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Factors Affecting Foreign Direct Investment: The Case of the Netherlands

Sidra Shaukat [a], Sara Shokat [b], Khadija Kanwal Khan [c]

[a] M.Phil. Economics Scholar, National College of Business Administration & Economic, Multan, Pakistan
Email: Sidrakhan@gmail.com
[b] CASPAM (Centre for Advanced Studies in Pure and Applied Mathematics), Bahauddin Zakariya University, Multan, Pakistan
Email: Sarakhan@gmail.com
[c] State Bank of Pakistan
Email: Khadijakhan@gmail.com

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ABSTRACT

This study analyzes the effect of gross domestic product, inflation, and natural resource rent on foreign direct investment in the Netherland. Our analysis employs the Autoregressive distributed lag model from 1980 to 2018. The empirical results show that gross domestic product and natural resource rent positively affected foreign direct investment while inflation negatively affected both the short and long run. This study recommends that government officials and policymakers formulate policies to promote foreign direct investment for the development of the economy of the Netherland.

Corresponding author's email address: Sidrakhan@gmail.com

1. Introduction

Foreign direct investment numbers have developed emphatically as a significant type of worldwide capital exchange over the many previous years. It is the most important economic indicator and critical component for a country's financial health and addresses a vital cause of funding capital speculation (Morshed et al., 2022). Additionally, it similarly assurances strength, as the "cold" FDI streams are viewed by way of a steadier wellspring of external financing due to its long-term stay in a country than "hot" portfolio investment treated as short period and a sentence always used for hot money is "hot money burns economy." The term "FDI" refers to a cross-border venture in which the resident of one country controls or has significant influence over the administration of a resident of a different nation. FDI relationships form when a direct investor directly possesses equity in a direct investment firm that allows it to be ten percent or more of the voting power. It benefits both economies (Remitter and Beneficiary) through overflow impact. It is an opportunity for an investor to invest in

developing countries and flourish his business. It is also beneficial for the economy to attract investors to develop the country's infrastructure, human capital, and per capita income (Faheem et al., 2022).

FDI plays a significant role in the nation's growth and a sense of competition to produce better. It is a non-obligation unfamiliar resource. The job of the FDI is very significant concerning the exchange of innovation in technology and skills. Late years have seen a huge shift in the world's FDI, as non-industrial nation fires the top choice for MNEs to set up their work and business. Various hypotheses clarify the rationale and factors behindhand the speculation choice away from the home nation (Pattayat, 2016). Foreign direct investment hurts the environment even though it increases economic development (Faheem et al., 2021). According to the pollution haven theory, foreign direct investment negatively influences the environment in developing countries since there are few environmental controls in place (PHH).

Consequently, developing economies are more concerned with real economic growth than sustainable economic growth (Hoang et al., 2022). Furthermore, FDI provides chances to enhance professional advancement in technology, capital information sources, and human resources improvement by preparing locals using foreign skills and adds to corporate incomes in the host nation (Feldstein, 2000). An increase in growth with better quality, export out, and up-gradation in delicate and hard infrastructure will lead the economy to better economic growth and increase in Balance of payment condition, i.e., increase in exports and decrease in imports. Conversely, Foreign Portfolio Investment (FPI) is a capital stream into a country that looks for monetary revenues in the short term over an interest in the stock and security markets. Economies do not recommend FPI since it is connected with quick outpourings in emergencies to make a profit and leave the stocks, disrupting the operations of native financial markets.

The previous literature shows mixed findings about factors of foreign direct investment. Especially in the case of the effect of GDP, natural resource rent, and inflation boost foreign direct investment. In contrast, others were found to be negatively affected in different regions, including the Netherlands. To fill this gap, our study tries to check the exact relationship between the abovementioned variables with foreign direct investment.

The design of the paper is by way of the following. Section 2 is literature writing proof of FDI, and Section 3 clarifies the methodology. At last, the conclusion portion of this paper may furnish some planning and strategy for policymakers to develop certain ideas concerning FDI in the Netherlands.

2. Literature Review

Reuber et al. (1973) observed that the profitable market, the liberal host government strategies, the technological setup, and the proximity of cultures were the primary factors that drew US investment. According to Garibaldi et al. (2001), who studied the factors affecting foreign capital inflows in 26 transition economies between 1990 and 1999, the main factors that influenced FDI flow into these economies included the size of the market and inflation, fiscal deficit exchange rate regime economic reforms, risk analysis, and trade openness, the access to natural resources investment barriers and the bureaucracy. Foreign direct investment in Turkey was studied by Bilgili et al. (2012). This study focused on time-series data from 1988 to 2010. The dynamic model applied the likelihood methodology of the Markov Regime switching Model, which positively affected long-run growth on FDI and capital accumulation. Derazo (2013) aimed to associate the relationship between market size, trade openness, geographical proximity, and foreign Direct Investment. The study employed OLS. The study employed OLS and Multiple Regression Methodology using the panel data from 1990 to 2010. The

results show that FDI bilateral effect and gravity variables are based on the constant return to scale. Addison et al. (2003) described the association between GDP, Foreign Direct Investment, and trade openness. The study used secondary panel data from 1988 to 2000. The empirical results show that GDP growth and trade openness positively affect FDI.

Kimino et al. (2007) investigated FDI (foreign direct investment) in Japan. The study used panel data from 1989 to 2002. The study used the pooled Ordinary Least Square Methodology. The findings provided a very important side to the determinants of Foreign direct investment Inflow in Japan. Cavallori and Addona (2013) Specified the role of foreign direct investment on economies by using the panel data from 1985-2007. The study used the Regression approach that indicates the results income effects negatively, and output is positively related to the exchange rate. Output has less influence, while the interest rate is more influenced by FDI. Kachoo and Khan (2012) estimated how the elements of foreign direct investment influenced developing economies. The study used panel data from 1982-2008. The Ordinary least square methodology is applied for this purpose. The results show that GDP has a positive association and the wage rate negatively links with FDI. Pattaya (2016) determines the effects of foreign direct investment by applying the time series data from 1980 - 2013. The study employed multiple regression techniques on macroeconomic variables like GDP, Trade openness, exchange rate, and FDI inflows. The conclusion reveals that the GDP has a direct effect on FDI.

By using data from 1985 to 2012, Faroh and Shen (2015) evaluated the economy of Sierra Leone. They discovered that, while interest rates have no bearing on FDI inflows, rate of exchange stability and greater trade openness consistently and meaningfully fascinate extra FDI. The examination proposes that to attract an ever-increasing number of foreign capital inflows, these nations need to keep up with development energy to develop their market size further and trade policies, utilize plentiful labor supply and discourse foundation blocks, and follow further open trade policies. Abbott et al. (2012) conducted an observational. The findings of an analysis of the effect of the exchange rate command on flows to FDI, an exchange rate command board comprising 70 emerging countries between 1985 and 2004, showed that the non-industrial nations that have fixed or intermediate exchange rate systems were significantly more successful than those that have rigid exchange rate system frameworks for attracting FDI flows.

Similarly, from 1990 to 1999, foreign direct investment and portfolio investment moved to twenty-six Eastern European transition nations, with the former Soviet Union, examined by Garibaldi et al. (2001). The regression analysis suggests that the flow of foreign direct investments is an effective method to explain the basic economic indicators like how big the market is, a deficit in the budget and the rate of inflation, changes in the rate of exchange economic reforms, risk assessments as well as trade openness, abundance in natural resources obstacles to investment and administrative burdens. However, the basic economics don't adequately reflect the flow of portfolios. However, Sahoo (2006) conducted a study between 1975 and 2003 to examine the causes of foreign direct investments in South Asian nations. Pakistan, Bangladesh, India, and Sri Lanka were among the countries which were represented in the sample. Panel Co-integration and Pooled Ordinary least squared were used to establish the determinants of foreign direct investment. The dependent variable, FDI, and the 11 explanation variables were included in the analysis. The primary variables that predict FDI, per the study's empirical findings, were the size of the market, the growth rate of the labor force, and the index of infrastructure, as well as trade openness. Levy-yeyati et al. (2002) identified to what extent developed economy economic cycles and interest rate changes influenced FDI flow to emerging countries between 1980 and 1990. They study the components of bilateral FDI by using the gravity model. They determine that FDI movements since the United States and Europe change counter-

cyclically to the source country's business cycle and that interest rate phases are major predictors of FDI arrivals.

3. Data and Methodology

The current paper uses foreign direct investment as the dependent variable, and gross domestic product, inflation, and natural resource rent are independent variables. The data is sourced by World Development Indicator (WDI). The study covers the data from 1980-2018 for the Netherlands. Previous researchers used conventional least square methods to establish the long-term correlations of time-variable variables, including the Johansen (1990) cointegration technique and the Engle-Granger causality method. A different approach for cointegration, referred to by "ARDL," or the "Autoregressive Distributed Lag (ARDL)" bound test, was suggested in recent research by Pesaran et al. (2001), Pesaran and Shin (1999), and Nayaran (2006). In contrast to other methods, such as the Engle-Granger traditional two-step approach and the maximum likelihood method of cointegration employing this ARDL model, also known as "Bound Testing Approach, "Bound Testing Approach," has many advantages (Johansen) and Juselius (1990).

ARDL is the most reliable method of establishing the cointegration relationship in smaller samples than Johansen cointegration techniques that require large samples to provide accurate estimates of parameters per Pesaran (2001) and Nayaran (2006). The most significant advantage is that ARDL estimation can be utilized with regressors that are either absolute ordered zero or pure ordered, or a mix of both (Faheem et al., 2020). In contrast to other methods of cointegration that require the regressors are connected in the same way. Because of this, we employed the ARDL method.

4. Econometric Strategy:

The study uses the time series econometric approach Autoregressive Distributed Lag (ARDL) Model on behalf of stationarity results (Augmented Dickey-Fuller ADF and Phillips Perron PP test). Autoregressive Distributed Lag Model (ARDL) is most suitable in case-mix order integration. This methodology has advantages over traditional econometric methodologies. It can be applied even in the case of a small sample; It is suitable if all variable is stationary at level I(0) or 1st difference or mix the order of integration (Chaudhry et al., 2021; Farooq et al., 2020). The study has applied the F-bound test to check the long-term co-integration between variables.

Table 1: Data Sources and variables Description

Variable	Symbol	Source
Foreign Direct Investment	FDI	WDI
Gross Domestic Product	GDP	WDI
Inflation	INF	WDI
Natural Resource Rent	TNRR	WDI

5. Results and Discussion

5.1 Descriptive Stat and Correlation Matrix

The outcomes of descriptive statistics show the mean, median, maximum and minimum values of the data of all variables. This table also indicates the data's standard deviation, Skewness, and Kurtosis. The following table 4.1 portrays the descriptive statistics and correlation matrix.

Table 4.1: Descriptive Statistics & Correlation Matrix Results				
	FDI	*GDP*	*INF*	*TNRR*
Mean	*9.37E+10*	*6.78E+11*	*2.254282*	*0.683434*
Median	*2.05E+10*	*7.10E+11*	*2.113788*	*0.497602*
Maximum	*7.34E+11*	*9.47E+11*	*6.738930*	*1.856437*
Minimum	*-3.61E+11*	*4.20E+11*	*-0.691203*	*0.094484*
Std. Dev.	*1.71E+11*	*1.73E+11*	*1.552631*	*0.441841*
Skewness	*1.219023*	*-0.130353*	*1.186813*	*1.029180*
Kurtosis	*7.310618*	*1.533825*	*4.945912*	*3.209919*
Jarque-Bera	*39.85393*	*3.603659*	*15.30859*	*6.956480*
Probability	*0.000000*	*0.164997*	*0.000474*	*0.030862*
Sum	*3.65E+12*	*2.65E+13*	*87.91699*	*26.65393*
Sum Sq. Dev.	*1.10E+24*	*1.13E+24*	*91.60514*	*7.418507*
Observations	*39*	*39*	*39*	*39*
FDI	*1*			
GDP	*0.486*	*1*		
INF	*-0.218*	*-0.397*	*1*	
TNRR	*0.077*	*-0.254*	*0.415*	*1*

5.2 Unit Root Test Results

The following table 4.2 show the ADF and PP test results. The outcome results explain variable GDP and foreign direct investment is non-stationary at a level, and they are stationary at first difference. On the other hand, variable INF and TNRR are stationary at both level and first difference.

Table 4.2;' Unit Root Test				
	ADF Test;'		**PP Test;'**	
	Level(0)	1st Diff	Level(0)	1st Difference
FDI	-2.717	-6.040***	-2.671	-5.960***
GDP	-0.400	-3.879***	0.017	-3.818***
INF	-3.246**	-5.246***	-3.246**	-5.353***
TNRR	-3.337**	-5.661***	-3.300**	-8.561***

*Note: *, **, *** denotes significance level at 10%, 5% and 1%, respectively.*

5.3 ARDL Bound Test Results

The following table 4.3 shows the results of long-run co-integration. The value of the F-test is upper than (1) upper bound, which shows a long-run association among the variables.

Table 4.3: ARDL Bound Test Results			
Test Statistic.	***Value.***	***I(0)***	***I(1)***
F-statist	*4.646705*	*2.72*	*3.77*
K	*3*	*3.23*	*4.35*
		3.69	*4.89*
		4.29	*5.61*

5.4 Long Run/Short-Run Results and Diagnostic Checking

The following table 4.4 explains the main ARDL results. The results show all variables are significant in the long run and short run. More specifically, foreign direct investment positively affects GDP and total natural resource rent. At the same time, inflation negatively affects foreign direct investment in both the long and short run.

Table 4: Short and Long Run Estimations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Short Run Estimates				
D(LGDP)	16.35	5.32	3.06	0.004
D(LINF)	-0.511	0.249	-2.048	0.052
D(LTNRR)	0.640	0.213	2.997	0.006
ECT	-0.644	0.158	-4.064	0.000
Long Run Estimates				
LGDP	7.327	0.495	14.789	0.000
LINF	-0.463	0.201	-2.298	0.031
LTNRR	0.697	0.153	4.522	0.000
C	-175.382	13.497	-12.994	0.000

5.5 Diagnostic Estimates

All the result for the diagnostic tests seems to have a white sound. The value for R-squared is 0.93, and the adjusted R- square is 0.93. The results show model is free from severe issues of hetero and serial correlation and is normal and stable in the long term.

Table 5: Diagnostic Estimates

R^2	0.94
Adj. R^2	0.93
J.B Test	0.774 (0.678)
Hetero Test	1.532 (0.207)
LM Test	0.094 (0.910)
Ramsey RESET Test	1.270 (0.268)

6. Conclusion and Policy Implication

Our work explores the effect of gross domestic product, inflation, and natural resource rent on foreign direct investment in the Netherlands. The study applies the Autoregressive distributed lag model for 1980-2018. The empirical results show that gross domestic product and natural resource rent positively affected foreign direct investment while inflation negatively affected both the short and long run. This study recommends that government officials and policymakers formulate policies to promote foreign-direct-investment (FDI) for developing the country of the Netherlands.

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