ECONOMIC GROWTH IN PAKISTAN; IMPACT OF FOREIGN AID, TAX REVENUE AND INFLATION

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Abstract

The goal to conduct this study was finding the empirical evidence about the relationship between growth of economy, foreign direct investment, tax revenues and inflation. Data from 1980 to 2018 was analyzed using ADF test for Stationarity, ARDL test for co-integration and ECM to check the short term behavior of the variables. Empirical findings show the positive association of FDI with growth in short run and negative yet insignificant relationship in the long run. Inflation was insignificantly correlated in shorter time span but was effecting economic development significantly and negatively in longer time span. Tax revenues were founded to be having negative correlation with the growth of economy. Study suggests putting less focus on FDI and more on domestic resources and to policy makers to avoid tax and inflation oriented policies.

Keywords: Foreign Direct Investment, Economic Growth, Taxation, Inflation,

Introduction

In an open economy, investment made in the economy from foreigners and investment in foreign from local residents is of much importance. Globalization had made everything possible. There are organizations working internationally to promote the coordination between developed economies and developing countries. Developed countries are providing aids and grants to the developing countries in various sectors. The major goal behind is the economic growth of those economies. However its effectiveness remained questionable. Researchers are still working hard to determine whether foreign aid is actually escalating the economic resilience or is just serving as policy tool to achieve the political goals of aid providing economies.

Gross Domestic Product (GDP) is important signal of resilience of an economy. The monetary value of the production output of the economy is referred as GDP. It is a yardstick to measure the country's economic development; economic situation of an economy can be predicted by looking at the monetary worth of the output produced in that economy. Household's

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consumptions expenditures, investment, Government expenditures and net exports are the important components of an open economy. Higher GDP is representation of higher living standard of people of that economy. GDP of Pakistan was meager in 1980 as compared to 2018. Since then due to dynamic nature of economic world, everything has changed rapidly. Gross Domestic Product of our economy which was $23.69 billion USD in 1980 has been increased to $314.6 billion USD in 2018.

Foreign aid is the financial assistance which one country provides to other either in form of loan, grant, investment or gift. The variables we are taking here as a representative of foreign aid is net inflows of foreign direct investment. Foreign direct investment net inflows can be described as the investment made within the economy by the foreigners or the capital that non-residents invest in the economy. FDI is studied as the major escalating tool of economic development. FDI of Pakistan was reported $319.2 million USD in December 2018 by State Bank of Pakistan (SBP).

Positive relationship between economic growth and foreign investment was favored by various economists however empirical evidence is providing the mixed results about the nature of their relationship. The major problem of such studies was model specification (various things being ignored including advancement in the theory) which received a lot of criticism. So identification of foreign investment as determinant of growth remained varying. Few economists considered it as the major determinant of economic growth while few didn't.

Tax revenues are also considered as important tool to escalate the resilience of an economy as they are the major financer of government spending. Economic theory suggests that economic stability can be achieved by decreasing and increasing the level of taxation. Pakistan with the cooperation of World Bank is trying to enhance the tax to GDP ratio to highest of time 17 percent in fiscal year 2024 and to broaden its tax net to 3.5 million taxpayers. In this era when Pakistan's economic policy is tax oriented, it is important to find out the actual effect of taxation, either it is healing the wounded economy or worsening the situation. Inflation is another important variable to determine the economic growth of the economy. However, there seems like inflation paradox as economic theory suggests that with the increase in inflation there is less unemployment and high economic growth while current figures are opposing the situation where inflation and unemployment are moving in the same direction. So finding out the actual impact of inflation on growth of economy is important.

Rationale of the Study

Distinction of this study is its contribution to the previous findings by taking time series data from 1980- 2018. This era remained centre of attention in the political world due to Afghan Taliban controversy, tensions on borders ,resource allocation to Afghan refugees and terrorism threat with in the country and being the part of CPEC, country received higher capital inflows either in form of aids and investment. An effort has been made through this study to analyze the trend of growth of economy at that time and the impact of factors including Foreign Direct Investment Net inflows (as percentage of GDP), Tax Revenues as % of GDP (TR) and Inflation, GDP deflator (annual %) on it. This study will be of great help for policy makers as it will assist in creation of effective policy tool to enhance the level of economic growth.

Objectives of the Study;

Principal purpose of conducting the analysis is to find out the effect of foreign aid on growth in case of economy of Pakistan. Sub objectives are as follows;

- To check how FDI effect the growth.
- To analyze the effect of Revenues generated through taxation as Percentage of GDP on growth of an economy.
- To find out the change in economic situation due to changes in the overall price level (Inflation).

Literature Review

The existing literature on the subject area is vast. However, almost all studies are pointing in different directions which are why it is difficult to formulate a general theory based on the literature. Few studies are in favor of the role of taxation in bringing economic prosperity while others don't. The same is the case with inflation and FDI. We have discussed a few important studies below.

For four South Asian nations, Mallik and Chowdhury (2001) investigated the connection between growth in GDP and Inflation (Bangladesh, Pakistan, India, and Sri Lanka). Using yearly data gathered from the IMF International Financial Statistics, a comparability analysis of results obtained empirically was procured using the error correction and co-integration models. For all four countries, the researchers discovered proof of a favorable long-term connection between rate of growth of GDP and inflation. Significant feedback was also present between inflation and

the economy's expansion. Their findings have significant policy repercussions. Growth was found to benefit from moderate inflation, whereas rapid economic expansion loops back into inflation. It was determined as a result that these nations were precariously balanced.

The study by Gokal and Hanif (2004) made a solid case for strongly suggested a cutoff point as a point where inflation has a destructive impact on GDP. Their data study of 145 nations indicated that while rates of inflation beyond the specified threshold had a considerable negative impact on GDP, price levels below the threshold had no impact. According to the authors' findings, the threshold was less for industrialized nations than it was for underdeveloped nations (the estimates, depending on the estimating technique, were 1-3 percent and 11–12 percent for advanced and emerging economies, correspondingly).

Mbaku (1993) undertook research to determine how foreign assistance affects the economic growth of Cameroon's economy. A neoclassical production function-based econometric model was created and used to evaluate the hypothesis that economic growth and foreign aid are related. Utilizing the data of annual time-series for the nation for period of 1971 to 1990, the model was evaluated. The findings demonstrated that domestic resources rather than foreign resources are influencing the GDP growth greatly in Cameroon. However, researchers must be aware that their data had measurement issues, the time period was brief, and there was a chance that the calculated coefficients would have specification issues in addition to other issues.

Romer (1993) proposes the theory that small, open economies experience lower inflation. Using yearly time series data for the years 1973 to 2005, Hanif and Batool (2006) investigated this hypothesis for the Pakistani economy. By concentrating on how Pakistan's economy's increased integration with the world's other economies influences inflation, they tried to simulate the behavior of inflation. They discovered that openness has a considerable detrimental influence on the increase of domestic prices while adjusting for all the conventional theoretical causes of inflation. The Romer (1993) assumptions that inflation is lesser in open and small economies were validated by these findings.

Fiji, the Solomon Islands, Papua New Guinea, New Caledonia, and Vanuatu are all part of the Melanesia region, which was the subject of Feeny's 2007 investigation of the efficacy of aid. These nations are of particular interest because they have struggled to develop despite

having access to abundant resources and receiving significant amounts of international help. His article studied how foreign assistance influence agricultural expansion and general growth in GDP of Melanesia. Since the majority population of Melanesia is confined to the rural regions and depended on subsistence farming, the influence on agricultural expansion was crucial. Results from an econometric study of data from 1980 to 2001 showed no proof that foreign aid had an effect on the agriculture industry. However, his article did discover proof that financial assistance received from foreign was beneficially impacting the economic expansion.

The study by Wu and Chiang (2008) used threshold regression techniques created by Caner and Hansen (2004). They analyzed whether various absorptive capabilities has a role in determining how foreign direct investment (FDI) influence the GDP growth of the economy depends on various absorptive capabilities. They talked about the three absorptive capabilities that were employed as threshold factors in the study: beginning GDP, volume of trade and human capital. Based on a representative sample of 62 nations during the years 1975 to 2000, the empirical research demonstrated that FDI alone has an equivocal function in promoting economic growth. They discovered that beginning GDP and human capital are significant determinants in explaining FDI under the threshold regression. When host nations have higher levels of beginning GDP and human capital, FDI is seen to affect growth of GDP significantly and favorably.

Adefeso and Mobolagi (2010) used yearly data from 1970 to 2007 to estimate and analyze the relative impactive of fiscal and monetary policy on development of Nigerian economy. The data was analyzed utilizing the co-integration method and the mechanism of error correction. Their findings demonstrated that the monetary policy impact is far larger than that of fiscal policy, and their conclusion was unaffected by the absence of the degree of openness. They contend that monetary policy should play a bigger role in efforts to stabilize Nigeria's economy.

Mercan et al. have researched the connection between economic progress and tax receipts in the Turkish economy (2010). They used ARDL bounds testing in their survey to investigate the connection between variables and co-integration as well as the short and long-term relationships, and it were found that series tended to move in tandem over the long run. In the longer period, there was existence of significant and favorable correlation between direct and indirect taxes and development of economy. It was discovered that direct taxes had a greater

impact than indirect taxes. The vector error correction model's coefficient was statistically significant and signed negatively in the short-term study. This indicates that the short-term divergence between series that had previously moved toward one another has vanished, and the series has become more closely spaced. Again, it was discovered that both tax types had a positively favorable impact on short-term GDP growth, which was also statistically significant. In addition, it was discovered that indirect taxes had a larger impact than direct taxes in this analysis.

Shahbaz and Rahman (2010) investigated the effects of local financial sector development and foreign capital inflows on GDP growth by using the data metrics of Pakistan. The ARDL bounds testing technique to co-integration and the Error Correction Model (ECM) were used, respectively, for longer period and short term connections, using yearly series of data from the World Bank and the Economic Survey of Pakistan for the years 1971 to 2008. Inflows of foreign capital had a favorable effect on GDP growth, as per the empirical research. They also suggested the expansion of the financial sector and public investment to promote economic growth. Inflation and human capital stock were also discovered to favorably influence economic growth. To enhance the efficiency of the national financial system, their analysis recommended that the Pakistani government implement financial reforms as it will lead to economic growth.

For the years 1981 to 2010, Gudaro et al. (2010) examined how FDI induce change in growth metrics in Pakistan. It studied the historical FDI and CPI trends in Pakistan as well as the GDP growth performance. With the use of multiple regression models, the association between the gross domestic product (GDP), Inflation and FDI was quantified. In their model, the effect variable was GDP, whereas FDI and inflation were treated as cause variables (CPI). The model was generally significant, the data showed, with a strong positive association between FDI and GDP and a significant but negative relationship between GDP and inflation. Policy suggestions were proposed to draw foreign direct investment to Pakistan based on their findings.

In the context of Pakistan, Hussain and Malik (2011) empirically investigated the association between growth in GDP and inflation. The research utilized yearly data for the years 1960 through 2006. They claim that inflation in Pakistan is positively correlated with economic expansion and vice versa. Regarding the issue of uni-directed causation between these 2 factors, it was discovered to exist. In other words, growth was not creating inflation and vice versa. Their

projected threshold model predicted that inflation will begin to slow Pakistan's economic development at a 9 percent threshold (i.e., the structural breakpoint). They contend that Pakistan must have low inflation in order to experience economic growth, as inflation might increase with rapid economic expansion.

Ayub et al. (2011)'s main goal was to reevaluate the presence of an growth-inflation link in the Pakistani economy and to objectively study how inflation affects GDP growth. Additionally, it aimed to determine whether it affects economic expansion in a consistent manner or acts differently at various stages. yearly time series data from 1972–1973 to 2009 were collected, and the Ordinary Least Squares technique was used for analysis (OLS). An economic association between inflation and growth that was both negative and substantial has been discovered in Pakistan. The findings of their analysis demonstrated that, at a certain threshold level, persistent inflation was detrimental to the economy's GDP development. They advised the policymakers as well as the State Bank of Pakistan that inflation should be maintained at constant level and under 7 percent limit based on descriptive and econometric studies. so that it could have its desired influence on the economy's growth.

In the example of Pakistan, Attari and Javed (2013) explored the connection between the rate of inflation, economic growth, and public spending. Government spending was categorized into two parts: current government expenditure and spending on development projects. The annual dataset of the years 1980-2010 were utilized to conduct the research. The link between the variables was examined using econometric procedures such as the Granger- causality test, ARDL, Johansen co-integration, and the Augmented Dickey Fuller (ADF) for analysis of unit root. The findings of using those econometric methods revealed association between the inflation rate, GDP growth, and public expenditures, which implied that government spending produced favorable externalities and links. In the near term, government spending had a greater effect on economic resilience than inflation rate. The findings obtained from the causality test demonstrated a one-way causal connection between the inflation rate and both expansion of economy and government spending.

Hong (2014) took data from 254 Chinese prefecture-level cities. To analyze this dynamic panel data he used GMM and explored the influence of FDI on the Chinese economic growth. He also analyzed other more important determinants of FDI during the time of 1994 to 2010. He

discovered that FDI had a favorable effect on growth. In addition, he also suggested that although trade liberalization does not considerably encourage direct investment by foreigners, other factors like human capital, economies of scale, quality of infrastructure, pay levels, and disparities created due to different regions actively interconnect with FDI and support growth in the Chinese Economy. He asserts that it is possible that FDI has driven away domestic investment, leaving domestic investment and sizable reserves of foreign exchange with the challenge of sensible utilization.

According to Silajdzic and Mehic's (2015) empirical analysis, higher levels of development in the tech sector, as measured by business and government expenditures on R&D, are linked to better growth metrics among the economies in the transition phase. FDI is thought to influence economic development primarily through the dissemination of knowledge. It actually allowed the assessment to clearly state the supporting influence of FDI on the resilience of the economy is connected with increased potential of knowledge and effectiveness of FDI. This was due to how they analyzed direct investment by foreigners in their study (i.e. the proportion of the investment made directly by foreigners in the manufacturing gross value added) and in the interrelated structure they investigated the association between FDI and the pattern of growth of an economy.

In a number of nations, foreign direct investment (FDI) has been connected to economic expansion. Spillovers in productivity at the business level have been highlighted as a crucial component of the mechanism through which FDI promotes economic growth. Additionally, there is proof of productivity spillovers related to FDI in China. However, the empirical question is whether these externalities have been large enough to have an impact on growth overall. To obtain a response, Gunby et al. (2017) used a meta-analysis of the relevant empirical literature. Their key discovery was that, in contrast to what one might predict from a careless accumulation of current figures, the FDI impact on Chinese economic development is substantially smaller. The observed values have been inflated as a result of publication bias and the abundance of calculations based on less desirable research and sample characteristics. The projected influence of FDI on the Chinese Economic trajectory of growth is statistically insignificant after these impacts are taken into consideration. This implies that other factors are more likely to be responsible for the Chinese "economic miracle."

The association between tax income and growth in Nigerian Economy was studied by Edewusi et al. in 2019. The research explored the influence of revenues generated by corporate income tax on economic resilience, determined the effect of value-added taxation on the Nigerian economic trajectory of growth, and assessed the effects of taxation on petroleum profits on that growth. The study's conclusions showed that the value-added tax and firm income taxes both considerably and favorably influence economic growth. The petroleum profit tax was also found to be having a noteworthy and favorable causation influence on economic growth. The research argued that in order to stop actions that undermine the country's tax system's performance, the government should make it more effective.

The Laffer curve depicts a potential correlation between taxes rates and the amounts of revenue that arise. In a research published in 2019, Lin and Jia applied the Computable General Equilibrium (CGE) mechanism to explore the link between rate at which tax is levied (taxation on income of labor directly), revenue of state, and performance of an economy from the Laffer curve perspective. The findings indicated that China's Laffer curve tops out around 40%. At such a time, the government should take the entire tax system into consideration rather than only making modifications to direct taxes while raising the direct tax rate. They contend that China should have a direct tax rate of 35% if it wishes to maximize tax receipts. They performed a number of sensitivity studies and came to the conclusion that the national tax peak always occurs 5–10% before the Laffer curve's peak. Therefore, they strongly advised that tax cuts will benefit both the economy and government income after a nation has arrived at the peak of the Laffer curve.

The fundamental components to bring economic growth which is sustainable to any country are liberalization of trade, exports of IT, FDI, and capital formation since these operate as a lifeline for sustainability. Using yearly panel data from 2013 to 2018, Zaman et al. (2021) analyzed the effects of openness of trade, Exports of IT, FDI, and capital formation on sustained development in an economy with regional interconnectedness of BRI nations. Regional Interconnectedness served as a moderator variable, while the real interest rate, the investment freedom index, the trade freedom index, and inflation served as control factors. Since there were more moment conditions than parameters in the sample, the two-step system GMM approach was used. Their findings revealed that whilst Trade Liberalization and exports of IT have a

negative, minor influence on economic development, FDI and gross capital creation have a considerable beneficial effect. According to the overall findings, trade openness has had little influence on growth in economies where China has invested FDI, perhaps because most developing nations must engage in industrialization and promote export-based growth.

In low-income countries (LICs) and lower-middle-income countries (LMICs) between 2005 and 2019, quality of institutions, public spending, revenue generated through tax, and economic development were all examined by Arvin et al. in 2021. Tax income, money from tariffs on foreign commerce, and revenue from customs and other import charges were all regarded as general revenues. Their findings demonstrated that the quality of institutions, public spending, revenue from taxation, and growth of the economy frequently have short-term endogenous relationships with one another. These outcomes weren't always consistent between samples. But a consistent and reliable finding throughout all datasets was that the three factors were significant contributors to development of economy in longer period. In order to ensure the sustainable long-term growth of the economy, they thus promoted the coordination and collaboration of stronger institutional structures and more efficient fiscal policies (related to taxes and public expenditure).

From existing literature about the relationship between economic development, FDI, Tax revenues and Inflation we found mixed results. We can categories our results into three categories. First one is about the studies which found no evidence about the relationship. Second one is those who favoured relationship among all variables and Third one was advocating the relationship among the few variables.

Methodology

Theoretical Model

Theoretical Model of this study has taken GDP growth (annual %) GDPG as dependent variable while Foreign direct investment, net inflows (% of GDP) FDI, Tax Revenues as percentage of GDP (TR) and Inflation, GDP deflator (annual %) I, as cause variables. This model has been specified to find out to the effectiveness of foreign aid, inflation and fiscal policy tools in case of Pakistan. Function form of our model is given below;

$$GDPG = f (FDI, TR, I)$$

Where,

GDPG = GDP growth (annual %)

FDI = Foreign Direct Investment Net Inflows (% of GDP)

TR = Tax Revenues as Percentage of GDP

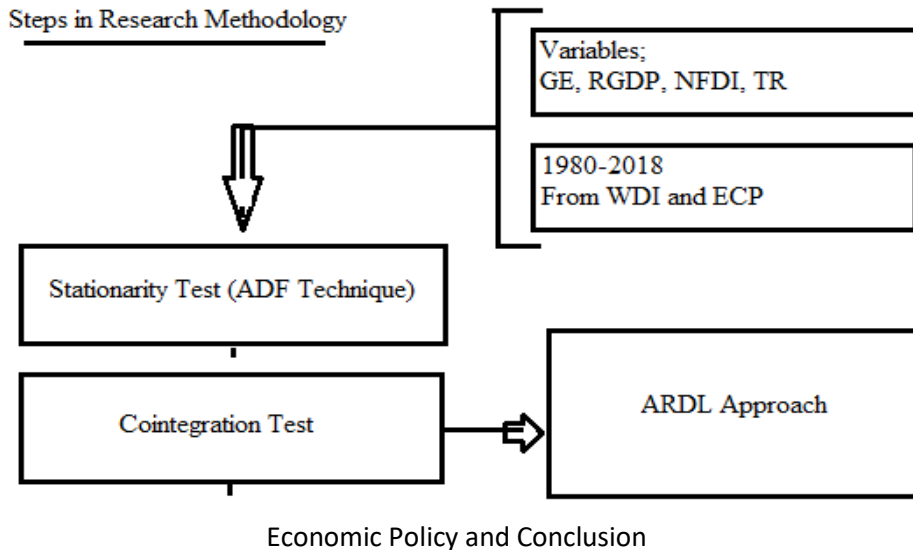I = Inflation, GDP deflator (annual %)

It can be written in equation form as $GDPG = \alpha_1 + \alpha_2 FDI + \alpha_3 TR + \alpha_4 I + \varepsilon$.

Data and Data Sources

Variable Names	Time Period	Sources
GDP growth (annual %)	1980-2018	World Development Indicators
Foreign Direct Investment Net Inflows (as percentage of GDP)	1980-2018	World Development Indicators
Tax Revenues as % of GDP	1980-2018	Economic Survey of Pakistan
Inflation, GDP deflator (annual %)	1980-2018	World Development Indicators

Empirical Strategy;

The empirical technique that will be used in our investigation is examined in this portion of the study. Because we will be working with time series data, it is necessary to first go through the features and attributes of time series analysis.

Steps in Research Methodology

Variables;
GE, RGDP, NFDI, TR

1980-2018
From WDI and ECP

Stationarity Test (ADF Technique)

Cointegration Test

ARDL Approach

Economic Policy and Conclusion

Principal Characteristics of Time Series Data

A data collection of any indication that has been gathered over time is referred to as a time series. Data can be collected on a monthly, quarterly, or yearly basis. The desirable qualities of time series data include stationarity, uncorrelated error terms, and consistent statistical measures (i.e. average, variance, etc.). Engel Granger, ARDL, and Johansen Techniques, among others, were utilised to examine the time series data.

Stationarity

Stationary data is defined as data whose statistical measurements (mean, variance, and co variance) are constant in time. Non-stationary datasets can lead to incorrect conclusions and misguided interpretations, such as increased t values and deceptive signs of coefficients, when analysing the long and short term connection between variables.

Unit Root Tests

Due to the instability of non-stationary data, it is required to verify for the presence of unit roots and integration order of the data before proceeding with the co-integration process. If the series is stationary, it suggests the data is free from the unit root problem and is integrated or ordered in the correct order I(0). Unit roots have been checked using a variety of procedures, including the Dicky Fuller Technique, the Modified Dicky Fuller Method (Augment Dicky Fuller Technique), and the Phillips Perron Test. To verify for the existence of unit roots in the data, we will use the Augmented Dicky Fuller Method.

Augmented Dicky Fuller Test (ADF)

The Dicky Fuller Method was initially proposed by Dicky and Fuller to check for unit roots; however, they neglected the potential of residuals that could be correlated. They later changed their prior version of the Dicky Fuller Test to the Augmented Dicky Fuller Test by factoring in correlated error factors. In ADF, the lag value of the effect variable was introduced as a cause variable to factor out the effect of auto correlated residuals. The length of a lag may be determined using a variety of techniques, such as the Schwartz Bayesian Criterion (SBC). The form implied for Augmented Dicky Fuller is given below:

$$\Delta Y_t = \beta_0 + \beta_1 t + \gamma Y_{t-1} + \sum_{i=1}^{p} \delta_i \Delta Y_{t-i} + \varepsilon_t$$

In which Δ is representative of first difference operator, p is representing lag operator, t is showing the time subscript and ε is error term. Formulated hypothesis will be as follows:

Null Hypothesis => H_0 = Series is stationary

Alternate Hypothesis => H_1 = Series is non-stationary

The decision rule being used is as follows:

t statistics > critical value of Augmented Dicky Fuller = Reject the null hypothesis.

t statistics < critical value of Augmented Dicky Fuller = Accept the null hypothesis.

Co-integration Test

Granger was the first to establish the notion of co-integration. The primary goal of co-integration is to determine if there is a long-term interaction between the variables or if one variable is moving as a result of the other. ARDL, Johansen Approach, Engel and Granger Technique, and others are some of the strategies used to check for co-integration between variables. When deciding which approach to apply, the order of integration is crucial. If the integrating order of the variables is the same, the Johansen technique is used; if the integrating order varies with other variables, the ARDL method is used. The ARDL approach will be used in this investigation.

Autoregressive Distributive Lag (ARDL) Technique;

Because the variables are autoregressive, it is possible to use the prior value of a dependent variables to determine its present value. We can't utilise the ARDL approach if the integration order is I(2), but we may use it if the integration order is I. (0,1), It is the more appropriate technique. Equation will be estimated as follows.

$$\Delta GDPG_t = \alpha_0 + \sum_{i=1}^{p} \beta_i \Delta GDPG_{t-i} + \sum_{i=1}^{p} \delta_i \Delta FDI_{t-i} + \sum_{i=1}^{p} \partial_i \Delta TR_{t-i} + \sum_{i=1}^{p} \vartheta_i \Delta I_{t-i} + \gamma_1 GDPG_{t-1}$$
$$+ \gamma_2 FDI_{t-1} + \gamma_3 TR_{t-1} + \gamma_4 I_{t-1} + \varepsilon_t$$

Where Δ is first difference operator, $\beta, \delta, \partial, \vartheta$ are the clear depiction of the short run relationship and the coefficients $\gamma_1, \gamma_2, \gamma_3, \gamma_4$ are the depiction of long run cointegration between variables. Long run coefficients have also been estimated.

Following is the form of the hypothesis utilised in ARDL;

   a. Null Hypothesis = H_0 = There is no long-term link between the factors

   b. Alternate Hypothesis = H_1 = Variables are co-integrated

When assessing co-integration between variables, the decision rule is to not to accept H0 if the estimated value of F statistics is more than the upper critical bound value, and accept otherwise.

Error Correction Model;

Error correction model is also being utilized in this study to check the convergence of previous year disequilibrium into current equilibrium.

Results

ADF Test

Unit root in the data can lead to the deceptive empirical findings and ultimately wrong policy suggestions that's why it is important to check the Stationarity of data.

Variables at Level	ADF Statistics	Lag Length	Variables at First Difference	ADF Statistics	Lag Length	Order of Integration
GDPG	-3.79	0	ΔGDPG	-7.81	0	I(0), I(1)
FDI	-2.95	1	ΔFDI	-4.05	0	I(1)
TR	-1.90	0	ΔTR	-7.61	0	I(1)
I	-4.87	0	ΔI	-7.66	1	I(0), I(1)

Results are showing that growth of GDP and inflation are stationary at level which means these two variables are integrated of order 0 while FDI and TR are integrated of order 1.

Bound Test

For checking the presence or absence of relationship between the dependent and independent variables of the model ARDL based Bound Test is the most appropriate technique.

	Number of Lags	Value of F-Statistics	Co-integration results
Model with GDPG as dependent variable.	3	18.63	Co-integration exists

The results of ARDL based Bound test shows that Economic growth is co-integrated with foreign direct investment, revenues generated through taxation and inflation in the long run

which means correlation exists among the variables and independent variables are causing the dependent variable.

Long run Coefficients

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FDI	-0.723540	0.445177	-1.625288	0.1177
TR	-0.473597	0.225658	-2.098735	0.0470
INFLATION	-0.379894	0.083571	-4.545754	0.0001
C	14.284712	3.468045	4.118953	0.0004

Results showed that Tax revenues and inflation are significantly correlated with GDPG but have negative impact on GDPG. Although FDI also has negative association with economic resilience but their relationship is insignificant. With the 72% decrease in foreign direct investment, economic growth is increasing by 1%. While 47% change in Tax revenues can cause 1% change in growth of GDP and 37% variation in inflation can only be the reason behind 1% change in GDPG.

Error Correction Modelling

Cointegrating form ARDL (4, 2, 0, 2)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FDI)	1.992569	0.469139	4.247285	0.0003
D(TR)	-0.410556	0.161262	-2.714198	0.0124
D(INFLATION)	-0.030439	0.034860	-0.873159	0.3916
CointEq(-1)	-0.866889	0.157899	-5.490139	0.0000

Cointeq = GDPG - (-0.7235*FDI -0.4736*TR -0.3799*INFLATION + 14.2847)

Results obtained empirically in this study demonstrated that Foreign direct investment is positively correlated with the growth in the gross domestic product in the short run while Tax revenues and inflation are negatively correlated in short run as well and 86% of previous year disequilibrium has been converged to the equilibrium of this year.

Conclusion

This study has taken into account the data from year 1980 to 2018. Taking data from world development indicators and economic survey of Pakistan and using ARDL bound test approach along with Error Correction Modelling, this research study implies that assistance received by foreigners in the form of foreign direct investment has positive role in promoting the GDP growth in the shorter period. However, it has insignificant effect on the long run economic resilience, Tax revenues both in shorter and longer time periods is tends to effect economic growth negatively and Inflation has insignificant negative effect in the short run but is effecting significantly in the longer spans.

Which means that Pakistan can use the foreign direct investment as a economic stimulus for the shorter time period but it shouldn't rely on FDI in longer periods as the results will no longer be positive. This suggests the policy makers to put more focus on domestic resources and provide the local entrepreneurs enough facilities to stop the cash out flows. Government's recent policies are tax oriented. The international Monetary Organization, from which Pakistan takes loan is also putting pressure on the government to increase the taxes so that government revenues can be increased but it is only worsening the condition as ratio of indirect tax increase is greater than direct tax which can be avoided as well. So the sufferings ones are only the street men and the gap between riches and poor is increasing day by day.

Although taxes can't be eliminated fully (as they finance most of the government expenditures) but there should be proportional tax system so that everyone can pay tax according to their ability and the inequality gap can be reduced. Economic theory (Phillips Curve) suggests that inflation and unemployment moves in different directions but in current economic scenario the situation is entirely different. Inflation and unemployment have joined the single path and are moving towards single destination which is slowing down the economic growth. Our study proves the paradox by showing that with increasing inflation there is decrease in resilience of the economy. So the research suggest to policy makers to maintain the inflation at a specific level and it shouldn't be increased to the level where it starts effecting economic activity negatively.

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