

IMPACT OF TAXATION AND INFLATION ON ECONOMIC GROWTH OF PAKISTAN

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Abstract

The objectives of this research paper is to measure the impact of inflation and taxation on economic growth of Pakistan by using the time series data from 1991 to 2017. The data was collected from World Development Indicators, IMF, Asian Development Bank, Pakistan Economic Survey and State Bank of Pakistan database. Economic growth GDP was dependent variables while independent variables include: inflation rate, tax revenue, unemployment Rate, tax on international trade and gross capital formation. ADF test, Auto Regressive Distributed Lag (ARDL), Bound Test and ECM were applied to determined stationarity, long run and short run relationship between variables. The findings reveal that gross fixed capital formation and tax revenue are positively related to GDP growth while unemployment, tax on goods and services, inflation and taxes on international trade have negative impact on GDP growth. We suggest to control tax evasion and expand tax net.

Keywords: Inflation rate; tax revenue; unemployment Rate; international trade; Economic growth

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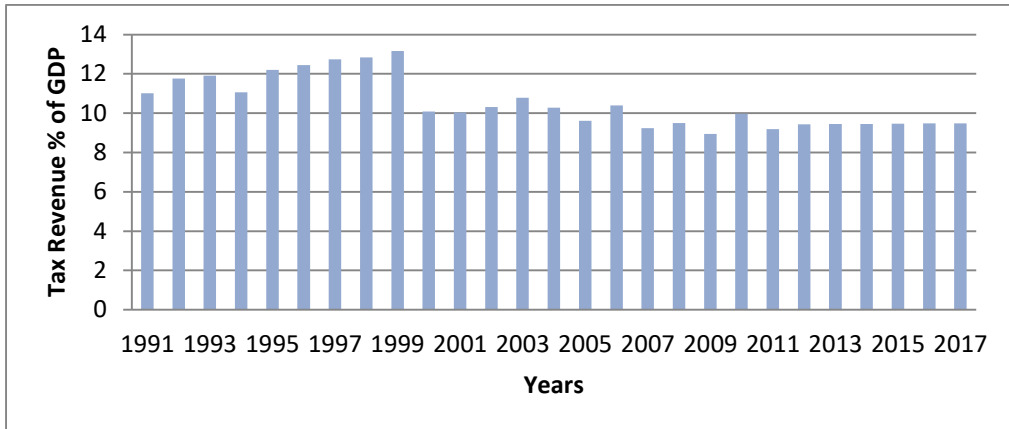
1. Introduction

1.1. Background of study

The role of fiscal policy in controlling inflation rates and increasing tax revenue, reducing public expenditures, and public debt has been addressed extensively by achieving fiscal efficiency over time. This incorporates numerous basic policy issues, including the appropriate size of the state, the government's position in stimulating economic growth, social progress and allocation of economic growth benefits, increasing employment and social equity through better distribution of income and wealth between income classes and ensuring efficiency by promoting economic growth (Padda & Akram, 2009). Government expenditures as the core instrument of economic policy is determined by the need for its finance, where tax receipts are typically the most significant component of state budget revenue (Macek, 2015). Bergstresser & Pontiff (2013) noted that taxation on corporations can reduce the returns on invested capital as well as the company's capital structure or age structure. The negative relationship between corporate tax and FDI was confirmed. The lower tax rate is believed to be a consideration increasing FDI inflows (Drebler et al. (2005); Feld and Heckemeyer (2008)). In relation to globalization and essential aspects of mobility, Martin (2009) examined the effect of the taxation policy on entrepreneurs and its impact on prices. The analysis finds that tax is a major factor in investment decision-making, however, other aspects of investment, such as infrastructure, employee availability, and legislation must also be taken into account by the investor. Figure 1.1 portrays the trends of tax revenue as a percentage of GDP in Pakistan. Tax revenue was highest in year 2016. It can be observed that there

is little fluctuation in tax revenue as a percentage of GDP in Pakistan during the period of 1991-2017.

Figure 1.1: Trends of Tax Revenue as a % of GDP in Pakistan

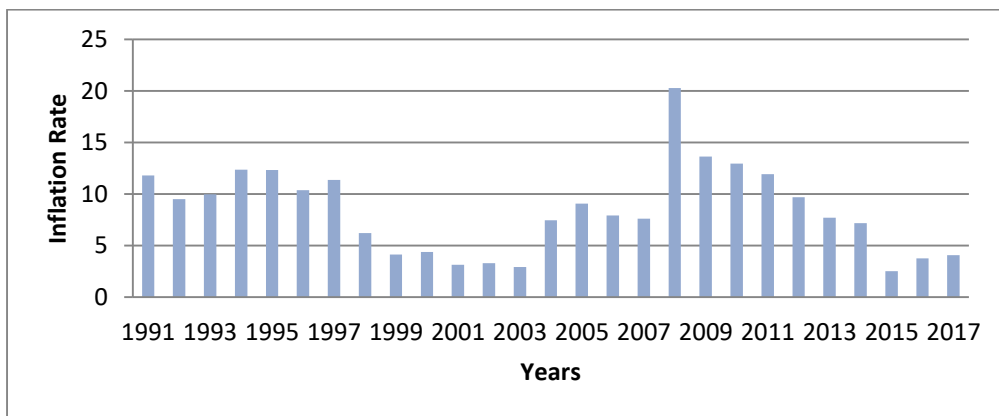


Source: World Development Indicators, 2018

Turning now our attention to the relationship between inflation and economic development, it is noted that the macroeconomic policymaker's core goal is to achieve strong and sustainable economic development with low inflation. For the past few years, thus, inflation has been one of the most studied subjects in macroeconomics, as it has important consequences for the development and distribution of income. Factors determine inflation rates were also widely debated around the world. Inflation is termed "price-pull inflation" by rising aggregate prices while supply shocks are expected to trigger "cost-push inflation." This would have a strong positive association with the production gap. Nevertheless, the relationship between growth and inflation depends on the economic situation. High growth is accomplished if the expected production of the economy raises enough to meet demand without raising inflation. If current production is below potential level (i.e. negative output gaps), it is often possible to meet the market expectation with enough power. Unless real production exceeds potential efficiency, little

excess capacity exists and the economy runs at maximum jobs and more productivity increases at the expense of growing inflation. When demand continues to rise at this point without increasing productive capacity, there is the possibility that the general price level may escalate significantly without more output growth over the long run. The economic effects of this period of high inflation can be severe. High inflation is often associated with higher price level and can create uncertainty regarding potential investment project profitability. This leads to more cautious investment choices than would be the case elsewhere. Ultimately that would contribute to lower investment rates and lower economic growth. Inflation can also affect the balance of payments in a country by making its exports more expensive. Besides, inflation can interact with the tax system to upset borrowing and lending decisions. Therefore, firms may need to devote more income to counter inflationary impacts (Ayyoub et al. 2011). Figure 2 shows the trends of inflation rate based on consumer price index in Pakistan. It shows symmetrical trend. The inflation rate was very high in 2008 and it exceeded 20.0 percent. However, after 2008 it declined till year 2015 but after that it again started to rise.

Figure 2: Trends on Inflation Rate in Pakistan



Source: World Development Indicators, 2018

1.2 Main Research Problem

The main research problem of this study is to analyze the impact of Taxation and Inflation on Economic Growth of Pakistan during the period of 1991-2017.

1.3 Objectives of study

The objectives of this study are stated in the following:

- To study the impact of inflation and taxation on the economic growth in Pakistan
- To study relationship between inflation, taxation and economic growth in Pakistan.
- To make some policy recommendations to enhance the economic growth by increasing tax revenue and reducing inflation.

2. Analysis of relevant studies

Ngwoke (2019) investigated the impact of taxation on the economic growth of Nigeria by using annual time series data of from 2007 to 2017. It was found that gross domestic product was significantly influenced by the petroleum tax. The influence of company income tax was found to be positive and statistically significant on the economic growth. It was recommended that policy makers must focus on the management of taxes efficiently to promote economic growth of the country. Islam (2019) explored the influence of tax revenue on the economic growth in Bangladesh. The linear regression model and co-integration analysis was applied to achieve the goals of the study. The outcomes of this research showed that tax revenue optimistically influenced the economic growth. It was recommended that policymakers design the tax structure that enhances the level of tax revenue and also boosts economic growth of the Bangladesh. Ahmad et al. (2018) explored the influence of indirect taxes on the gross domestic product of Pakistan by using the data from

years 1974 to 2010. The outcomes of the study showed that indirect taxes adversely affected economic growth and this association was statistically significant. The findings showed that as the indirect taxes increases by one percent the level of economic growth declines by 1.68 percent. The authors concluded that indirect taxes should be reduced and the direct taxes be enhanced in order to boost the economic growth of the country. [Khan and Khan \(2018\)](#) examined the association between inflation rate and economic growth in the context of selected Asian countries. The selected Asian countries were Iran, Malaysia, Indonesia, Bangladesh and Pakistan. The data from time span of 1973 to 2016 was utilized. The results of study showed that inflation rate adversely affected the economic growth of selected Asian countries. The study recommended that an effective policy is required to be designed in order to control the inflation rate and conduct activities that boost the economic development and growth in Asian countries. [Gashi et al. \(2018\)](#) determined the influence of tax structure on the Kosovo economic growth by using data from the time period of 2007-2015. It was found that these taxes had a positive and significant impact on the gross domestic product. The type of taxes such as value added tax, tax on profits, dividends and taxes on interest positively influenced the gross domestic product of Kosovo. The influence of withholding tax was found to be negative on economic growth although this affect was statistically insignificant. [Ali et al. \(2018\)](#) estimated relationship between tax revenue and economic growth in Kenya by using the annual time series data from 1980 to 2007. The findings revealed that revenue from tax positively related to the economic growth of Kenya. The authors recommended that management of the tax system to collect tax revenue should be effective so that higher tax revenue can boost the economic growth of Kenya. [Gatawa et al. \(2017\)](#) determined the effect of macroeconomic variables

on economic growth by using t data from 1973 to 2013. The findings of study showed that supply of money directly linked to the economic growth while inflation and interest rates inversely linked to the economic growth of Nigeria. The results of granger causality test suggested that the explanatory variables inflation, supply of money and interest rate does not cause economic growth. [Ehikiyo and Mohammad \(2016\)](#) assessed the impact of inflation and monetary variables on the economic growth of Nigeria by using data from 1985 to 2012. The findings revealed that rate of exchange, money supply, and inflation rate significantly affected the economic growth of Nigeria. On the contrary granger causality results showed that there was unidirectional causality among the variables. The authors recommended that government should manage the money supply, and exchange rate in an efficient manner so that the economic growth of Nigeria may be enhanced. [Macek \(2015\)](#) investigated the influence of taxes on the economic growth of OECD countries by using time series annual data from 2000 to 2011. It was found that income tax and social security contributions were negatively associated with economic growth while relationship between world tax index and economic growth was negative. On the other side, the relationship between property tax and economic growth was also found to be negative but statistically insignificant. It was recommended that OECD countries must reduce the corporate and income taxes to enhance the level of economic growth. [Saqib et al. \(2014\)](#) investigated the impact of taxes on gross domestic product in Pakistan. The annual time series data from 1973 to 2010 was used for analysis. The findings of this analysis showed that tax to GDP ratio was negatively associated with Pakistan's growth. The income tax also has negative effect on the investment. And sales tax also negatively related to the consumption public expenditures. The authors concluded that taxation system in Pakistan required to be reformed to make it

efficient. [Shahid \(2014\)](#) determined the influence of unemployment and inflation on economic growth in Pakistan by using data for the period of 1980 to 2010. The findings of this study revealed that inflation rate inversely impacted the economic growth while unemployment rate also negatively affected the Pakistan's economic growth. It was suggested that, in order to reduce the unemployment rate in Pakistan, self-employment activities should be encouraged while state bank should control inflation rate. [Azeem et al. \(2013\)](#) examined the relationship between tax rate and economic growth in Pakistan by using data from 1975 to 2009. The results of the study showed that tax rate inversely related to economic growth. Health expenditures, exports and capital stock positively associated with the economic growth. The study concluded that tax policy needs to be changed in order to widen tax base in Pakistan. [Atif et al. \(2012\)](#) explored the role of taxation and inflation in affecting the economic growth and investment in Pakistan by using data from 1981 to 2010. The ordinary least square (OLS) method and Johansen co-integration technique were used to analyze the data. The results of this analysis showed that taxes did not significantly influence the economic growth of directly but it affected the economic growth by investment channel. Inflation adversely affected the economic growth of the country. Bank loans have positively affected private investment. The findings also showed that income tax has negative effect on investment as well as economic growth. It was recommended that government of Pakistan must lower the taxes on capital stock and create easiness in provision of bank loans to boost the level of investment and economic growth. [Padda and Akram \(2009\)](#) evaluated the association between tax rates and economic growth in South Asian economies. It was observed that high rate of taxes diminishes the level of output but it has no permanent impact on the output growth rate in the long run. It was also

observed that the influence of change in the tax rates on the economic growth was negative in the short run in the case of Pakistan and India although its influence on the Sri Lanka economic growth was positive in the first year but after that its impact was negative. It was found that the tax rates were low as compared to the developed economies in these Asian economies.

3.Data and Methodology

3.1 Research design

The purpose of this study is to investigate the association between economic growth, taxes on goods and services, and inflation rate by using annual time series data from the period of 1991 to 2017 in Pakistan. The nature of data is time series annual data and it was collected from World Development Indicators, IMF, Pakistan Economic Survey, 2020, Bureau of Statistics, Asian Development Bank and State Bank of Pakistan. In order to investigate or explore relationship among these variables, different tests, methodologies, and techniques were applied. An econometric model was developed for the empirical analysis of data. The Dickey-Fuller and Augmented Dickey-Fuller (ADF) test was applied to check stationarity in data. Correlation Matrix was used to determine degree of association between variables to find the long-run association between variables we use the co-integration test and Bound Test to analyze the relationship among variables. In bound test, F-statistics indicates the outcomes and this technique introduced by the [Pesaran \(2002\)](#). In a bound test, it has two critical values such as lower bound and upper bound. It also has hypothesized which are as follows:

H₀: No co-integration exists between the series

H₁: Co-integration exists between the series

3.2 Variables of the study

In current analysis, we have intended to analyze the effects of taxation and inflation on the gross domestic product (GDP) in Pakistan. The dependent variable used in a study is GDP growth rate while explanatory variables are inflation and taxation and the control variables are unemployment rate, gross capital formation and exports of goods and services.

3.2.1 Description of variables

The detail of these variables is given as follows:

(i) Gross Domestic Product (GDP)

Gross domestic product is the total output of goods and services which are produced by a country in one year. It includes only those things which are produced in the boundary of the country. It is used to compare economic growth among different countries.

(ii) Unemployment rate

Unavailability of paid work is called unemployment. It is the ratio of the labour force which is unemployed. The people who can work and willing to work are included in the labor force. According to the ILO, the age valid for the working labour force is started from 15 and above. Total labor force includes employed and unemployed labor force.

(iii) Gross Capital Formation

It is the rise in the volume of investment, capital stock, and assets that are used to produce more goods and services is called capital formation. It has two types such as gross capital formation and net capital formation. Gross capital formation defines an increase in the physical assets in which disposals and removals are not minuses during the period of measurement. But on the other hand, net capital formation is the net increase in the real assets of the country

without losing its nominal value such as a new build dam, roads, track for train, plant and factory.

(iv) Inflation rate

It indicates the ratio variation in the general price level in the economy. The GDP deflator is used for the inflation measurement. In this analysis there is direct relationship exists between the inflation rate and the nominal GDP. We use inflation in this analysis as a dummy variable either inflation greater than seven percent is harmful to the economy or not.

(v) Exports of goods and services

Exports are the monetary values of goods and services to foreign countries from the domestic country. In this research analysis, there is a positive association exists between GDP and exports of goods and services. The value of exports is expressed in local currency units.

The tax rate is the percentage ratio on which any individual and businesses paid taxes. It is the ratio of income of an individuals and business firms pay in taxes which is compulsory on the residents of the country. The description of variables is given in [Table 1](#).

Table 1: Description of Variables

Variables	Description of Variable	
Dependent Variable		
GDPGR	GDP Growth Rate	Rate
Independent Variables		
UNR	Unemployment rate	Rate
GCF	Gross Capital formation	Percentage of GDP
TAX	Tax on goods and services	Percentage of GDP
INF	Inflation Rate	Rate
TAXIT	Taxes on international trade	Percentage of GDP
TAXR	Tax Revenue	Percentage of GDP

3.4 Analytical techniques

We have used the following analytical techniques to analyze the data and draw the results.

- Descriptive Statistics
- Correlation Analysis
- Unit Root Analysis
- ARDL Approach

4. Empirical Analysis

4.1 Descriptive Statistics

In the descriptive analysis of this study, it is used twenty-seven observations for all the repressors. The descriptive analysis of the selected variables has explained in table 2. In the study, the mean of GDP gross domestic product is 4.19 with possessing of standard deviation 1.84. The gross

domestic product for Pakistan is a maximum of 7.71 and a minimum of 1.01. Similarly, the descriptive statistic of other variables can be observed in [Table 2](#).

Table 2: Descriptive Statistics

Statistic	GDR	TAXGA S	TAXIT	TAXR	GCF	UNR	INFG7
Mean	4.19	32.03	13.18	11.45	15.75	3.25	0.30
Median	4.40	31.90	10.69	10.58	15.66	3.41	0
Maximum	7.71	38.56	27.69	15.22	19.24	6.24	1
Minimum	1.01	27.08	2.19	8.94	12.52	0.40	0
Std. Dev.	1.84	2.41	8.44	2.06	1.85	1.88	0.47
Skewness	0.21	0.63	0.65	0.72	0.07	-0.01	0.89
Kurtosis	2.39	3.72	1.99	1.99	1.92	2.01	1.80
J.B.	0.61	2.36	3.05	3.50	1.33	1.10	5.21

Source: Author's calculations

4.2 Correlation Matrix

The correlation matrix shows the degree of relationship or association between the variable that suggests the relationship between variables either strong or weak. The degree of correlation 1 shows the strong positive relationship between variables. If the value of the degree of correlation is zero

its means that the relationship is variables does not exist. The negative sign with value shows the inverse relationship between variables. GDPGR is positively correlated with TAXGAS, TAXIT, TAXR, GCF, UNR, and negatively correlated with INFL above seven percent. The results of correlation analysis are shown in [Table 3](#).

Table 3: Results of Correlation Analysis

Variables	GDPGR	TAXGAS	TAXIT	TAXR	GCF	UNR	INFL7
GDPGR	1						
TAXGAS	0.10	1					
TAXIT	0.12	-0.46	1				
TAXR	0.14	-0.47	0.87	1			
GCF	0.13	-0.35	0.74	0.49	1		
UNR	0.26	-0.18	0.25	0.26	0.10	1	
INFL7	-			-	-		
	0.12	0.27	0.29	0.13	0.31	0.45	1

Source: Authors' Calculations

4.3 ADF's Unit Root Test

ADF Unit root test is important to find stationarity of variables. Based on the integration order, we accept or reject the null hypothesis of non-stationarity. In our analysis of unit root test, gross domestic product is stationary on intercept and trend of first difference. The variable of unemployment rate is also stationary on intercept and trend of the level. Gross capital formation is also stationary on the level. The inflation rate is stationary on the first difference. A tax on goods and services is also stationary on the

first difference. Thus, the variables are stationers at different levels and we can use ARDL techniques. The results of ADF unit test are given in [Table 4](#).

Table 4: Results of Unit Root Test

Variable	Level				First Difference			
	Intercept		Intercept and Trend		Intercept		Intercept and Trend	
	Cal.	Pro.	Cal.	Pro.	Cal.	Pro.	Cal.	Pro.
GDPGR					6.33979	0		
GCF			-4.3327	0.0109				
INFG 7					-4.12553	0.0039		
TAXGS					-5.77506	0.0001		
UNR			-4.66847	0.0052				
TAXIT			-4.29053	0.012				
TAXR			-6.49753	0.0001				

Source: Author's calculations

4.4. Bound Test

The bound test is applied to confirm long-run association between variables. This test is applied based on the WALD test, F-statistics. If the F-statistics value is greater than the critical value of upper bond value, then the null hypothesis is rejected and there is no co-integration among the variables and accept the alternative hypothesis because co-integration exists between

the variables. In our analysis, the value of the F-statistics is greater than all upper bound values. The results of Bound Test are shown in [Table 5](#).

Table 5: Bound Test Analysis

Test Statistic	Value	K
F-statistic	33.03162	6
Critical Bound Values		
Significance	I0 Bound	I1 Bound
10 percent	2.12	3.23
5 percent	2.45	3.61
2.5 percent	2.75	3.99
1 percent	3.15	4.43

Source: Author's Calculations

4.5 ARDL Approach

To analyze the impact of inflation and taxation on economic growth we used GDP growth as the dependent variable. The independent variables include are the unemployment rate (UNR), gross capital formation (GCF), tax on goods and services (TAXGAS), Inflation rate greater than 7 percent (INF), taxes revenue (TAXR) and taxes on international trade (TAXIT). The ARDL long-run estimates found that gross fixed capital formation and tax revenue are positively related to the GDP growth rate while unemployment rate (UN), tax on goods and services (TAXGAS), Inflation rate greater than seven percent (INF), and taxes on international trade (TAXIT) are negatively related to the economic growth in the long run in Pakistan. These results are shown in [Table 6](#).

Table 6: Impact of Inflation and Taxation on Economic Growth

The dependent variable is GDPGR				
Variables	Coefficient	Std. Error	T-Statistic	P-Value
UNR	-0.95	0.24	-4.56	0.0070
GCF	0.84	0.32	2.56	0.0428
TAXGAS	-0.49	0.15	-3.26	0.0185
INF7	-4.95	1.09	-4.56	0.0038
TAXIT	-0.75	0.17	-4.41	0.0046
TAXR	1.69	0.38	4.34	0.0048

Source: Author's calculations

4.5.1 Interpretation of Results

The unemployment rate has a very important role in the growth of any economy. Labour plays an important role in increasing economic growth rate of any country. But, the unemployment rate badly affects the economy in developing countries due to existence of disguised unemployment. Disguised unemployment means no marginal productivity of labour. Unemployment occurs mostly in developing countries like Pakistan because of overpopulation. In our analysis, there is an indirect relationship between the unemployment rate and gross domestic product (GDP). Gross Capital Formation is the most important factor of production and it is the part of neo classical production function. It has a critical role in improving economic growth rate. According to the classical production function, more capital added to the fixed factor of production the marginal productivity will increase. Gross capital formation has a direct association with the GDP. In our analysis, there is a positive association between gross domestic product and gross capital formation. The estimated value for the gross capital formation is 0.84. It means that the 0.84% will likely to increase in the economic growth rate of

Pakistan due to the one unit increases in capital formation. The results are consistent with the study of (Dladla&Khobai, 2018). Tax on goods and services is the backbone of any economy. It is also the income of the federal government. Different investments and development projects are financed through tax by the government. These taxes reduce the purchasing power of the consumer or households. The high tax rate has negative effects on GDP growth. In our long-run analysis, there is negative association between tax on goods and services and economic growth rate (GDP). The estimated value of tax is -0.49. It means GDP will likely to be decreased by 0.49% if one unit increases in the tax rate. These results of our study are consistent with the results of Engen and Skinner (1996) who found that tax affects the economic growth by declining investment, negatively affecting productivity growth, diminishing in capital marginal productivity, dis-utilizing human capital and affecting labor supply. Inflation is the most important variable that is used in this analysis. In developing countries like Pakistan inflation rate negatively affects GDP growth because our proxy used for GDP is used not in nominal but real term. The long-run results of the ARDL model show the negative association between inflation rate and GDP growth rate. The estimated value of inflation is -4.95. It means If the inflation rate increases one unit it will likely to GDP by 4.95%. These findings are consistent to the studies of (Ayyoub et al. (2011); Faria &Carneiro, (2001); Kasidi & Mwakanemela, (2013); Atif et al. (2012). Tax revenue is also a core variable in our analysis. Tax revenue has significant effect on the economic growth of the economy. If tax revenue rises, then the balance of trade and term of trade will improve. It has a direct link with the economic growth of Pakistan. It means that both variables are moved in the same direction. The estimated coefficient of tax revenue according to our long run results is 1.69. It means if one-unit increases

in tax revenue on international trade it will likely to increase in tax revenue by 1.69 percent. These results are aligned to the results of (Ali et al. 2018; Islam,2019). Tax on international trade is the backbone of any economy. It is also the income of the federal government. Different investments and development projects are financed through taxes by the government. However, these taxes reduce the purchasing power of the consumer or households. The high tax rate has negative association with GDP growth. In our long-run analysis, this there is negative association between tax on goods and services and economic growth rate. The estimated value of tax is -075 which means if one-unit increase in the tax on international trade it will decrease the GDP growth by -0.75% in the long run.

5. Error Correction Model (ECM)

This model is used to determine short run relation between variables. The results of Error Correction Model are given in Table 7.

Table 7: Error Correction Model

Cointegrating Form				
Variable	Coefficient	Std. Error	t-statistic	P-value
D(TAXGAS)	-0.13	0.17	-0.78	0.4633
D(TAXGAS(-1))	0.90	0.13	7.22	0.0004
D(TAXIT)	0.18	0.19	0.91	0.3971
D(TAXR)	0.85	0.22	3.78	0.0091
D(TAXR(-1))	-0.41	0.22	-1.82	0.1179
D(GFCF)	1.09	0.24	4.58	0.0038
D(GFCF(-1))	-0.96	0.36	-2.69	0.0362
D(UNR)	-0.46	0.28	-1.63	0.1549
D(UNR(-1))	-0.62	0.13	-4.73	0.0032

D(INFL7)	-1.10	0.69	-1.59	0.1623
D(INFL7(-1))	3.00	0.92	3.25	0.0174
CointEq(-1)	-1.47	0.17	-8.88	0.0001

Source: Author's calculations

The value of the co-integration equation is -1.47 that shows the speed of adjustment of the variables from short run to long-run at equilibrium level

6. Conclusions

The objectives of this study were to explore the influence of inflation and taxation on economic growth of Pakistan. For this purpose, the time series data from 1991 to 2017 was used. For unit root analysis Augmented Dickey-Fuller ADF test was applied on to check stationarity in the variables. It results show that the variables are stationers at different level and we can use ARDL approach for data analysis. The GDP growth rate was dependent variable while independent variables included in the study were unemployment rate (UN), gross capital formation (GCF), tax on goods and services (TAXGAS), Inflation rate greater than seven percent (INF7), tax revenue (TAXR) and taxes on international trade (TAXIT). Based on the findings of the study it is concluded that inflation rate negatively affects the economic growth in Pakistan so the policymakers should control the inflation rate and keep it at lower levels to enhance economic growth and consumers' purchasing power. Tax revenue is found to be the important factor of economic growth. The government of Pakistan should take steps to widen the tax base to generate extra revenue to finance development projects and meet budgetary gap. We also conclude that international trade is an engine of growth and Pakistan should take policy imitative and provide fiscal incentive to improve exports of goods and services.

7. Policy implications

In the light of above conclusions, we would like to make the following policy recommendations: -

- As we noted in our analysis that inflation rate has negative effect on economic growth. It is, therefore, recommended that the policy makers and Central Bank should take policy measures to keep inflation rate below seven percent. It will create stability in price level and boost employment and purchasing power of the consumers.
- It is found that tax revenue directly linked to the economic growth. To maintain its direct association with growth it is necessary to expand the tax base by increasing number of tax payers and making tax collection system more efficient and less costly.
- Unemployment is assumed to be curse and has drastic effects on economic growth. Proper policy initiative should be taken to increase the employment level in a country by promoting technical education, increasing public spending on development projects and political stability in Pakistan.
- Taxes on goods and services and international trade also had negative effect on economic growth. Policymakers must adopt policies to improve tax collection and reduce tax rates so that international trade also boosts.
- Investment in any economy boosts the economic growth. Investment projects should be increased for this purpose government should create climate that increase the confidence of the investors.

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Contribution of Authors

Both authors jointly carried out this research study and collaborated each other. The author 1 collected data, conducted its statistical analysis. He

prepared initial draft of manuscript. The Author 2 helped Author 1 in selected of title of research, guided in statistical analysis and formatted final draft of manuscript. Both authors carefully read final draft of manuscript and find it fit for publishing. They also following ethical values during this research study.

Reference

Ahmad, S., Sial, H. M., & Ahmad, N. (2018). Indirect taxes and economic growth: An empirical analysis of Pakistan. *Pakistan Journal of Applied Economics*, 28(1), 65-81 [Google Scholar](#).

Ali, A, A., Ali, A, Y, S., & Dalmar, M, S. (2018). The Impact of Tax Revenues on Economic Growth: A Time Series Evidence from Kenya, *Academic Research International*, 9(3), 163-170. [Google Scholar](#)

Anwar, Faiqa, Awan, Abdul Ghafoor (2019) Role of Fiscal policy in employment generation in Pakistan. *Global Journal of Management, Social Sciences and Humanities*, 4 (2). [Google Scholar](#)

Atif, M., Shahab, S., & Mahmood, M. T. (2012). The nexus between economic growth, investment and taxes: Empirical evidence from Pakistan. *Academic Research International*, 3 (2), 530. [Google Scholar](#).

Awan, Abdul Ghafoor, Khan, Rana Ejaz Ali (2014). The Enigma of US productivity slowdown: A theoretical analysis. *American Journal of Trade and Policy*, 1 (1):7-15. [Google Scholar](#)

Awan, Abdul Ghafoor (2016). Wave of Anti-Globalization and Capitalism and its impact on World Economy, *Global Journal of Management and Social Sciences*, 2 (4):1-21. [Google Scholar](#)

Awan, Abdul Ghafoor (2012) Diverging Trends of Human Capital in BRIC countries, *International Journal of Asian Social Science*, 2, (12):2195-2219. [Google Scholar](#)

Awan, Abdul Ghafoor (2015). State Versus Free Market Capitalism: A comparative Analysis, *Journal of Economics and Sustainable Development*, 6 (1): 166-176 [Google Scholar](#)

Awan, Abdul Ghafoor (2015). Analysis of the impact of 2008 financial crisis on the economic, political and health systems and societies of Advanced countries, *Global Journal of Management and Social Sciences*, 1 (1):1-16 [Google Scholar](#)

Awan, Abdul Ghafoor (2012). Human Capital: Driving Force of Economic Growth in Selected Emerging Economies, *Global Disclosure of Economic and Business* 1 (1): 09-30. [Google Scholar](#)

Awan, Abdul Ghafoor, Umair, Afroz (2019). Impact of Globalization on Poverty in Pakistan. *Global Journal of Management, Social Sciences and Humanities*, 5 (4): 624-644. [Goggle Scholar](#)

Awan, Abdul Ghafoor, Wamiq, Sammar (2016). Relationship between environmental awareness and Green Marketing, *Science International*, 28 (3): 2959-2963. [Google Scholar](#)

Awan, Abdul Ghafoor (2013) Relationship between Environment and Sustainable Economic Development: A Theoretical approach to Environmental Problems, *International Journal of Asian Social Sciences*, 3 (3):741-761 [Google Scholar](#)

Ayyoub, M., Chaudhry, I. S., &Farooq, F. (2011). Does Inflation Affect Economic Growth? The case of Pakistan. *Pakistan Journal of Social Sciences (PJSS)*, 31(1) [Google Scholar/ISI](#)

Azeem, M. M., Saqi, M., Mushtaq, K., & Samie, A. (2013). An Empirical Analysis of Tax Rate and Economic Growth Linkages of Pakistan. *Pakistan Journal of Life and Social Sciences*, 11(1), 14-18. [Google Scholar.](#)

Bergstresser, D., & Pontiff, J. (2013). Investment taxation and portfolio performance. *Journal of Public Economics*, 97, 245-257 [Google Scholar/ISI](#)

Dladla, K., &Khobai, H. (2018). The impact of Taxation on Economic Growth. South Africa. *Munich Personal RePEc Archive*. [Google Scholar](#)

Drebler, D. (2012). The impact of Corporate Taxes on Investment-An Explanatory Empirical Analysis for Interested Practitioners. *ZEW-Centre for European Economic Research Discussion Paper*, (12-040)

[Google Scholar](#)

Engen, E. M., & Skinner, J. (1996). *Taxation and economic growth* (No. w5826). *National Bureau of Economic Research*. 49, 617-642

[Google Scholar/ISI](#).

Faria, J. R., &Carneiro, F. G. (2001). Does high inflation affect growth in the long and short run? *Journal of applied economics*, 4(1), 89-105

[Google Scholar](#)

Feld, L. P., &Heckemeyer, J. H. (2011). FDI and taxation: A meta-study. *Journal of economic surveys*, 25 (2), 233-272

[Google Scholar](#)

Gashi, B., Assllani, G., &Boqolli, L. (2018). The Effect of Tax Structure on Economic Growth. *International Journal of Economics and Business Administration*, 6(2), 56-67.

[Google Scholar](#).

Gatawa, N. M., Abdulgafar, A., &Olarinde, M. O. (2017). Impact of money supply and inflation on economic growth in Nigeria (1973-2013). *IOSR Journal of Economics and Finance (IOSR-JEF)*, 8 (3), 26-37.

[Google Scholar](#).

Ihtshamul Haq Padda, & Akram, N. (2009). The impact of tax policies on economic growth: evidence from South-Asian economies. *The Pakistan Development Review*, 961-971

[Google Scholar](#).

Imran, Muhammad, Awan, Abdul Ghafoor (2015). Factors Affecting Food Price Inflation in Pakistan, *ABC Journal of Advanced Research*, 4 (1):74-88. [Google Scholar](#)

Islam, N., (2019). Relationship between tax revenues and economic growth in Bangladesh, *International Journal of Scientific & Engineering Research*. 10 (30), 415-425. [Google Scholar](#).

Kasidi, F., & Mwakanemela, K. (2013). Impact of inflation on economic growth: A case study of Tanzania. *Asian Journal of Empirical Research*, 3 (4), 363-380 [Google Scholar](#)

Kiren, Kausar, Awan, Abdul Ghafoor (2018). The Role of Globalization in employment generation: Evidence from Pakistan, *Global Journal of Management, Social Sciences and Humanities*, 4 (1). [Google Scholar](#)

Khan, M. A., & Khan, A. (2018). Inflation and the economic growth: evidence from Five Asian Countries. *Pakistan Journal of Applied Economics*, 28 (2), 235-252 [Google Scholar](#)

Macek, R. (2015). The impact of taxation on economic growth: case study of OECD countries. *Review of economic perspectives*, 14 (4), 309-328 [Google Scholar](#).

Ngwoke, O. M. (2019). Effect of Taxation on Economic Growth (2007-2017). *European Journal of Accounting, Finance and Investment*, 5(4), 68-82 [Google Scholar](#)

Saeed, Fauzia, Awan, Abdul Ghafoor (2020). Does Technological Advancement really affect economic growth of Pakistan. *Global Journal of Management, Social Sciences and Humanities*, 6 (2) [Google Scholar](#)

Saqib, S., Ali, T., Riaz, M. F., Anwar, S., &Aslam, A. (2014). Taxation effects on economic activity. Pakistan. *Journal of Finance and Economics*, 2(6), 215-219 [Google Scholar.](#)

Shahid, M. (2014). Effect of inflation and unemployment on economic growth Pakistan. *Journal of Economics and sustainable Development*, 5(15), 103-107 [Google scholar](#)
