GDP will decrease by 0.08%, keeping other things constant. The value of X2 indicates that if the value of unemployment accelerates by 1%, then GDP will increase by 0.04%, keeping other things constant.

5) Assessment of the bi-directional relationship

The test of Granger causality is based on the hypothesis that determines whether the time series is beneficial in forecasting or not. “The Granger Test for causality” is based on the technique that seeks the route of causality among constructs. The outcomes of the test of Granger causality are demonstrated in the below table:

TABLE VII: GRANGER CAUSALITY TEST

Null Hypothesis:	Obs	F-Statistic	Prob.
INFLATION does not Granger Cause GDP	37	2.95918	0.0662
GDP does not Granger Cause INFLATION		0.07146	0.9312
UNEMPLOYMENT does not Granger Cause GDP	37	1.27579	0.2930
GDP does not Granger Cause UNEMPLOYMENT		2.14588	0.1335

The above table of a test of Granger Causality shows that inflation has a bi-directional association with GDP because the sig value is 0.06 that is less than a 10% significance level, whereas, GDP has no bi-directional relationship. After all, the sig value is 0.93 that is more than 0.10. Moreover, unemployment has no bi-directional relationship with GDP and GDP does not have a bi-directional relationship with unemployment because sig values are 0.29 and 0.13 that is more than a 10% level of significance.

6) Detection of Multicollinearity

The regression model hypothesizes that there should not be any sort of relationship among independent variables, also known as regressors. While running the test of pair-wise correlation the researcher gets the values of 0.44 between GDP and unemployment that suggests that there are very fewer chances of multicollinearity because the correlation between independent variables is at a lower level. Furthermore, in this study, the researcher has examined the detection of multicollinearity through “Variance Inflation Factors (VIF)”. Below table 4 depicts the VIF for detection of multicollinearity:

TABLE VIII: VARIANCE INFLATION FACTORS

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	1.699514	15.15304	NA
Inflation	0.009569	6.819169	1.242197
Unemployment	0.031157	5.509880	1.242197

As per the results of above table, the VIF of above model is 1.24 that explains that no multicollinearity among independent variables. If the value of VIF is around 5 to 6 then multicollinearity is at moderate level and if the value is more than 6, then it shows high level of multicollinearity among regressors. The above results of VIF and pair-wise correlation indicate that independent variables that include inflation and unemployment obtained for this study are free from the problem of multicollinearity.

7) Heteroscedasticity

Heteroscedasticity is another problem of regression model, and it is based on the supposition that variance of error term has to be constant. The presence of heteroscedasticity might create more outliers in the dataset, and it does not make the dataset “Best Unbiased Linear Estimator”. In order to detect heteroscedasticity, the researcher has used BP test and White test without cross terms. The results of both tests are depicted below:

TABLE IX: BREUSCH-PAGAN GODFREY TEST

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	3.331925	Prob. F (2,36)	0.0470
Obs*R-squared	6.091578	Prob. Chi-Square (2)	0.0476
Scaled explained SS	5.504118	Prob. Chi-Square (2)	0.0638

TABLE X: WHITE TEST

Heteroskedasticity Test: White			
F-statistic	1.957355	Prob. F (2,36)	0.1560
Obs*R-squared	3.824999	Prob. Chi-Square (2)	0.1477
Scaled explained SS	3.456123	Prob. Chi-Square (2)	0.1776

The results of BP test indicate that there is a problem of heteroscedasticity because F-value is significant i.e., 0.04 less than the level of significance of 10%. For counter checking the results of BP test, the researcher runs White test without cross-terms and got insignificant F-value of 0.15 that is more than 10% significance level. As per [5], the White test is more general and more flexible as compared to BP test, hence the researcher has concluded the results of White test and has stated that there is no heteroscedasticity in the dataset. Furthermore, for making sure that the results of White test are valid, the researcher runs the test of GLS that is a remedial measure of heteroscedasticity. After running GLS, the results of White test became statistically significant

that further confirms that there is no heteroscedasticity in the dataset. The results of heteroscedasticity of this study are strongly supported by the study of [1] in which the estimates of diagnostic tests on unemployment rate, inflation rate, and interest rate indicate non-existence of problem of heteroscedasticity.

8) Autocorrelation

Autocorrelation is another supposition of regression model is the covariance between error term and in autocorrelation standard errors are under-estimated. In this study, for detection of autocorrelation, the researcher has used Dubin-Watson (DW) test and serial correlation LM test. The figure of the DW test lies from 0 to 4 and if the value is around 0, it means positive autocorrelation and if the value is around 4, it means negative autocorrelation. On the other hand, in LM test if the results are significant, it means there is a problem of autocorrelation. The outcomes of the serial correlation LM test are shown below:

TABLE XI: SERIAL CORRELATION LM TEST

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	5.626830	Prob. F (2,34)	0.0077
Obs*R-squared	9.698503	Prob. Chi-Square (2)	0.0078

The above table indicates that this model has a problem with autocorrelation because f-value is 0.007 that is less than a 10% significance level. The author used DW test as well to detect autocorrelation. The outcomes of DW test are mentioned below:

TABLE XII: DUBIN WATSON TEST

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D (Inflation)	-0.089255	0.096136	-0.928420	0.3594
D (Unemployment)	0.208116	0.220392	0.944300	0.3513

In the above table of DW test, the value is 2.47 shows no autocorrelation. The rule of thumb for DW test is if the value exists from 1.5 to 2.5, it lies under indecision zone and confirms that there is no autocorrelation. As the values of f-value in LM test suggest that there is auto-correlation and the DW test suggests that there is no autocorrelation, the researcher has conducted a remedial measure of autocorrelation i.e., generalized transformation. The following table depicts the generalized transformation that is the remedial measure of autocorrelation:

TABLE XIII: GENERALIZED TRANSFORMATION TEST

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.165015	0.868508	4.795597	0.0000
Inflation-0.25*Inflation (-1)	-0.127859	0.087783	-1.456533	0.1542
Unemployment-0.25*Unemployment (-1)	0.041011	0.163868	0.250269	0.8038

Now, after running a generalized transformation test, the researcher further conducted a diagnostic test i.e., LM test. If the value of LM test becomes insignificant it means the problem of autocorrelation has been removed. The results of LM test after generalized transformation are depicted below:

TABLE XIV: SERIAL CORRELATION LM TEST

F-statistic	0.818213	Prob. F (2,33)	0.4500
Obs*R-squared	1.795341	Prob. Chi-Square (2)	0.4075

As per the above table, the f-value in LM test is 0.45 that is more than 10% significance level. This value shows that the problem of autocorrelation has been removed from the model. If there is autocorrelation in the regression equation, then it has to be removed otherwise the results of OLS will not be the best Linear Unbiased Estimators.

9) Well-specification of model

It is a supposition of regression model that the model has to be well-specified. It means that there should be no exclusion of omitted variables and no inclusion of irrelevant variables. It also states that probability distribution of error term is well-specified. For assessing that whether the model is well-specified or not, the researcher has used test of Ramsey RESET. The outcomes of Ramsey RESET test are demonstrated in the below table:

TABLE XV: RAMSEY TEST

	Value	df	Probability
t-statistic	2.501799	35	0.0172
F-statistic	6.258998	(1, 35)	0.0172
Likelihood ratio	6.416325	1	0.0113

From the results of above test, it is derived that as the t-values and f-values are significant because they are less than 10% level of significance. Due to significant t-values and f-values, the researcher has concluded that the model is not well-specified. It means that the researcher needs to add more variables to make the model well-specified. Apart from Ramsey RESET test, the researcher can also assess the need of adding other variables and examine whether the model is well-specified or not by comparing R-square but having same dependent variable.

V. DISCUSSION

The experiential results proved that the effect of inflation and unemployment on GDP is statistically insignificant. The outcomes showed that inflation is considered as influential and vibrant occurrence for Pakistan's economy. The inflation has to be regarded as the most essential factor for economies and focus on strategic economic decisions. The outcomes of research show the effect orientation of unemployment and inflation on GDP is at an insignificant level. The findings of prior studies indicated that the role of inflation has powerful occurrence towards unemployment, but it is contradicted at insignificant level. The inflation is occurring as an ongoing phenomenon in every economy and most of the economies, inflation has a robust effect where there is high employment level, discount rates, price level, items of daily usage, expenditure costs, and discount rates. It can be determined that due to economic compasses; inflation can be evaluated with other variables for examining integral conditions in more detail [14]. The hypothesis summary of this study is shown in following table:

TABLE XVI: HYPOTHESIS SUMMARY

Hypothesis	Retain/Reject
Unemployment has no effect on the economic growth of Pakistan.	Retain
Inflation has no effect on the economic growth of Pakistan.	Retain

This study has been proved as compatible with other studies on the effect and impact on influence level [3], but from the point of significance level, it is contradicted with different economic conditions.

VI. RECOMMENDATIONS AND CONCLUSION

A. Policy Recommendations

The outcomes of this research have some policy implications for development partners and policymakers. This research is not consistent with different policy propositions from global agencies. There are some efforts required for reducing inflation to a lower level or to zero and is expected to undesirably influence financial growth. Some attempts are required to achieve quick economic growth that might hurt the economy to a level and makes the rate of inflation unstable. For the Pakistan's Government, there is a real challenge to get rate of growth that is constant with steady rate of inflation and unemployment, rather than reduce the rate of inflation first to achieve quick economic growth. Pakistan is a country that requires inflation for achieving growth and if the growth rate is fast then it might quicken the rate of inflation. Different policymakers around the world have identified that lower rate of inflation might be favorable for enhancing growth performance. Pakistan's government aims to maintain the rate of inflation to one digit or closer to it.

B. Conclusion

In this study, the data was obtained from 1981 to 2018 and the variables that were examined were GDP, unemployment, and inflation. The descriptive statistics results of this study demonstrated that the dataset was almost normally distributed. The econometric results suggested that the time series was stationary because the value of t-statistic was more than t-tab and sig value was also significant. Then, the researcher checked co-integration by running ADF on error term. The error term on ADF was significant and that ensured that there was long term association. The results of ECM indicated that inflation and unemployment were away from the value of equilibrium. The results of multiple linear regression model indicated that inflation and unemployment were statistically insignificant, and the overall model was also insignificant. As per the results of pair-wise correlation, all the variables had lower level of correlation. There was no multicollinearity and there was no heteroscedasticity as per White test. As per "Granger causality test", the inflation had

a bi-directional relationship with GDP, but unemployment did not have bi-directional relationship. As per DW test, there was no autocorrelation but as per LM test, there was a problem of autocorrelation. The researcher used method of generalized transformation to remove autocorrelation. By running Ramsay Reset test, the researcher concluded that the model was not specified because the sig values were significant.

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