How Does Foreign Direct Investment Promote Economic Growth? Empirical Evidence from Pakistan

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Abstract

Foreign direct investment (FDI) is assumed to be benefiting developing countries like Pakistan. Pakistan offers attractive investment opportunities for foreign companies and has adopted a number of policies to attract foreign direct investment into the country. The paper investigates the impact of foreign direct investment (FDI) on economic growth using time series data from period 1972-2011. The econometric framework of cointegration and error correction mechanism was used to capture two way linkages between variables of interest. An econometric result shows that FDI and economics growth has long run as well as short relationship with each other and also the impact of export and foreign remittances on economics growth rate is found to be positive. Based upon these results the ultimate objective of the Pakistan government is to attract FDI for development an appropriate policy mix is necessary to be taken in the future.

Introduction

Foreign Direct Investment (FDI) play very important role in international business, it facilitates excess of firms to different international markets and marketing channel. It provides economical inputs for productions like labor and capital, modern technology to the other countries. The classical definition, the different firms and companies from one country making investment and developing factories in another country. Especially FDI considers the main external source of flow for developing world since last few decades and it is central part of capital formation. In spite of very low share of FDI in global business, but still it is one of the pivotal external sources of enhancing growth in the developing world.

Different factors have different impact on economic growth theoretically and have been proved by giving empirical evidence, like exports which has positively related to economic growth and it is supported by Bhagwati (1988). He found empirically by using econometrics techniques that exports increase GDP. This types of analyses has also ascertained by Helpman(1991) and he investigated in his research study that increase in production, resources best utilization,, employment boom, economic growth and development, are just possible through the expansion of exports. Khilifa (1997) also found the same results in his research; he found significant positive relationship between exports and growth.

Foreign remittances increase economic growth which is positively related, but the most important factor is foreign direct investment which has highly significant impact on economic growth, although theoretically FDI impact on economic growth, it has been proved empirically for some countries, but some research studies has also found significant negative relationship, while some other researchers and economist has been proved causal relationship. And it's clear from the literature that why this impact is positive for some countries? And why for few countries negative?

BACKGROUND OF THE STUDY

The main goal of the study is to establish the linkages between Foreign Direct Investment and economic growth, which may be beneficial from different point of views like in government policies and for firms and companies making their decisions regarding FDI.

The critical discussion has been done in literature review, different studies of different developed and developing countries has been conducted and showed negative association while some has positive association between FDI and economic growth and few identified causal relationship. Positive influence are supported by Carkovic, Levine (2003) and Borensztein et al. (1998) in their studies.

Beck et al. (2000a, b) arguments also favor positive impact of FDI on economic growth just for financially strong countries.

In global world, developing countries like Pakistan, Bangladesh, Sri-Lanka etc. give additional incentives and great opportunities to attract foreign investors for investment in their countries. They introduced several reforms and different economic policies to attract foreign in their territory. Pakistan introduced different policies for the foreign investors. In 1980 Pakistan government implemented few investment friendly policies, incentives to the investors for the investment in region, exchange rate policies etc. which highly attracted the foreign investors.

In past, several studies built this relationship. But this study deals to elaborate theories that may explain

the fundamental interaction between FDI and growth. This research mainly focuses on determining the impact of foreign direct investment on Pakistan's Economic Growth and also attempts to determine how foreign direct investments (FDI) can improve the performance of the Economy of Pakistan.

OBJECTIVES
The main objectives of this research work are to examine the impact of FDI on economic growth of Pakistan empirically and to check the performance of Pakistan economy through foreign direct investment (FDI) at different time period. The objectives of this study are to,

❖ Ascertain the impact of foreign direct investment (FDI) on economic growth both in short run as well as in long run.
❖ Identify the performance of Pakistan economy through foreign direct investment.
❖ Know the impact of export on economic growth of Pakistan.
❖ Show the impact of foreign remittances of economic growth of Pakistan.
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HYPOTHESIS
Formulating null hypothesis,
H0: Foreign Direct Investment has no significant impact on Economic Growth in short run.
H0: Foreign Direct Investment has no significant impact on Economic growth in long run.

OVERVIEW OF PAKISTAN ECONOMY
In this section it is important to briefly discuss the last sixty years. This study divides the last sixty years in five decades to easily understand the fluctuations, booms and drought in Pakistan economy. The brief discussion and explanation make us able to highlight various amendments undertaken by the government in different periods. This study distinguishes between military and civilian government and also the reforms undertaken by various government enable us to examine the impact of these reforms and what requires to be done to achieve high economic development in future decades.

THE FIRST DECADE FROM 1947 TILL OCTOBER 1958.
Pakistan achieved remarkable growth rate in industrial sector in 1949-54. The large scale manufacturing growth rate was about 23.6% in these years. It was too high about 9.3% in 1960. Investment rate was also too high in the first few years of the first decades. In the period 1949-54, Per capita GNP rises on average by 0.2 percent only and it increased about zero percent in the last five years of the first decade because of the high population growth rate in these years. Manufacturing sector was also growing rapidly in these periods; the manufacturing growth rate was about 19% and per capita income on average increase by 6.97% in West Pakistan.

The fact and figures supported that the manufacturing sector in the first era were growing very rapidly in East and West Pakistan, but on the other side the other main and important agriculture sector were moving in opposite direction. The growth rate of agriculture sector was declining in the first years of the first decades. The annual growth rate of agriculture was 2.6% in 1050-51, while it became negative and was -9.1% in 1951-52. In 1952-53 this growth rate increase to 0.2 % but it again became -0.8 in 1954-55.so therefore, It was very difficult for a newly born state to coup up these along with some other critical problems. As Pakistan was one of the new country and was considered agriculture country in the word. And mostly people lived in rural areas and their source of income is only agriculture, means they are dependent mostly on agriculture sector. About 75% of the total population lived in rural areas, 65% of which are connected with agriculture sector. Low growth rate in agriculture not only affect the income of the people but disturbed the industrial sector as well.

GENERAL AYUB KHAN REGIME (1958-1968)
In these years, Agriculture annual growth rate, large scale manufacturing and economic growth showed remarkable trends. Because of unexpected and unprecedented trends this period became "Good Luck or Development Period".
In the first seven years of the Khan regime annual agriculture growth rate was very high. In 1961-62, this rate was about 6.2 percent and it was negative in the first years of the first decade comparatively. Such improvement and raised in agriculture production is really appreciated. GDP growth rate also increased, and was near to double digit in 1964-65 that is too high if we compare it with the other decades. GDP growth was about 10 percent on average in this decade which is very high.

The wide gap in 1950 about 1960 was due to green revolution through which agriculture production increased very rapidly in very short period.

LIBERAL INDUSTRIALIZATION POLICIES

Foreign Assistance

Mostly studies suggested that high growth rate and rapid economic growth and development in 1960 were due to the foreign aid. Without foreign aid such remarkable improvement in economic growth was impossible for newly made country. Pepanak, Griggin and Rashid Amjad supported the above statement.

Amjad investigated that in 1960 foreign aid made suitable condition for private investment and it directly effete private sector. Foreign aid was the main and important factor responsible for economic development in 1960-1968.

Bhutto Regime (1972-1977)

Zulfiqar Ali Bhutto became the president of Pakistan in December 20, 1971. Nationalization is main feature of his government, he was socialist and believe on socialism. Bhutto government nationalized many firms and industries in January 1972. It was the first and foremost step of his government. Nationalization process became extended in May 1972. In period 1973 financial institutions like Banks, insurance companies etc. and at the end of 1973 vegetable, oil etc. also became nationalized.

AFTER THE SIX MONTHS OF HIS REGIME HE DID LAND REFORMS.

Devalued its currency by 13 percent. In the beginning of the Bhutto regime GDP growth rate increased in 1971 and 1972, GDP growth rate was only 1.2 percent and raised to 7.2 percent in 1972 and 1973, comparatively too high. Similarly it remained 7.7 till 1974[1].

Total exports also increased in these periods by 153 percent. Industrial sector production increased to much high because of high demand of cotton, textile in global market[2]. Agriculture production increased, in the same periods economic policies has taken place by the government, nationalized all the banks through which more credit was available for small farmers on very low rate of interest rate. The main purpose of these policies was to increase agriculture and industrial productions. But global demand for cotton, textile declined in 1974 due the world recession, Organization of Petrol Exporting Countries (OPEC). And considerably GDP growth rate decreased from 3.3 percent to 3.4 percent in 1975-76.

In July, 1977 Gen Zia took over, Zia government took some new steps for the stabilization of economy, included budgetary steps to control expenditure and increase resources. Public sector investment programs slow down, private investment extended, to encourage exports, incentives were introduced, etc, these steps achieved success and stabilized economy in some extant and later on some other important policies and efforts has taken by the government.

In the late years of eighties, despite higher agriculture and industrial growth, some new reforms were introduced in 1978-88.there were still some weaknesses, included

i)   Government budget deficit was too high and very low government saving.
ii)   Financial sector was too weak and work inefficiently.
iii)   Development expenditures were in adequate.

Before 1988, budget deficit increased to 8.5 percent of GDP. Inflation closed to double digit, huge declined in reserve from 886 million dollars to 438 million dollars.

1) Economic survey of Pakistan (2). Asian Development Bank

FOREIGN DIRECT INVESTMENT IN PAKISTAN:

In last thirty years Pakistan received huge amount of Foreign Direct Investment of its history. Because government of Pakistan developed investment friendly policies and made a good environment for the investors in these years, in these years specially private sector played vital role in improving economic growth. In 1980, several very important incentives has given by the government to encourage foreign investors in its region, Pakistan reduced its import duty to zero, investment friendly monetary and fiscal policies were introduced, which were in favor of investors. These policies played vital role in encouraging domestic and foreign investors in the region. Similarly other good policies like foreign exchange control, permission to foreign investors in local projects and such others investment friendly policies implemented by the government of Pakistan to attract investment from other countries.

Some other steps took by the government as in this regard "Board of Investment" established to meet the challenges facing to the industrial sector and rapid its development. The "Board of Investment" paved a favorable environment for local & foreign investors and also solved the problems facing to the foreign firms regarding making their investment decisions in the host country.

As a result of these steps FDI has increased at the end of the last years of 80's. In 1970-71 net flow of FDI in Pakistan was only $41 million. This was only 0.5 percent of gross capital Investment. In 1975-79 net flow of FDI has increased to $138 million which was about 10 percent of GFC and it was very high as compared to 1970-71. In the first periods of 80's FDI doubled and reached to $322 million similarly in last five years of 80's FDI became $764 million.

In 1990 when government launched different policies for the attraction of investment from abroad, which allowed FDI, and as a result actual net flow of FDI rose to $5009 million which was obviously very high as compared to the last twenty years. It is also important to note that FDI has encouraged in 1960, but again discouraged due to the nationalization in 1970 by Z.A Bhutto.

ECONOMIC SURVEY OF PAKISTAN, WORLD DEVELOPMENT INDICATOR
FDI shows declining trends during the last years of nineties. This declining trend in FDI due to the multiple of reasons, but this trend was for very short period of time.
In last decade FDI showed various ups and down, in first seven years of the last decades it showed very high increase and then again in last two to three years again it showed declining trend as it clear from the given table.
In the year 2000 total FDI inflow was $308 million but after 2000 FDI show increasing trend again. In 2001-02 total FDI was $485 million, this increasing trend remained up to the coming next six years. In 2004-05 total FDI was $5139.00 million, but it's jumped and reached to its peak in 2007, $5409.80 million.
In 2009 and 2010 due to the number of reasons like low and order situation, political instability and low economic growth, total FDI inflow dropped to 2150 million dollars, and it dropped down to 1739.40 million dollars in 2010 and 2011.

Table No: 2.1 FDI Inflows in Pakistan (1975-2011)

Period	Total net value ($million)	Period	Total net value ($million)
1975-79	138.00	2003-04	1524.00
1980-84	322.00	2004-05	3521.00
1985-89	764.00	2006-07	5139.60
1990-99	5009.00	2007-08	5409.80
2000	308.00	2008-09	3719.90
2001-02	485.00	2009-10	2150.00
2002-2003	798.00	2010-11	1739.40

Source: Board of Investment, World Development Indicator

Reasons for Declining trend in last two to three years of last decade.
Three major reason should be highlighted are
- Global Economic Crises
- Low and order situations
- Energy crises

International crises peaked in the last few years of the last decade. Crises did not only affect the countries in which crises occurred but also affected other countries. Due to which FDI outflow declined globally. As we mentioned that the main source of FDI in Pakistan is USA, which mostly affected in these economic crises, due to which FDI inflow to Pakistan in these years decline. Except USA other countries like UAE, Saudi Arabia, Germany, etc also affected, and dropped FDI in these years to 1739.40. Although, FDI outflow increase up to 16 percent in 2011, the increment in FDI is very high, but if we compare this to 2007, it very low comparatively.
The second responsible reason is low and order situation, after 2007-08 Pakistan was considered not a good and investment friendly country.
The third reason is energy crises. In few years of PPP government there was load shedding and power shortage are on peak and the power shortage highly affected all the sectors of the country, especially manufacturing sector.

LITRATURE REVIEW
The different results of cross sectional, time series and pooled data have been reported in the existing literature on the impact of Foreign Direct Investment (FDI) on Economic Growth. Saqib (2013), with the help of time series data from the time period 1981 to 2010 investigated a long run relationship between FDI and Economic Growth. His results support the relationship between FDI and Economic Growth.
Borensztien (1998) on the basis of cross sectional data analysed the relationship between FDI and Economic Growth and recommended that foreign direct investment transmits technology leads to growth more than domestic investment.
Lamine (2010) observed a positive impact of FDI on Economic Growth in Guinea Republic in West Africa.
Herzer et al (2008) found a positive association between FDI and economic growth in developing countries.
Obiamaka and Onwwumere (2011) analyzed the impact of Foreign Direct Investment on Economic

Growth for Nigeria with time series data and cointegration econometrics techniques and found direct long run relationship between foreign direct investment (FDI) and gross domestic products (GDP).

(Herzer (2012) examined the effect of FDI on economic growth for 44 developing countries using multi-form panel cointegration techniques and suggested that on average, FDI has an adverse effect on developing countries economic growth, but there are great dissimilarities in the results across countries. And second they used general-to-specific model-selection approach to systematically country-specific factors effecting the cross-country disparities in the growth effects of FDI and they recommended that the cross-country diversity in the growth effect of FDI can be explained widely by cross-country differences in freedom from government intervention, business freedom, FDI volatility, and primary export dependence. Batten and VO (2009) utilized a panel data modeling econometrics tools and argued that in the countries with low population growth rate, high literacy rate, and international trade openness where FDI has highly positive significant impact on economic growth.

Kotrajaras et al (2011) studies suggest an advantageous impact of FDI on Economic development, they used Panel data for their analysis and cointegration techniques were employed to test their hypothesis for 15 East Asian countries. Koojaroenprasit (2012) used annual time series data from period 1980 to 2009 and multiple regression analysis has been employed. The study investigated influential direct impact of foreign direct investment on South Korean economic growth.

A study conducted to find out the effect of FDI & CPI on GDP of SAARC nations, data from 2001 to 2010 used and found the results by using multiple regressions. The study concluded that GDP increases with increase in FDI and decreases as FDI decreases, mean study concluded direct relationship between FDI and GDP, while CPI and GDP are negatively related (Abbas.et al.(2011). To examine the influence of Liberalization of trade on economic growth of Pakistan, Afzal (2010) used secondary data from period 1960 to 2009 and investigated positive relationship by using Johenson Co integration techniques.

Falki (2006) conducted a study to show the economic growth gain from FDI. Time series data from 1980 to 2006 used. The data collected from economic survey of Pakistan and used related variables, on the basis of empirical evidence the study found positive influence on GDP. Carkovic and Lavine (2005) used data (1960-2005) by employing GMM techniques and found uninfluencial impact FDI eco-growth. Choe (2003) utilized VAR econometrics techniques taking panel data from 1971-1995 and found strong causal relation of FDI and Economic growth.

There is possibility of eradicating poverty, increasing economic growth and employment in developing countries through high amount of FDI. And in this regards many developing countries are making policies, in country where economic policies are implemented and followed can accomplish this objective OECD (2002).

Aqeel (2005) examined the main determinants of foreign direct investment (FDI) in Pakistan. Annual time series data from period 1961 to 2003 has collected from different sources to fulfill his research objectives. The variables used are exchange rate, tax rate, tariff rate, GDP per capita. He used cointegration and error correction version for the analyses to simplify short and long run impact of the said variables. On the basis of his research he concluded that all the variable except share price index and wage rate have direct relationship while these two variables have inverse relationship. The variable use in research play significant role in attracting FDI.

Hussain (1990) analyzed that in the first decade due to other critical challenges and uncertainty the inflow of FDI was very low. In late years after of its independence, Pakistan made new industrial policies in 1959 and 1984 and 1990. The main objective of these policies was to increase industrial production, and the second main objective was to encourage FDI. Increase in industrial production was possible through foreign investment because of low availability of internal finance.

Kazmi (1999) investigated FDI trends in Pakistan. He suggested on the basis of his study that Pakistan can achieve high economic growth and can repeat the history of Ayub Khan era which we call" Decade of Development" because of high availability of natural and human resource. He examined that Pakistan has made different investment policies in different times but has not implemented systematically, due to which country did achieve high economic growth because FDI works as back bone of increasing economic growth. He recommended that Pakistan should need to provide better environment to attract foreign investor to invest more as compare to other countries.

A research study conducted to ascertain the interdependence of FDI, trade and economic growth in Pakistan. Time period 1998 to 2009 and quarterly data used to find out the causal relationship among the said variables. VAR and VECM model has used and concluded long run causal relationship among the factors and also found that the two important factors that improve economic growth are FDI and exports (iqbal (2010).

Although FDI play a significant rule on boosting up economic growth and supported by the above literature. But it is also considered that FDI effectiveness also depends on the domestic financial system of a country. Different theories and empirical research suggested that, a country which have strong financial sector, strong absorptive capacity, will necessarily have strong and efficient influence of FDI on growth. Khan (2007) supported the above statement; he used time series data and utilized co integration and ECM econometrics tools

and found short and long run impact. The results showed that as good as the domestic financial sector, the more will be the economic growth and more the benefits to the country. McKinnon (1973), Goldsmith (1969), and Shaw (1973) supported and investigate that well developed financial system boost economic growth.

RESEARCH METHODOLOGY
DATA, DATA SOURCE
This research work is based on secondary data. Time series data from 1972 to 2011 has been used annually. The data has been collected from different sources, Gross Domestic Products (GDP) and Exports data has obtained from State Bank (SBP) of Pakistan. Work Remittance data has been collected from Economic Survey of Pakistan (ESP) and World Development Indicator (WDI). The explained variable or dependent variable is Economic Growth (GDP) while the main explanatory variable or independent variable is Foreign Direct Investment (FDI) and other explanatory supporting variables are Foreign Worker Remittances and exports.

ECONOMETRIC MODEL
Econometric model is
GDP = f (FDI, EXP, REM)

$$\text{GDP} = \beta_1 + \beta_2 FDI_t + \beta_3 EXP + \beta_4 REM + ei$$

Where, GDP represents Gross Domestic Product, proxy variable for Economic Growth, FDI stands for Foreign Direct Investment as main explanatory variable, EXP indicates Exports, and REM indicates Foreign Work Remittances. β_2, β_3, β_4 are their coefficients respectively. From the above model it is clear that GDP is dependent variable, FDI, EXP and REM are the independent variables and the expected signs of FDI, EXP and REM are positive.

To fulfil the main research objective, "to find out the impact of FDI on economic growth", in short run and long run. The first step is to identify the long run relationship between the said variables and for this purpose we first check the stationarity of the variables, Dicky-Fuller and Augmented Dickey-Fuller (1979) has been used and the variables became stationary after taking first difference. After finding out the long run relationship, the second step involve is this process is to ascertain the short run relationship among the variables; Error Correction Model (ECM) approach has been used.

RESULTS AND DISCUSSION
In this section we discussed the result of our analysis. First we checked the stationarity of the data and data of the given variables are non-stationary at level. The means and variances of the variables changes over time. The other important issues related to the data series or regression model are Multicollinearity, Heteroscedasticity and autocorrelation, for this purpose we used different test e.g. (Dickey-Fuller test) for stationary, Tolerance and VIF to check multicollinearity, white heteroscedasticity test for Hetro or misspecification and Breusch-Godfrey LM test for autocorrelation. After that we run the regression and interpret the result of the model.

Data Stationarity Analysis:
Test for Unit Root in the Level of Data
Table: 1 The Dickey-Fuller test in Level

VARIABLE	AT LEVEL				
	T-STATISTICS	P-VALUE	INTERCEPT	LAGS	DECISION
GDP	2.975073	0.9988	NO	1	I(0)
FDI	-2.007457	0.0442	NO	1	I(1)
WR	5.209001	1.0000	NO	1	I(1)
EXP	3.109548	0.9992	NO	1	I(1)
Critical value at 5% and 10% level of significance is: -1.950687 and -1.611059 respectively					
VARIABLE	AT LEVEL				
		P-VALUE	INTERCEPT	LAGS	DECISION
GDP	1.655738	0.9994	YES	1	I(0)
FDI	-2.485774	0.1274	YES	1	I(1)
WR	4.124659	1.0000	YES	1	I(1)
EXP	0.753599	0.9917	YES	1	I(1)
Critical value at 5% and 10% level of significance is: -2.948404 and -2.612874 respectively					

If an OLS regression is estimated with non-stationary data and residuals, then the regression is spurious. To overcome this problem the data has to be tested for units root (i.e. whether it is stationary). For this purpose ADF (Augmented Dickey-Fuller) test (1979) is used for the presence of unit root on the individual time series. The null hypothesis of ADF test that there is unit root I (1). The above table indicates the results of ADF test.

ADF test is performed in the level by including constant and without constant term to these variables. Results reveal that the null hypothesis that they have unit root cannot be rejected at 5% and 10% level of significance in the level form by including constant term and without constant term to these variables hence data series of all variables are non-stationary or are integrated of order 1.

Test for Unit Root Taking Log and Log Difference of Variables
Table: 2 The Dickey-Fuller tests Taking log and Log Difference of Variables

Log					
VARIABLE		P-VALUE	INTERCEPT	LAGS	DECISION
LGDP	-3.037036	0.0412	YES	1	I(0)
LFDI	-2.249295	0.1935	YES	1	I(1)
LWR	-1.217522	0.6558	YES	1	I(1)
LEXP	-0.901499	0.7759	YES	1	I(1)
Critical value at 5% and 10% level of significance is: -2.9484 and -2.6128 respectively					
Log Difference					
VARIABLE		P-VALUE	INTERCEPT	LAGS	DECISION
D(LGDP)	-3.993018	0.0041	YES	1	I(0)
D(LFDI)	-4.781302	0.0005	YES	1	I(0)
D(LWR)	-4.854493	0.0004	YES	1	I(0)
D(LEXP)	-6.465736	0.0000	YES	1	I(0)
Critical value at 5% and 10% level of significance is: -2.9511 and -2.6143 respectively					

To avoid the problem of heteroscedasticity and outlier in the data we take the log of all variables. The above table 2 shows the results of ADF test after taking the log and log difference of data. Here ADF test is performed only included the constant term to these variables. The test statistics of all variables reported in table shows that all series are stationary or are integrated of order 1 at 10 % level of significance except GDP taking only log of these variables. After taking the log difference of these variables the test statistics value for all variables " GDP, Exports, FDI and workers remittances" are more negative (i.e. the null hypothesis of non-stationary is rejected) at 5 % level of significance so we conclude that data series of all variables are stationary or integrated of order 0. After completing ADF unit root test we come to know that our data of all variables are stationary by taking log difference of the data series. Therefore we have been done rest of all analysis taking the log difference of all variables.

Model Diagnostics tests
In order to verify the validity of assumptions, we have applied the following the test
Multicollinearity Diagnostic test
Table: 3 VIF and Tolerance for Collinearity

Model	Collinearity Statistics	
	Tolerance	VIF
GR: Dependent Variable		
Workers Remittances Growth rate	.924	1.083
Exports Growth Rate	.955	1.047
FDI Growth Rate	.902	1.109

Multicollinearity is identifying through different methods in the regression model. Tolerance and variance inflating factor is the most common indicator to detect the multicollinearity in the model. If the value of tolerance is less than 0.20 or 0.10 and the value of VIF is greater than 10 it means that explanatory variables are high correlated with each other. In the above table the value of tolerance for all variables is greater than .2 and the value of VIF is less than 10 therefore we concluded that there is no perfect multicollinearity between the explanatory variables in the model.

Heteroscedasticity Diagnostic Check
Table:4 White heteroscedasticity test

F-statistic	0.815375	Probability	0.567165
Obs*R-squared	5.205747	Probability	0.517709

Under white heteroscedasticity test the null hypothesis that there is no heteroscedasticity. In the table 4 the test statistics values for F-statistics and Obs* R-squared are greater than .05 so one can conclude, on the basis of the White test, that there is no heteroscedasticity in the specified model.

Autocorrelation Diagnostic check

Table: 5 Breusch-Godfrey Serial Correlation LM Test

F-statistic	1.642633	Probability	0.21.964
Obs*R-squared	3.561510	Probability	0.168511

One important problem in the time series data is autocorrelation and serial correlation. BG test is applied to check the autocorrelation in the model. In the test the null hypothesis that autocorrelation is equal to zero which mean that there is no autocorrelation. If the probability of F-statistic and observed R is significant at given level of significance we reject null hypothesis otherwise we fail to reject null hypothesis. In above table the LM test result indicate that the probability of F-statistic and observed R is significant at 5% significance level because the probability value for both "F-statistics and Obs* R-squared" are greater than 5% therefore Researcher concluded that there is no autocorrelation in the model.

Cointegration Analysis

Table: 6 Results of Johansen Cointegration Test

Sample Size : 1976- 2011				
Trend assumption: Linear deterministic trend in the data				
Series: GDP EXP FDI WR				
Lags interval : 1 to 1				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.765012	72.26571	47.85613	0.0001
At most 1	0.333150	23.02618	29.79707	0.2448
At most 2	0.238164	9.249723	15.49471	0.3428
At most 3	2.67E-05	0.000908	3.841466	0.9766
Trace test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.765012	49.23954	27.58434	0.0000
At most 1	0.333150	13.77645	21.13162	0.3837
At most 2	0.238164	9.248815	14.26460	0.2660
At most 3	2.67E-05	0.000908	3.841466	0.9766
Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

For existence of the long term relationship we have employed the Johansen cointegration test. The primary assumption of the cointegration test is that all variables integrated order 1 or same order therefore we employed the cointegration test in the level of the data because all these variables are integrated order 1 in the level. The above results in table 6 the Trace and Maximum Eigen statistic values indicate one cointegration at the 5 percent level of significance, suggesting that there is cointegrating relationship among the variables so tested; this implies that foreign direct investment, workers remittances and exports have long run relationship with GDP for specified sample period.

Table: 7 Normalized cointegrating coefficients: 1 Cointegrating Equation

Standard error in parentheses		Log likelihood = -1063.940	
GDP	EXP	FDI	WR
1.000000	-6.299268	-11.31535	-7.888288
	(0.96716)	(4.21064)	(2.59255)

The long run relationship among the tested variables (GDP, Exports, FDI and Workers Remittance) is based on the following cointegration vector

{1.00, -6.299268, -11. 31535, -7. 888288)

The coefficient value of GDP is normalized to one so from the cointegration results the following long run equilibrium relationship can be established.

GDP = 6.299268EXP + 11.31535FDI + 7. 888288WR

The above results suggest that export has long term positive relationship with GDP. The coefficient value of the exports is 6.299268 it means that one unit (one million dollar) positive change in exports would lead to enhance the 6.299268 unit (Million Dollar) GDP on average in long run. This relationship is statistically significant.

The coefficient value of FDI is 11.31535 it indicate that FDI relative large impact on GDP and has play comparative significant role in the economy. The coefficient value of the FDI is also statistically significant. One can conclude here that the our null that FDI has no long run relationship with GDP rejected hence has a statistically significant long-run equilibrium relationship with GDP for specified sample period in Pakistan.

Workers remittances has also positive correlated with GDP in the long-run. The coefficient value for workers remittances is 7. 888288 it means that one unit (Million Dollar) increase in workers remittance would lead to boost 7. 888288 units (Million Dollar) on average in long- run.

Error Correction Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.042427	0.004003	10.59820	0.0000
D(LFDI)	0.014206	0.006811	2.085808	0.0459
D(LWR)	-0.007075	0.014046	-0.503701	0.6183
D(LEXP)	0.082110	0.031230	2.629173	0.0135
ECM(-1)	-0.206973	0.081129	-2.551174	0.0134

We utilized the Error correction model to estimate the short run relationship between dependent and independent variables. But the assumption which should be fulfilled before employing ECM model is the data should be stationary. In above model the data become stationary after taking log and first difference .The value of ECM (-1) is negative but significant at 5% level. Negative coefficient sign of ECM implies the speed of adjustment from disequilibrium to equilibrium and the results show that there is short as well as long run relationship exists between dependent and independents variables.

And the coefficients in the above tables are short run coefficients of foreign direct investment, workers remittances and exports.

CONCLUSION

FDI inflows in Pakistan have brought various changes during the last thirty five years. In 1990-99 FDI inflow in Pakistan was on its peak due to investment friendly policies by Government of Pakistan, the total value of FDI 5009.00 million US dollars which is too high in the history of Pakistan, and it decline to 308.00 million dollars in 2000. Again in the 2007-08 FDI inflow increased and the total value received was 5409.80 million dollar very high compare to the other periods. And once again FDI declined to $1739.40 million due to a multiple of reasons like, terrorism, energy crises, flood in 2010, and many other reasons.

This paper has attempted to examine the impact of FDI on economic growth. We used secondary annual time series data (1976-2011) and which collected from various sources. For the fulfillment of our research objectives we utilized multiple regression models and checked its related problem. We find long run relationship among the said variables by using cointegration techniques and for short run relationship we employed ECM tools. The data of the all the variables included in econometrics model were non-stationary on level. Due to which we first checked the stationarity of the variables by using DF & ADF test to avoid none sense regression. All the explanatory variables became stationary by taking first difference. On the basis of cointegration analysis GDP has positive strong long run relationship with FDI and exports but has no significant relationship with workers' remittances. The ECM model revealed that FDI, exports and workers' remittances also affect GDP in short run, mean short run relationship among the said variables exist.

The main conclusion we draw that GDP has strong and highly significant relationship with the macroeconomic variables (i.e FDI, exports and workers' remittances).

RECOMMENDATIONS

Pakistan has a very important strategic location. Many countries are connected through land route. Pakistan is the central businesses hubs for the investors of many countries in Asia. The worst situations are confronting like terrorism, political and economic instability, natural disasters, and sectarian voidances etc to Pakistan after 9/11. They highly affected Pakistan economy from every angle. Foreign investors discouraged and due to which foreign investment highly declined in late of the last decade. Efforts for the establishment of business friendly environment will be appreciated for attracting FDI to our country that will play a vital role in uplifting the economic growth. The following suggested recommendation base on our research finding.

Political instability engenders economic uncertainty and reduces the confidence of investors in our country; hence it is crucial to take serious actions for insuring political stability for the purpose of developing business friendly environment and to attract FDI to our country.

Price stability also play a vital role in this regards, so therefore policy makers should take serious step to stabilize price level to attract foreign investors.

Investment friendly monetary and fiscal policy through central bank and central government should design to decrease foreign debts, boost economic growth and increase exports to encourage FDI.

Our research used cointegration and ECM models to find out the relationship of FDI with others macro variables. Other statistical tools, socio-economic variable also capture this issue.

Improvement in the physical infrastructure is also conducive to FDI toward host country and therefore, it is recommended that the immense investment should be done to improve infrastructure to attract FDI for the economic growth of our country.

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