

Impact of Inflation, Imports and Tax Revenue on Economic Growth of Pakistan: An Empirical Study from 1990-2020

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Abstract

The basic purpose of this research is to find the impact of Inflation, Tax revenue and imports on economic growth of Pakistan by using quantitative research approach. After going through various literatures related to this topic, authors found that mixed results are occurring in different countries due to regional difference and development levels of country. Moreover, authors have analyzed secondary data through using time series data from year 1990-2020. This data is analyzed through using E views version 10 after generating results from Unit root testing and OLS regression. Results showed that the Imports and Inflation have a significantly negative impact on the economic growth in Pakistan whereas, tax revenue has significantly positive impact on economic growth in Pakistan. This research gives the base for policy makers in order to design policies for achieving better economic growth in future.

Keywords: Economic growth, Inflation, imports, Tax, revenue

1. INTRODUCTION

The Biggest debate between policies makers of a country is what steps must be taken for economic development. This question is the epicenter of any state. So the key to answer this question is to know the variables which have to be influenced in certain order which will lead to growth of an economy. In today's era where whole world is globalized, the most important topic of human concern is economic growth. Moreover, economic growth is the biggest debate going on in media for decades (Chizonde, 2016). All of the economists follow the Macroeconomic theory in this regards. Many models have been created through following it such as one model which is of utmost importance is named as Solow model. This model tells that economic growth can be achieved by increasing the physical capital and not his capital or labor (Romer, et al., 1996). While some other economic growth theories also proved that technological advancement is a key to increase economic growth of a country. Furthermore, the growth of an economy is a very dynamic procedure so researches which were performed decades ago won't be relevant or suitable to apply now (Upreti, 2015). Since very minimal work have been done regarding factors which have impact on economic growth in developing countries, specifically in Pakistan. So authors of this research have worked on multiple variables to determine their impact on economic growth in Pakistan with most updated time series data.

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1.1. Problem Statement

The economic growth of any state defines the living standard of its people (Abramovitz et al., 1973). After going through various literatures related to this topic, authors found that mixed results are occurring in different countries due to regional difference and development levels of country. It is very necessary to reconfirm the impact of these variables in context of economic growth of Pakistan.

1.2. Research Gap

Authors have found the research gap by thoroughly going through previous researches done related to topics with different time zones and countries. First of all, the main gap authors have found is that no research is done for time period of last 30 years in Pakistan. Kartkasari (2017), to do further research with more time period because he did research on impact of imports on Economic growth through using data of only 8 years in Indonesia. Secondly, gap which is fulfilled in this paper is the one recommended by Kalas et al., (2017), who did research in African countries and recommended to do further research in Any Asian developing country due to their different behavior because of regional difference. So authors are doing this research in Pakistan which is an Asian developing country and where no latest significant work is done in these regards. Thirdly Ali et al., (2018) recommended to do research on other independent variables impact on economic growth because their research concluded that a part of tax revenue, there is 33 % impact of other variables on economic growth. So authors have performed this research by including Inflation and imports with Tax revenue to see impact on Economic growth. In the last, Authors have found majority literature revealing mixed results regarding all variables (Inflation, tax revenue and imports) indifferent countries. So this paper focuses on reconfirmation of impact of these variables on economic growth of Pakistan.

2. LITERATURE REVIEW

2.1. Inflation

Runganga (2020), results revealed, highly negative impact occurs on economic growth due to inflation. While in Zimbabwe the threshold level of inflation above which the impact is negative is 4%. The authors recommend that policy makers must keep inflation target below 4 % so that Zimbabwe can achieve higher economic growth. Kelikume (2018), The results reveal that high inflation has a very negative and adverse impact on Economic growth of African countries. This research found a threshold level above which inflation gives an adverse impact which is 12.5 percent and 9.4 percent for both type of countries respectively. The authors advised that increased inflation in Africa threw economic growth in downward trajectory. So authorities must make policies to keep inflation under the given threshold level. Nazir (2017), It was concluded that there was a positive relation between inflation and the GDP from 5% to 9%. The hypothesis left with the fact that in order to have a good economic growth and stability, inflation rate between 5 to 9 percent should be the aim for authorities. Madurapperuma (2016), the outcome will be very important for utility functions as it supports such functions in perspective of real money balances and consumption. Abiola et al., (2016), Findings revealed that Uzbekistan, Turkmenistan, Azerbaijan, Kazakhstan and Kyrgyzstan had a close nonlinear relation between the inflation rates and the economic

growth results. Below the threshold level which was 7.9% offered a disruptive negative behavior the inflation rate had a positive impact on the economic growth, however, once the inflation rate came near to or exceeded the set value, the economic growth started to fatally reduce. Authors suggest that in order to acquire sustainability and increase the efficiency of the policy, economic decision makers strictly ensure that the threshold value and inflation rate is carefully enlisted in their calculations. Mohseni and Jouzaryan (2016), results reveal a pattern in the negative effect of inflation on economic growth in the long term phase. The conclusion was set to the need to reduce inflation rates to hence improve economic growth. It should also be noted that the results found were used by numerous authorities in Iran, especially those in charge of social and economic institutes. Erbaykal and Okuyan (2008), the dependent variable was GDP and three independent variables were Inflation, remittances and money supply. The Findings reveal that in long run Inflation has positive relationship with GDP of Bangladesh.

H1: Inflation relate to Economic growth in Pakistan.

2.2. Imports

Turay (2019), final results authors showed that exports have a positive impact on economic growth and imports depicts a negative impact on economic growth so the government should design policies to increase exports and emphasize less on importation. Asfand et al., (2019), after running multiple test they found out that the relationships are non-stationary and imports has a negative relationship gross development product in the long run. Bakari (2017), the result of this study concludes that 1) exports and domestic investment have positive impact on the economic growth and 2) imports have positive impact on economic growth of Egypt. Bakari and Mabrouki (2017), The result of this study concluded that there is no relation between imports, exports and economic growth in Panama. Chaudhry, I. S., and Munir (2010), the findings of the research showed adverse relationship between GDP and Imports but a positive relation between exports and GDP, Somalia's economy is currently dependent on the imports which causes huge trade deficit which is then covered by remittances and international aid so they need to implement export led growth strategy for long run. Kartikasari (2017), findings showed there is a negative impact of imports on economic growth of Indonesia. Bakari and Mabrouki (2017), Results reveal there is a negative relationship between imports and economic growth of Bangladesh. The exports are in deficit as the imports are higher so being a developing country economist and policy makers of Bangladesh should design the policies carefully when it comes to the economic growth.

H2: Import relate to Economic growth in Pakistan.

2.3. Tax Revenue

Ewa et al., (2020), This paper shows that there is a significant positive impact of company income tax, petroleum profit tax and value added tax economic growth of Nigeria. Gashi et al., (2018), the result tells that majority of the taxes have the positive impact on the GDP. The recommendation from this research is that by lowering tax rate, reduction of tax exemption, extending the tax basis and creating such tax structure can have a positive impact on the economic growth of Kosovo. Ali et al., (2018), the result shows that there is a positive significant impact of tax revenue on the economic growth. Egbunike et al., (2018), this

research shows that there is a positive impact of tax revenue on the gross domestic products of Ghana and Nigeria. Khumbuzile and Khobai (2018), the result of this study concludes that there is a negative relation between taxes and economic growth of the South Africa. Bakari and Krit, (2017), Correlation matrix shows that there is a positive and strong relation between tax revenue, corporate income tax and GDP. The model shows that there is a positive impact of social security contribution and tax revenue. Elshani and Ahmeti (2017), the results of this data conclude that personal income tax has the negative effect on the economic growth in the European countries that apply progression taxation.

H3: Import relate to Economic growth in Pakistan.

3. METHODOLOGY

Quantitative approach helps to find the impact or measurements on the basis of information on facts rather than personal observation, analysis or descriptions. (Steckler et al., 1992). The main objective of this research is to find the impact of Inflation, Tax revenue and imports on economic growth of Pakistan by using quantitative research approach. The data used in this research is secondary. By secondary data we mean that it's not self-collected and the people who are analyzing it were not part of collection of data (Adaramola and Dada). The sources of the secondary data used in this research are World Bank indicators and Economic survey of Pakistan. These database websites represent the real-time and official data of country which would be very helpful for authors in order to analyze correct impact of variables on economic growth. Sample size is the number of observations taken from whole population in order to draw calculation towards whole population. In secondary data the sample size depends on number of years of which data is taken under consideration. This research uses time series data from year 1990-2020. So the sample size used in this research is 30 years.

3.1. Research Model

$$EGP = \alpha_0 + \beta_1 IP + \beta_2 TRP + \beta_3 ISP + eit$$

Where.

EGP indicates economic growth of Pakistan

IP Indicates inflation in Pakistan

TRP indicates Tax revenue in Pakistan

ISP indicates imports in Pakistan

eit indicates error.

4. Results and Discussion

4.1. Unit Root Test

When we use time series data in research it is very important to see if the is stationary or not. Majority of times the data is non-stationary because there are huge trends in data. These cycles can also be seen through graphs in Eviews. So first of all the data is converted into stationary form because if it is not done then the researchers would consider the results of regression analysis as over stated. Augmented Dickey-Fuller (ADF) test is applied in unit root till the data becomes stationary. This is done on various levels such as level, first difference and 2nd difference and it is also observed on stages such as trend, trend and intercept. See the table 1.

Table 1: Unit root test results from Eviews

Variable	P Value at 2 nd difference	Decision rule for rejection of null hypothesis p-value less than 0.05
Log Economic growth (Independent variable)	0.0000	Data is stationary
Log Imports (Independent Variable)	0.0004	Data is stationary
Log Inflation (Independent variable)	0.0001	Data is stationary
Log Tax revenue (Independent variable)	0.0023	Data is stationary

Source: Author's Estimation

First of all, authors applied unit root test to examine that if data is stationary or non-stationary. Due to trends involved in the time series data, Data was non-stationary first but after taking log of variables under observation the data became stationary. It is important to ensure that data must be stationary in order to avoid any kind of over-estimation in OLS regression test. So After applying Augmented Dickey-Fuller unit root test we found results that variables economic growth, Inflation, Imports and tax revenue all have p-value less than 0.05 at 2nd difference. As the data is stationary and there is no threat of over-estimation we can apply OLS regression analysis to all variables.

4.2. OLS Regression

The ordinary least squares regression (OLS) is the analytical method which works for the unprocessed information observations and it is also names as linear regression. This method helps in calculating the relationship among dependent variable and not alone independent variable which means multiple independent variables. See the table 2.

Table 2: Regression analysis performed through Eviews

Variable	Beta Value	R-Value	Null hypothesis rejected if P- P-Value is less than 0.05 Value
Log Imports (Independent variable)	-0.420181	0.0075	Null hypothesis rejected (Significant impact)

Log inflation (Independent Variable)	-0.287451	0.453888	0.0091	Null hypothesis rejected (Significant impact)
Log Tax revenue (Independent variable)	0.839907		0.0372	Null hypothesis rejected (Significant impact)

Source: Author's Estimation

After assuring that data is stationary through Unit root testing, Authors examined the impact of independent variables on dependent variable which is Economic growth in Pakistan through the help of OLS Regression. Beta value shows the relation between independent variable and dependent variable. It tells that either the relation is positive or negative. A positive beta value signifies a positive relation while a negative beta value signifies a negative relation whereas, p-value tells us the level of significance. If the p value is less than 0.05 then the impact is significant or vice versa. The R-value determines overall fitness of model in percentage. Results show us that imports and Inflation have a significantly negative impact on the economic growth in Pakistan. The reason for this result is that the beta value is negative while p value is less than 5% which means confidence value is more than 95% whereas, the tax revenue has significantly positive impact on economic growth in Pakistan. The reason for this result is that the beta value is positive while p value is less than 5% which means confidence value is more than 95%.

4.3 Discussion

H1: Tax revenue relate to Economic growth in Pakistan.

The results show us that this Hypothesis is accepted as the beta value of Tax revenue is positive and the p-value is less than 5 % which means that results are significant. These results are in accordance with (Ewa et al., 2020, Gashi et al., 2018, Ali et al., 2018 and Egbunike et al., 2018). The main benefits which a good tax structure provides to a country are allocation of money, stabilization of economy and redistribution. Moreover, different kind of tax categories can be used to increase the overall tax revenue such as direct taxes, Indirect taxes and international trade taxes (Egbunike et al., 2018). These results mean that in order to increase GDP or economic growth of Pakistan we have to maximize the overall Tax Revenue of Pakistan.

H2: Inflation relate to Economic growth in Pakistan.

The results show us that this Hypothesis is accepted as the beta value of Tax revenue is negative and the p-value is less than 5 % which means that results are significant. These results are in accordance with Runganga (2020), Kelikume (2018), Madurapperuma (2016). Too much flexible and increased inflation is dangerous for economic growth; due to this possibility of long term planning is very tough due to unpredictability. This is why private investors are not convinced to invest and they move to markets which have less flexible and low inflation rates. These results mean that in order to increase GDP or economic growth of

Pakistan we have to decrease the level of inflation in Pakistan through decreasing CPI.

H2: Import relate to Economic growth in Pakistan.

The results show us that this Hypothesis is accepted as the beta value of import is negative and the p-value is less than 5 % which means that results are significant. These results are in accordance with (Turay, 2019 and Abdulkadir et al., 2017). In Pakistan more than two third of the GDP is accounted for imports which leads to trade deficit which will ultimately decrease overall economic growth of country (Ali et al., 2017). These results mean that in order to increase GDP or economic growth of Pakistan we have to minimize the overall imports in Pakistan.

5. Conclusion

The basic purpose of this research is to reconfirm the impact of Inflation, Tax revenue and imports on economic growth of Pakistan by using quantitative research approach. The economic growth of any state defines the living standard of its people. After going through various literatures related to this topic, authors found that mixed results are occurring in different countries due to regional difference and development levels of country. Authors have analyzed secondary data through using time series data from year 1990-2020. This data is analyzed through using E views version 10 after generating results from Unit root testing and OLS regression. Results show us that imports and Inflation have a significantly negative impact on the economic growth in Pakistan whereas; the Tax revenue has significantly positive impact on economic growth in Pakistan.

5.1. Policy Implications:

The empirical findings from this study can be considered for future policy making of Pakistan. Officials can use results of this research in order to develop correct policies for achieving better economic growth in the country. All the variables have a very serious impact on economic growth so responsible institutions such as State bank of Pakistan and co must develop policies in synchronization with the results of this research for better economic growth of Pakistan.

5.2. Future Research Direction

Authors recommend researchers who are interested in extending research on this topic to use many other variables which have impact on economic growth such as employment opportunities, foreign investment and exports. Moreover, Authors suggest a bigger sample size of at least 50 years can be useful in carrying out much more meaningful results. A comparative research can be performed with other south Asian countries such as India, Bangladesh and SriLanka.

References

1. Abramovitz, M and David, P. A. (1973). Reinterpreting economic growth: Parables and realities. *The American economic review*, 63(2), 428-439.
2. Ali, A. A., Ali, A. Y. S., and 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.
3. Adaramola, A. O., and Dada, O. (2020). Impact of inflation on economic growth: evidence from Nigeria. *Investment Management & Financial Innovations*, 17(2), 1-13.
4. Abiola, J., and Asiwah, M. (2012). Impact of tax administration on government revenue in a developing economy-a case study of Nigeria. *International Journal of business and social science*, 3(8), 99-113
5. Bakari, S., and Mabrouki, M. (2017). Impact of exports and imports on economic growth: new evidence from Panama. *Journal of Smart Economic Growth*, 2(1), 67-79.
6. Bakari, S., and Krit, M. (2017). The nexus between exports, imports and economic growth: Evidence from Mauritania. *International Journal of Economics and Empirical Research*, 5(1), 10-17.
7. Chaudhry, I. S., and Munir, F. (2010). Determinants of Low Tax Revenue in Pakistan. *Pakistan Journal of Social Sciences (PJSS)*, 30(2), 439-452.
8. Chizonde, B. (2016). The economic determinants of economic growth in Zambia: Do copper. *Munich personal RePEc Archive*. 16(18), 1-76
9. Dladla, K., and Khobai, H. (2018). The impact of taxation on economic growth in south Africa. *Munich personal RePEc Archive*, 15(2), 1-14.
10. Ewa, U. E., Adesola, W. A., and Essien, E. N. (2020). Impact of Tax Revenue on Economic Development in Nigeria. *International Business Research*, 13(6), 1-1.
11. Erbaykal, E., and Okuyan, H. A. (2008). Does inflation depress economic growth? Evidence from Turkey. *International Journal of Finance and Economics*, 13(17), 41-48.
12. Egbunike, F. C., Emudainohwo, O. B., and Gunardi, A. (2018). Tax revenue and economic growth: A study of Nigeria and Ghana. *Signifikan: Jurnal Ilmu Ekonomi*, 7(2), 213-220.
13. Gashi, B., Asllani, G., and Boqolli, L. (2018). The effect of tax structure in economic growth. *International Journal of Economics and Business Administration*, 6(2), 56-67.
14. Kartikasari, D. (2017). The Effect of Export, Import and Investment to Economic Growth of Riau Island Indonesia. *International Journal of Economics and Financial Issues*, 7(4), 663-667.
15. Madurapperuma, W. (2016). Impact of inflation on economic growth in Sri Lanka. *Journal of World Economic Research*, 5(1), 1-7.
16. Mohseni, M., and Jouzaryan, F. (2016). Examining the effects of inflation and unemployment on economic growth in Iran (1996-2012). *Procedia Economics and Finance*, 36, 381-389.
17. Nazir, S., Lohani, S., Tachamo, N., Poudel, D., and Donato, A. (2017). Statin-associated autoimmune myopathy: a systematic review of 100 cases. *JCR: Journal of Clinical Rheumatology*, 23(3), 149-154.
18. Nelson, R. R., and Romer, P. M. (1996). Science, economic growth, and public policy. *Challenge*, 39(1), 9-21.
19. Runganga, R. (2020). Inflation and Economic Growth in Zimbabwe is there Any Inflation Threshold Level? *International Journal of Applied Economics, Finance and Accounting*, 8(1), 1-10.
20. Steckler, A., McLeroy, K. R., Goodman, R. M., Bird, S. T., & McCormick, L. (1992). Toward integrating qualitative and quantitative methods: an introduction, 6(4), 1-8.
21. Turay, M. J. (2019). Relationship between Exports, Imports and Economic Growth in

Sierra Leone. *Journal of Innovation and Social Science Research* ISSN, 2591, 6890.

22. Upreti, P. (2015). Factors affecting economic growth in developing countries. *Major themes in economic*, 17(5), 37-54.