



DETERMINANTS OF FOREIGN DIRECT INVESTMENT IN PAKISTAN

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ARTICLE DETAILS	ABSTRACT
History Revised format: Feb, 2021 Available Online: Mar, 2021 Keywords FDI, Growth, Interest rate, ARDL, Pakistan	The foremost purpose of the study is to investigate the (FDI) foreign direct investment's key determinants in the case of Pakistan. This study used time series data (annually) with time period 1984 to 2019. For checking the stationarity of data, study used ADF test. To investigate the data empirically, this study applied ARDL (Auto Regressive Distributed Lag) model. The finding of this study shows that market size has strong relationship with FDI and explaining major portion of variation in FDI. The second variable is trade openness; coefficient value of this variable is statistically insignificant showing that it is not affecting FDI. The coefficient of trade openness is insignificant means that it has no impact on FDI. The last variable is nominal interest rate; it is negatively related with FDI.

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1 Introduction

Mostly developing countries are facing the problem of saving and investment gap. To fill this gap, they much rely on foreign direct investment which helps the country in economic growth. FDI not only covers this problem, but also creates employment in developing countries like Pakistan. The Foreign investor comes with advanced technology into the country, it also fosters the competition at the domestic level which encourages business activities in developing countries. FDI also becomes cause to expand the size of the market. Many research papers have been written on the same topic; this paper distinguishes the FDI's growth determinants in Pakistan with the time 1974 to 2019. This study will identify all those factors which can influence FDI in Pakistan. The FDI stream's Significance is all around supposed in collected works for the developing and developed countries. In recent era development of no less than two times as rapidly as exchange Meyer, (2003), Because of the Capital deficiency in the underdeveloped states, where capital is basic for process of their improvement, capital's marginal profitability is higher in developing nations. On the opposite side financial specialists in the developing world request noteworthy of their capital yields, subsequently there is a shared preferred standpoint in the world-wide capital development. The developing procedure of mix economy of the world and progression of the economies in underdeveloped nations have piece of information to an extreme competition for inner FDI in underdeveloped nations. The switches and cutoff points over the passage and procedures of foreign firms in underdeveloped nations are currently being substituted via cautious strategies went for FDI inflows, as incentives. The specific measures upgrade the basics of the economy as well as they go for drawing in more FDI in the state.

wide empirical literature on instruments of internal Foreign direct speculation stretches the monetary circumstances or basics of the host nations fit the bill to the FDI origin nations as devices of FDI streams. This literature is in accord with relative plagiarism (1993) that recommends it is the locally beneficial for the host nations e.g., showcase size and level of pay, foundation, aptitudes and governmental and macroeconomic consistency that decides cross country example of FDI. Saleem (2013), will appraise that political security level of specialized work constrain, tranquil lawfulness circumstance and mineral assets and unwind strategies of the administration pull in the foreign financial specialists in Pakistan. The presents study adds to the literature by observation looking at the reaction of FDI to precise contracts, which are tariff policy and tax, exchange rate arrangements and monetary motivating forces offered in Pakistan. All the more precisely the cause for this study is to investigate the feasibility of these arrangements among the modification of administration. After this examination we will know which specific government arrangement is pulling in FDI or not in Pakistan. Our exploration would tolerate some consequence with arrangement creators in numerous nations which are underdeveloped where supporting alterations are being imposed. he moving procedures of worldwide activities of business and the cross marginal beginning of computed riches review of global fabricate, novel parts for unyielding money associated with advancement. Liberalization has released the restrictions of numerous states for financial specialists to advantage openings in the host countries. FDI is described as the base of establishment of authoritative power by an exchange mission of foreign nations over an exchange upheaval into a host nation.

Hypothesis of the study

1. Market size and Trade openness have positive influence on FDI inflows to Pakistan.
2. Nominal interest rate has negative association with FDI inflows to Pakistan.

Objectives of Study

This research has the following objectives:

1. To enquire different factors affecting FDI inflows to Pakistan?
2. To find out causes of fluctuation to the inflows of FDI?

2 Literature Review

The review of literature discusses about the determinates of FDI in brief. Numbers of observational examinations [Agarwal (1980); Gastanaga et al. (1998); Chakrabarti (2001) and Moosa (2002)] on the point of determinant's of FDI determinants control us to choose a set of exogenous factors that are utilize widely and observed to be imperative FDI determinants. For instance [Lim (2001); Maskus and Markusen (1999); Lipsey (2000) and Moosa (2002); Love and Lage-Hidalgo (2000)] guide us how the size of market and contrasts in factors expenses can interlink to the FDI area. To foreign investors who work in enterprises described by moderately vast scale of economies, the noteworthiness of the size of market and its development is exaggerated. It is on the grounds that they would feat being able to scales economies simply after the limit measure that a specific market accomplishes. The most broadly utilized the market measures are scale of GDP, development in GDP and GDP/capita. The expected of signs would be negative of these coefficients. Talking about the cost of labor that is considered a real part of the price tag, it is demonstrated that extraordinary ostensible wage, different things being steady, demoralize FDI. This should be valid for the organizations/organizations that include in labor-concentrated generation exercises. In this manner, predictably, the normal sign would be negative for this variable. The investigations that locate no negative or a critical association of FDI and wage are: [Barrell and Pain (1996) Wheeler and Mody (1990); Kravis and Lipsey (1982); Wang and Swain (1995) and Lucas (1993);]. Indeed, even

so, there are numerous different scientists who have discovered that higher wages don't generally dishearten FDI in every one of the enterprises and demonstrate a positive connection amongst FDI and work costs [Love and Lage-Hidalgo (2000) and Moore (1993)] higher wages lead toward the higher efficiency. To pull in foreign investors the tax assessment structure and monetary impetuses are critical. As the tax rate change the benefit of venture projects. Various tax cut periods are offered as a motivating force to multinationals to draw in the inflow of FDI. Empirical studies demonstrated a negative connection between area of organizations and taxes. [Gastanaga, et al. (1998); Billington (1999); Shah and Masood (2002) and Campa (2002); Newman and Sullivan (1988)]. On the opposite side Hines and Rice (1994) and Hines (1996); Carlton (1983) found no help on the effect of charges on FDI. Strikingly, Swensen (1991) finds a noteworthy direct and significant impact of charges on FDI. In like manner the impact, rate of exchange developments on FDI streams is a genuinely very much looked into subject, while the size and bearing of impact is a long way from assured. Froot and Stein (1991) guaranteed that a deterioration of the host money should expand FDI into the assemblage nation, and unexpectedly an expansion in the estimation of the host cash should diminish FDI. Likewise, Love and Hidalgo (2000), additionally recognize that the slacked variable of swapping scale is sure which demonstrates that a deterioration of the peso energizes US coordinate interest in Mexico after some time. In opposition to Froot and Stein (1991); Campa (1993), while breaking down outside firms in the US advances the speculation that a valuation for the host cash will in actuality increment FDI into the host nation that proposes that an energy about the host money builds desires of future gainfulness as far as the home cash. Financial and political accounts across a host nation are capable to have a considerable result in the long-term competence of (FDI) risks. Primary threats are frequently made on the state-run luxuriant intimate the crowd state alongside with the significance of the action (or inaction) of the central government, also known as self-determining risks. These key risk reports contain cruel conflicts, Annexes of international resources, 'grand' dishonesty (i.e., future demands for payoffs from politicians as well as higher-ranking perform official duties route to win agreements), political violence and currency inconvertibility (Zelner and Henisz, 2004). Hard work is recurrently ready to count the likelihood (or probability) that political, financial or economic reports will form the manufacturing environment in such a way that stakeholders will lose wealth or not make as much money as they in the beginning projected (Howell, 1998) Vachani (1995), during his investigation he set up the brimming with life nature of exchanging force and how it can change exhaustively toward the day's end. In exact, Worldwide Venture with in arranging positions may maybe run over them progressively more unprotected to the political danger. Following to the initial speculation has been separated; the dealing power elements are projected to fluctuate. As the business hazard (include the danger of the business' possibility) and vulnerability diminishes following effective usage, the host country will run over itself in a wanting to reconsider the underlying understanding bringing about the oldness of the first fight. Analysts have asserted in order to firms can contract their danger by expanding their exchanging power all through advancing agonies or by utilizing their market power in the host country (Zelner and Henisz, 2005). Bargaining hypothesis research has have an inclination to nervousness the oppositely incorporated extractive enterprises; framework. Furthermore, reasonableness areas and hefty industrialized not as a lot of is notable about the assistance and high innovation zones notwithstanding how these enterprises differ from the assembling just as extractive ventures (Spiller, Bergara&, Henisz, 1998). Besides, earlier hypothetical work exhibited the bartering progression just as the obsolescing deal as energetic in eccentric, it is generally unpredictable to take into charge this strength in massive scale experimental work as a lot of this examination has rely upon objective – haggling - derivation

tolerably than (Vernon, 1971). They found that strong contract enforcement, fragile government intervention, protection of academic property rights and low corruption all positively affect FDI. In this study, Lu, Du, and Tao (2008) show an interesting collaboration between accumulation and recognized quality as this accumulation effect can dull the negative impact of weak public institutions on FDI inflows. Moreover, institutions also denote to local government usefulness and public goods (La Porta et al. 1999). For example, Kwan and Cheng (2000) claim that foreign investments flow to regions with high road and railway mass. Based on an industrialized survey dataset, Park and Li (2006) show that multinationals capitalize in provinces with better setup in the form of electricity providing, communication facilities, as well as roads.

3 Model Estimation:

Our topic is determinates of foreign direct investment. There are many factors which are used as determinants of FDI. But in our model, we just focus of three explanatory variables. Wemake different hypotheses and then check the impact of these variables on foreign direct investment. So, we established following model for estimation:

$$FDI = f (MSZ, TO, INT)$$

$$fdi = \alpha + \beta_1 msz + \beta_2 to + \beta_3 int + \mu_i$$

FDI= Foreign Direct Investment as dependent variable.

MSZ= Market Size used as proxy as an explanatory variable.

TO= Trade openness (Import+export/GDP)

INT= Nominal Interest rate.

μ = Error Term.

In our model we take foreign direct investment as an explained variable because our topic is determinants of foreign direct investment. We took three explanatory variables which are market size, trade openness and nominal interest rate. We assumed that these three variables having major impact on FDI. Market size shows that as the market size of the country increases that invites the foreign investors to invest in the domestic country. That shows the purchasing power of the people. It is used in this model as proxy variable. Second variable is trade openness which is generated by total import plus total export divided by total GDP. Trade openness shows as the import and export as a percentage of GDP increases the foreign direct investment also increases. The last variable is nominal interest rate which is assumed to show negative relationship with the FDI. As nominal interest rate of the country increases it will decrease the FDI.

4 Methodology

In our model we have total four variables. In which our dependent variable which is foreign direct investment (FDI) is stationary at order 1, in our explanatory variable trade openness is also stationary of order 1, market size is also stationary of order 1 but nominal interest rate is stationary at level. We cannot apply simple ordinary least square (OLS) because it is applicable only in a situation where all variable is stationary at level. And we also unable to use co- integration because for co-integrations all variable must be stationary at same level or we can

say that the order of integrations of all variable must be same (which is not) so we cannot apply the technique. In our model we used Auto Regressive Distributive Lag (ARDL). Because our dependent variable is stationary at first order and the order of stationarity is not the same for all variables. Maximum order for stationary is also not greater than 2, so it is best to use ARDL.

Unit Root Test

In time series analysis it is essential to test for the order of integration. Augmented Dickey–Fuller test is a notable test that is legitimate in substantial examples. Bhargava and Sargan built up the ideal limited example tests for unit root in autoregressive models. PP test is likewise utilized to check the stationarity. The first step in econometric investigation is to look at the time arrangement properties of the information by testing either the factors are stationary or not. For this determination, we apply T test, W-detail test, ADF-Fisher Chi-square test and PP-Fisher Chi-square test to the series. In agreement with these imprints, the levels of all arrangement do exclude unit root at 1 percent significance level. This implies levels of this arrangement are stationary.

ARDL

ARDL (The autoregressive distributed lag) model is presented initially by Pesaran and Shin (1999) and additionally reached out by Pesaran et al. (2001) and it manages single co-reconciliation. It is the upside of ARDL approach that it doesn't require all factors to be $I(1)$ {mean all factor stationary at order 1} as the Johansen outline work and it is as yet relevant on the off chance that we have $I(1)$ and $I(0)$ factors in our set. The bound test strategy co-coordination has positive econometric advantages in contrast with different techniques for co-integration. The bound test of ARDL depends on F-statistic (the Wald-test). Pesaran et al. (2001) gave two basic esteems for the co-integration test. The lower basic bound attempts (accept) every one of the factors are $I(0)$ which mean there is no co-coordination association among the tried factors. The upper bound embraces (expect) that every one of the factors are $I(1)$ meaning that there is co-reconciliation among factors. At the point when the value F-measurement is more noteworthy than the upper bound basic esteem, at that point the Null Hypothesis is rejected (the factors are co-integrated). If the F-measurement is underneath the lower bound basic esteem, at that point the H_0 can't be rejected (there is no co-coordination among the variables). When the processed F-statistic falls between the lower and upper bound, the outcomes are vague.

5 Result and Interpretation

Table:1

Dependent variable FDI			ARDL (2,0,0,2)	
Regressors	Coefficients	Std. Error	T –ratios	prob
FDI (-1)	0.75870	0.19005	3.9921	0.001
FDI (-2)	-0.63716	0.16924	-3.7648	0.001
MSZ	0.008896	0.0022	4.1357	0.001
TO	3.4089	2.9814	1.1434	0.267
INT	-0.022177	0.0287	-0.7685	0.452
INT (-1)	0.27565	0.03188	0.86479	0.398

INT (-2)	-0.076655	0.029016	-2.6418	0.016
C	-4.0845	1.3761	-2.9681	0.008
R squared 0.87404			F- stat 18.83(0.000)	
Diagnostic tests				
F-stat. 7.6724		white test 0.10026(0.752)	LM 4.7160(0.13)	

$$FDI = -4.6496 + 0.0101msz + 3.8806to - .0811int$$

ARDL Bound Testing Results

In our analysis we take three variables as explanatory variables. We take market size as proxy variable, trade openness which we get by total export plus total import divided by total GDP and real interest is taken as last explanatory variable. These three variables explained 87% variation in dependent variable which is FDI. The F statistic is (7.6724) greater the upper bound of both at 5% significance level and at 10% level of significance. Our diagnostic tests show that the model is not suffering from serial correlation and Heteroskedasticity. The results ARDL (2,0,0,2) are represented in table no 1.

Stability Tests

In test we check the stability of the model if the blue line lies between the red lines, it shows our model is stable and we can make or recommended any policy for future on the basis of this model. The figure no 1 shows stability of the model in that graph at 5% level of significance our error term is good. In second graph we check the stability of our model by checking its convergence to the mean value. In that model we take the sum of square of the error term and our model shows that at a specific point our model touches the boundary line and later on it converges back.

Figure no 1

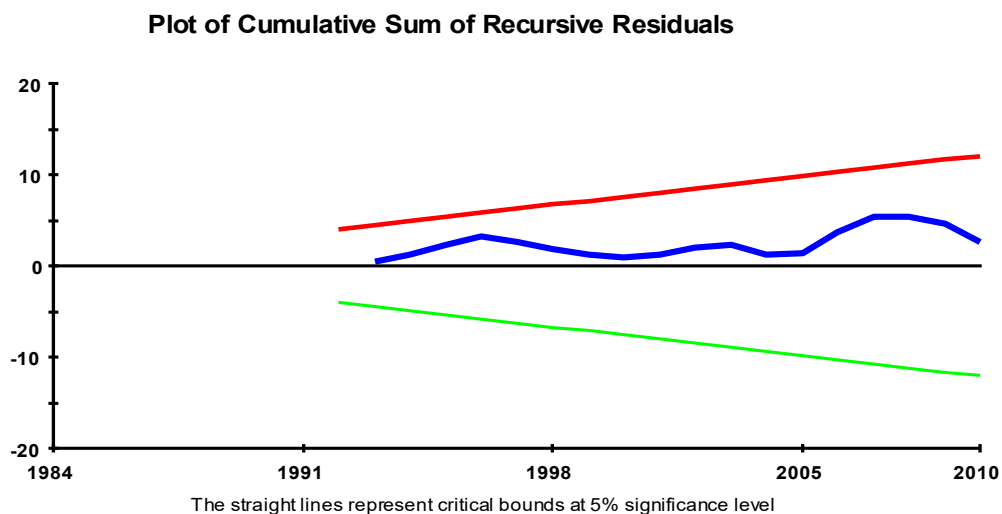
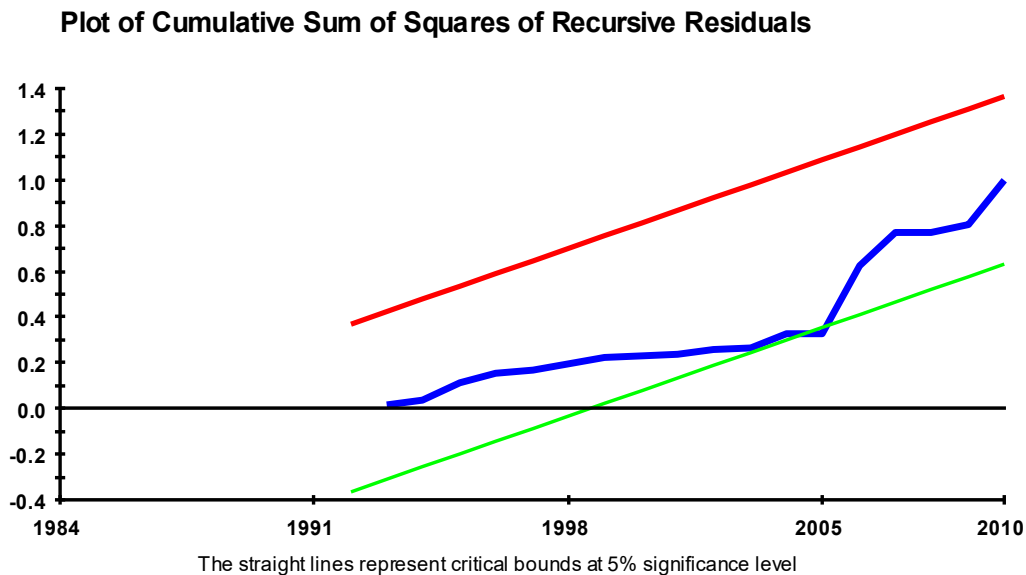


Figure no 2

Results Of Long Run Diagnosis

In this test we estimated long run coefficient which shows that there long runs relationship with dependent variable. In our model market size variable, which is used as proxy variable shows strong long run relationship with dependent variable which is foreign direct investment. That shows positive relationship with FDI (as market size increases the foreign direct investment also increases and vice versa). Our results are coinciding with that of Shahzad, and Zahid, (2012). Second variable trade openness have no impact on FDI so it has no long run relationship. Third, variable nominal interest rate has no relation at 5% level of significance but having negative relationship at 10% level of significance. The result of this variable is in contrast to the results calculated by Rubab, and Zahra., (2016) as they shown positive relation. This relation shows as nominal interest rate increase the foreign direct investment tends to decrease and vice versa results are depicted in table no 2.

Table No 2

Long run coefficients			
Regressors	Coefficients	Std.Error	T –ratios
MSZ	0.010126	0.0013	7.9137
TO	3.8806	3.4422	1.1274

INT	-0.081128	0.042	-1.9408
C	-4.6496	1.3612	-3.4159

ARDL Results of Short Run Dynamics

Short run results of the ARDL model are represented in the table no 2. It also shows the error correction estimates. Short run relation shows that FDI depends on its first lagged as an explanatory variable, market size and first lag of nominal interest rate, while trade openness have not any short run relationship with foreign direct investment. Error correction model shows that after a shock in a model is that will converge to the equilibrium or not? And the coefficient of error correction model shows speed of adjustment. In our model the coefficient of error correction model shows very high speed of adjustment which is 87%. This show in case of any shock it will converge to equilibrium with the speed of 87. The results of ECT are shown in table no 3.

Table:3

6 Conclusion

Dependent variable FDI			
Regressors	Coefficients	Std.Error	T -ratios
DFDI (-1)	0.6371	0.16924	3.7648
DMSZ	0.008896	0.002151	4.1357
DTO	3.4089	2.9814	1.1434
DINT	-0.022177	0.028860	-0.76845
DINT (-1)	0.076655	0.029016	2.6418
ECM _{t-1}	-0.87845	0.17013	-5.1635

In this article we exactly tried the determinants of FDI in Pakistan over the period 1984 to 2019. The primary objective of this study is examining the important determinates of FDI. This study utilized the ARDL Model of co-integration and ECT to distinguish the factors in clarifying the FDI in Pakistan. The examination considered significant three factors which are the size of GDP, trade openness and interest rate, and they clarify the inflow of FDI. In these factors market size having strong relationship with FDI and it is clarifying long run and short run association. This variable is clarifying the significant segment of variety in FDI. Second factor which is trade openness, this variable is having no noteworthy effect on FDI. The last factor which we have taken in to thought amid contemplate is interest rate. Interest rate having no effect at 5% level of noteworthy yet it wound up huge at 10% level of essentialness. The investigation obviously underlines the part of these arrangement factors in pulling in FDI and deciding its development in both short and long keep running in Pakistan. The examination likewise shows a positive and noteworthy effect of changes on FDI in Pakistan.

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