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Impact of Corruption on Foreign Direct Investment: An Empirical Analysis for Sri Lanka

P. Anusha[1], K. Denistan[2]

[1]Department of Economics and Statistics, Faculty of Arts,

University of Peradeniya, Sri Lanka. Tel: +94763977734

E-mail: pathmakanthananusha94@gmail.com

[2]Faculty of Business, University of South Wales, UK. Tel: +447863533268

E-mail: denistan503@gmail.com

Abstract: *Foreign direct investment (FDI) is considered as one of the major factor that promotes the economic development in developing countries like Sri Lanka. Even though in Sri Lanka the pace of FDI is more, the corruption rates additionally similarly more. The FDI is became an important avenue in adopting new technologies, diversify and increase exports, skills and managerial capabilities in the different sectors of the economy which are traditionally difficult to raise through use of domestic saving. Thus, this study attempts to examine the impact of corruption on FDI in the context of Sri Lanka using annual data of 1996-2020. We used FDI net inflows (FDINET), gross domestic product growth rate (GDPGR), control of corruption (COC), exchange rate (ER), Political stability and absence of violence (PSAV), trade openness (OPEN), 91 days treasury bills rate (TBR) as variables. The ADF and PP unit root tests confirmed that none of the variables are I (2), which allows us to examine the co integrating relationship between the variables using ARDL Bound testing method. AIC advocated employing ARDL (2, 1, 1, 1, 0, 1, 1) model among the top 20 models. The bound testing results detected the co integrating relationship between the variables. Results of CUSUM test confirmed that the selected ARDL model is stable. Further, this model passes the all the diagnostic tests of serial correlation, heteroscedasticity, omitted variables and normality of error term. Although there is a significant relationship between COC and FDINET in the long run, but there is no significant relationship between these two series in the short run. The Granger causality test found that there is a causality relationship between COC and FDINET. These findings could be useful to policy makers when they formulate and implementing the FDI and corruption related economic policies.*

Keywords: *Foreign Direct Investment, Corruption, Autoregressive Distributed Lag Model, Sri Lanka.*

I. Introduction

Some countries in the world are developing rapidly; some countries are still seen as poor. There are many important reasons for this. Thus the growing importance of foreign direct investment is seen as an important aspect to be observed in economic globalization. In most countries, foreign direct investment is

one of the factors contributing to the economic development of those countries. Foreign direct investment (FDI) is a major component of capital inflows in developing countries. That is why these countries are taking a number of steps to increase foreign investment. Domestic and foreign investments are the sources of capital formation in the private and public sectors. The poor countries do not have the domestic resources needed to meet their investment needs. This is due to low domestic savings, low per capita income, frequent stagnant inflation, low export earnings, inefficient financial institutions, corrupt practices, and political and economic instability. Among these factors, however, are corruption and political instability as the most important risk factors for investment.

At the same time, many theories were initially put forward by many regarding the factors that determine or determine foreign direct investment. Among them, the theories of Adam Smith (1776), Ricardo (1817) are important. They examine the impact of economic openness, economic growth on capital, corruption, wage rates and government policy on foreign direct investment. Further, corruption can be seen to be more prevalent in developing countries. At present, the government of Sri Lanka is facing various economic problems. Among them are issues related to foreign direct investment that have not yet attracted the attention of many but are likely to be the biggest challenge in the future. The countries like Sri Lanka have a high literacy rate and a high level of foreign investment, but there is also a high level of corruption in those sectors. Because of it foreign direct investment is reducing.

Further, after the end of the Sri Lankan civil war in 2009, similarly when 'the good governance' government came to power in 2015, one of their most important goals was to increase foreign investment and achieve the goal of creating an administration without corruption. In particular, Sri Lanka's fluctuation in the economic environment and diverse economic policy were obstacles to achieving this goal.

More, corruption is seen as one of the most devastating consequences. Although global foreign investment increased by 24% from 1991 to 2000, it increased to 20% in developing countries (World Investment Report, 2002). However, foreign direct investment fell sharply in 2001 due to the recession in the world economy. In addition, FDI inflows for 2018 have fallen by 27% compared to 2017 (International Economic Cooperation Development Institute 2019). Sri Lanka pursued a closed economic policy prior to economic liberalization. During the period, Sri Lankan foreign direct investment was low. But after the liberalization of the economy in 1977, foreign direct investment increased in Sri Lanka. The foreign direct investment (FDI) inflows, which were flat from 1996 to 2006, increased to 752200000 (BoP, current US$) in 2007. Then in 2009, it fell to 404000000 (BoP, current US$). However, it is increased to 1374894656.60811(BoP, current US$) (Global Development Report 2018).

However, in today's context, foreign investors are reluctant to invest in Sri Lanka as a result of their increased focus on Sri Lanka's recent corruption scandal. Many times foreigners have tried to privatize Sri Lankan state-owned enterprises. But for various reasons, they have not been effective and the result has been a decline indirect investment. In addition, the primary goal of most investors in Sri Lanka is to reduce costs. But in today's era of increasing corruption in Sri Lanka, the size of the investor is declining as the costs of investing in Sri Lanka are high. According to the World Health Organization's 2018 report, we can identify that Sri Lanka's corruption has been on the rise since it was relegated from 79th to 89th place in the world rankings in 2018. Further, according to the Sri Lanka Corruption Perceptions Index (2019), Sri Lanka has the highest level of corruption with 4 points in 2012, the lowest level of corruption with 3.1 points in 2006, and the average level of corruption with 3.4 points in 2018 (Corruption is measured by 1-10 points and also point 1 reflects the low level of corruption, point 10 reflects the high level of corruption).

A 2013 corruption assessment survey indicates that the values of honesty and cleanliness are declining due to the excessive power and influence of those in the Sri Lankan government. As a result, the effects of

foreign direct investment are likely to move from Sri Lanka to less corrupt countries than Sri Lanka. According to the study by Robertson and Watson (2004), corruption has been found to have a negative impact on foreign direct investment in developing countries. Further, when a company engages in corrupt practices in order to gain investment opportunities, it can lead the company to future intimidation efforts, according to Rose Ackevman (1999). And Corruption reduces economic growth and causes transaction costs, as noted by Besley and Mclaren (1993) and Husted (1995). Next, Cazurra (2007) examined the impact of corruption on foreign direct investment based on data from 12 developed countries from the period 1998 to 2000. Finally, he noted that corruption in developed countries has a negative impact on foreign direct investment and that government and foreign policy should be aimed at reducing levels of corruption.

Therefore, theories and previous studies have shown that corruption is a barrier to foreign direct investment and when looking at the data on these two variables in Sri Lanka, there is a fluctuating tendency both direct investment and corruption in Sri Lanka. Since it is not clear what the relationship is between the two variables, it is necessary to find the relationship between the two variables using the most modern economics techniques.

II. Literature review

The review of theoretical literature helps to understand the real relationship between variables in a study. Since no direct theoretical explanations are found in relation to this research topic, theories aimed at indirectly relating these two variables of foreign direct investment and the corruption are intended here.

First is the Vernon production cycle theory. In 1966, Vernon developed the theory of the production cycle, describing some of the FDI made by American companies in Western Europe after World War II. He said that there are four stages in the production cycle which are innovation, growth, maturity and decline. According to Vernon, in the first stage, companies in the United States developed new products and exported them to domestic consumption and overseas markets. According to the theory of the production cycle, the demand for goods produced in the United States increased in Europe after World War II. Thus, American companies began to export. And through technology their international trade grew. Manufacturers benefit from adopting new technologies when the production cycle is in its early stages. Thus production increases. As a result, companies in the United States began to follow in the footsteps of European companies. Due to this, FDI has increased. This theory managed to clarify bound forms of investments in Western Europe created by U.S. corporations between 1950 and1970. Although there are areas where Americans have not possessed the technological advantage and FDIs were made during that period.

Second theory is the Exchange Rates on Imperfect Capital Markets. This theory developed by Itagaki (1981) and Cushman (1985) to illustrate FDI. Cushman shows that real rate of exchange increase excited FDI created by USD, whereas a distant currency appreciation has reduced American FDI. Cushman concludes that the greenback appreciation has led to a reduction in U.S. FDI by 25%. However, currency risk rate theory cannot make a case for simultaneous FDI between countries with totally different currencies. The sustainers argue that such investments are created in several times, however there are enough cases that contradict these claims.

Third theory is the theory of internalization, which tries to explain the growth of transnational companies and their motivations for achieving FDI. This theory was developed by Buckley and Casson, in 1976 and then extended by Hennart, in 1982 and Casson, in 1983. Initially, this theory was launched by Coase in 1937 in the national context and Hymer in 1976 in an international context. In his Doctoral thesis, Hymer had known 2 major determinants of FDI. One was the removal of competition. The other was the advantages which some firms possess in a particular activity. Hymer is that the author of the concept of firm-specific

abenefits and demonstrates that FDI crop up provided that the advantages of exploiting firm-specific advantages outweigh the relative prices of the operations abroad. According to Hymer (1976), the MNE seems because of the market imperfections that led to a divergence from good competition within the final product market. Hymer has mentioned the matter of data prices for foreign corporations revered to native corporations, totally different treatment of governments, currency risk (Eden and Miller, 2004). The result meant an equivalent conclusion: multinational corporations' face some adjustment prices once the investments are created abroad. Hymer recognized that FDI could be a firm-level strategy decision instead of a capital-market money decision.

In sum, production cycle theory developed by Vernon in 1966 suggests that development of technologies was important for the growth of FDI. Itagaki (1981) and Cushman (1985) argued that the exchange rate theory for the Imperfect Capital Markets was driven by the fact that the increase in the real exchange rate was driven by FDI, and that foreign currency valuation had reduced FDI. The theory of internalization, put forward by Buckley and Casson in 1976, explained the growth of companies in the country and their drive to attract FDI, and that FDI would only take place if foreign investment exceeded the relative cost.

Further, the review of previous studies also aids in gaining a broader knowledge of the research being conducted, in organizing the study, in identifying the research methodology, and in making recommendations. Although various studies have been conducted in this regard focusing on the impact of corruption on FDINET, only a few important studies that are most relevant to our research topic are reviewed here.

Focusing on the 99 countries, Robertson and Watson (2004) employed secondary data from 1998 to 2000 to examine the impact of corruption in emerging countries. Using the Corruption Perceptions Index, the foreign direct investment per capita, the Human Development Index, and the GDP as variables, they found that corruption has an indirect and indirect effect on foreign direct investment. As a result, the number of investors is declining and foreign direct investment is declining. In addition, Cole and et al. (2009) examine whether FDI is motivated by the effectiveness of provincial governments and anti-corruption efforts in creating representatives who are highly active in the fight against corruption that express good governance using the China data over the period 1980-2006. The results of this study depict that FDI is increasingly being attracted to the provinces which have relatively high levels of government efficiency and are actively involved in the fight against corruption. Zurawichi and Habib (2010) conducted a study to examine the relationship between corruption, foreign direct investment and international organizations using data from 70 countries using the data over the period of 1980 - 1983. They used variables such as GDP, FDI, Corruption Perceptions Index and Unemployment Rate. The results of the study show that corruption has a negative impact on imports, exports, and foreign investment, and that corruption has a greater impact on foreign direct investment than on the country's exports.

Moreover, Cazurra (2007) aimed to examine the relationship between foreign direct investment and corruption using data from 12 developed countries. The study uses time series data for the period 1998-2007, using a dual logarithmic model with variables such as education, gross domestic product, and corruption index and population density. He concludes that in developed countries; Corruption has been found to have a negative impact on foreign direct investment. The study suggests that government policies and foreign policy should be aimed at reducing levels of corruption as they have the opposite effect on quality of life.

Next, Quazi (2014) explored the relationship between foreign direct investment and corruption in 9 countries, including East Asia and South Asia. The study concludes that political instability, market opportunity, infrastructure and human capital are motivating foreign investors, but that corruption can change all that, and that foreign direct investment can be increased by adopting strategies to promote long -

run development. Time series data for the period of 1995-2011 were used in this study.

Castro and Nunes (2013) investigate the how foreign investment is more prevalent in less corrupt countries and therefore how corruption restricts foreign direct investment from 79 countries data for the period 1998-2008. The data was analyzed using the generalized least squared (GLS) technique, it has been concluded that the quality of governance is positively correlated with the inflow of FDI and that the investments are affected by corruption and that corruption reduces the value of investment assets and that corruption has a negative impact on foreign direct investment. Further, Muzurura and Joe (2013) conducted a study using annual time series data over the period of 31 years (1980 to 2011) with the aim of identifying the factors that are primarily influential in attracting sufficient FDI to Zimbabwe. Using multiple linear regressions techniques, the study concluded that gross fixed capital formation, inflation, trade openness, corruption, political instability, poor governance, weak export competitiveness and inconsistent government policies prevented the inflow of FDI into Zimbabwe. The study suggests that the country should adopt good economic policies that reduce the risk of political instability and corruption in order to attract adequate FDI. Another study focusing on SAARC member states (Afridi and Shah, 2015) found that political stability and regulatory quality significantly affect FDI, and the spread of corruption has a negative impact on FDI infiltration.

Next, we look at the studies that are conducted in Sri Lanka. For instance, Vijesandiran and Vinayagathasan (2020) investigated the relationship and impact of economic and non-economic factors on the net inflows of FDI using the time series data from 1996 to 2017. They used ARDL Bounds test method for data analysis and conclude that political instability has a significant and negative impact on the FDI in the long run. Further they suggested that although increase in corruption and corporate taxes have reduced the FDI as expected, the effect is not statistically significant in the long run.

Given the growing importance of foreign direct investment in Sri Lanka, it has been an area of corruption that has not been empirically researched much for the Sri Lankan case. Even there are limited studies on FDI in Sri Lanka that were mainly focused the economic factors that could influence on FDI, not given enough concern to the impact of non-economic factors which are related to risk on FDI flows in Sri Lanka. Therefore, it is important to explore the impact of non-economic factors that are determining the FDI inflows in Sri Lanka. Hence, this study attempts to fill this gap by investigating the influences of corruption on FDI net inflow in Sri Lanka.

III. Data, Variables, and Methodology

This study intends to examine the impact of corruption on foreign direct investment using annual data from Sri Lanka over the period 1996 to 2019. The time period is limited to the above period due to the availability of data for selected variables. The Foreign Direct Investment Net Inflow (FDINET) was used as the dependent variables, and Control Of Corruption (COC), Trade Openness (OPEN), Political Stability And Absence Of Violence/Terrorism (PSAV), and Exchange Rate (ER) were used as the independent variables. The data of Foreign Direct Investment Net Inflows, Exchange Rate (ER), GDP are collected from World Development reports of the World Bank, and Control Of Corruption (COC) and Political Stability And Absence Of Violence/Terrorism are collected from World Governance Indicators of the World Bank database, and data of Trade Openness was collected from Central Bank reports of Sri Lanka.

In examining the effect of corruption on FDINI, the model can be defined as follow:

$$FDINET_t = \propto_0 + \propto_1 TBR_t + \propto_2 COC_t + \propto_3 ER_t + \propto_4 GDP_t + \propto_5 PSAV_t + \propto_6 OPEN_t + U_t \quad (1)$$

Where, $\alpha_i (i = 0, \ldots\ldots, 6)$ are the slop coefficients and u_t is the white noise error term. Variables are as described above.

As the first step of the estimation procedure, ADF and PP unit root tests were adopted to test the stationarity property of data series. When series are stationary at I(0) and I(1) Autoregressive Distributed Lag (ARDL) model which was developed by Pesaran et al. (2001) can be employed to find out the long-run and short-run relationship and long-run adjustment. The ARDL Bound testing technique can be defined as below.

$$\Delta FDINET_t = \beta_0 + \beta_1 FDINET_{t-1} + \beta_2 TBR_{t-1} + \beta_3 COC_{t-1} + \beta_4 ER_{t-1} + \beta_5 GDP_{t-1} + \beta_6 PSAV_{t-1} + \beta_7 OPEN_{t-1} + \sum_{j=1}^{q_1} \rho_{1j} \Delta FDI_{t-j} + \sum_{j=0}^{q_2} \rho_{2j} \Delta TBR_{t-j} + \sum_{j=0}^{q_3} \rho_{3j} \Delta COC_{t-j} + \sum_{j=0}^{q_4} \rho_{4j} \Delta ER_{t-j} + \sum_{j=0}^{q_5} \rho_{5j} \Delta GDP_{t-j} + \sum_{j=0}^{q_6} \rho_{6j} \Delta PSAV_{t-j} + \sum_{j=0}^{q_7} \rho_{7j} \Delta OPEN_{t-j} + e_t \quad (2)$$

Where, Δ denotes the first difference operator, β_0 is the drift component, e_t is the white noise error term, $\beta_2 \rightarrow \beta_7$ correspond to the long-run relationship, the remaining expressions with the summation sign $(\rho_{1i} \rightarrow \rho_{7i})$ represent the short-run dynamics of the model. Bound testing procedure is used to investigate the existence of long-run relationships among the variables.

In the next step of the estimation procedure we need to obtain the short run dynamics of parameters and long run adjustment of the model by estimating the Error correction version of ARDL model pertaining to the variables in Equation (3) is as follows:

$$\Delta FDINET_t = \lambda_0 + \sum_{j=1}^{q_1} \lambda_{1i} \Delta FDINET_{t-i} + \sum_{j=0}^{q_2} \lambda_{2i} \Delta TBR_{t-i} + \sum_{j=0}^{q_3} \lambda_{3i} \Delta COC_{t-i} + \sum_{j=0}^{q_4} \lambda_{4i} \Delta ER_{t-i} + \sum_{j=0}^{q_5} \lambda_{5i} \Delta GDP_{t-i} + \sum_{j=0}^{q_6} \lambda_{6i} \Delta PSAV_{t-i} + \sum_{j=0}^{q_7} \lambda_{7i} \Delta OPEN_{t-i} + \tau ECT_{t-1} + u_t \quad (3)$$

Where, λ is speed of adjustment coefficient, u_t is pure random error term. Meanwhile as this methodology considers both short-run and long-run relationships it facilitates policy making to attain expected changes of the economy through these variables.

We can define the granger causality test model between the foreign direct investment and the Control of corruption as follows:

$$\Delta FDINET_t = C_1 + \sum_{i=1}^{P} \beta_i \Delta FDINET_{t-i} + \sum_{i=1}^{p} \alpha_i \Delta COC_{t-i} + U_{1t} \quad (4)$$

The hypothesis test for the above model can be defined as follows:

H_0 : The Control of corruption does not have any causality impact on the foreign direct investment.

H_1 : The Control of corruption has a causality impact on the foreign direct investment.

$$\Delta COC_t = C_2 + \sum_{i=1}^{P} \theta_i \Delta FDINET_{t-i} + \sum_{i=1}^{p} \delta_i \Delta COC_{t-i} + U_{2t} \quad (5)$$

The hypothesis test for the above model can be defined as follows:

H_0 : The foreign direct investment does not have any causality impact on the Control of corruption.

H_1 : The foreign direct investment has any causality impact on the Control of corruption.

It is possible to know the relationship between these two variables as mentioned above. Thus, for each pair of variables used in our study, the granger causality relationship test is performed and the causality relationship between them is determined.

IV. Results and Discussions

In first steps of the estimation procedure, we have to confirm the order of integration of all the series. The results of ADF and PP unit root tests are given in Table 1.

Table 1: Results of Unit Root Test

Variables	ADF Test		PP Test		Order of Integration
	Level	1st difference	Level	1st difference	
FDINET	0.9982	0.0110**	0.9984	0.0066***	I (1)
COC	0.2049	0.0015***	0.2099	0.0000***	I (1)
ER	0.9476	0.0010***	0.9544	0.0010***	I (1)
GDPGR	0.0179**	0.0000***	0.0179**	0.0000***	I (0)

OPEN	0.0701	0.0125**	0.0482**	0.0008***	I (0)
PSAV	0.6152	0.0461**	O.8279	0.0677*	I (1)
TBR	0.7717	0.0030***	0.7816	0.0028***	I (1)

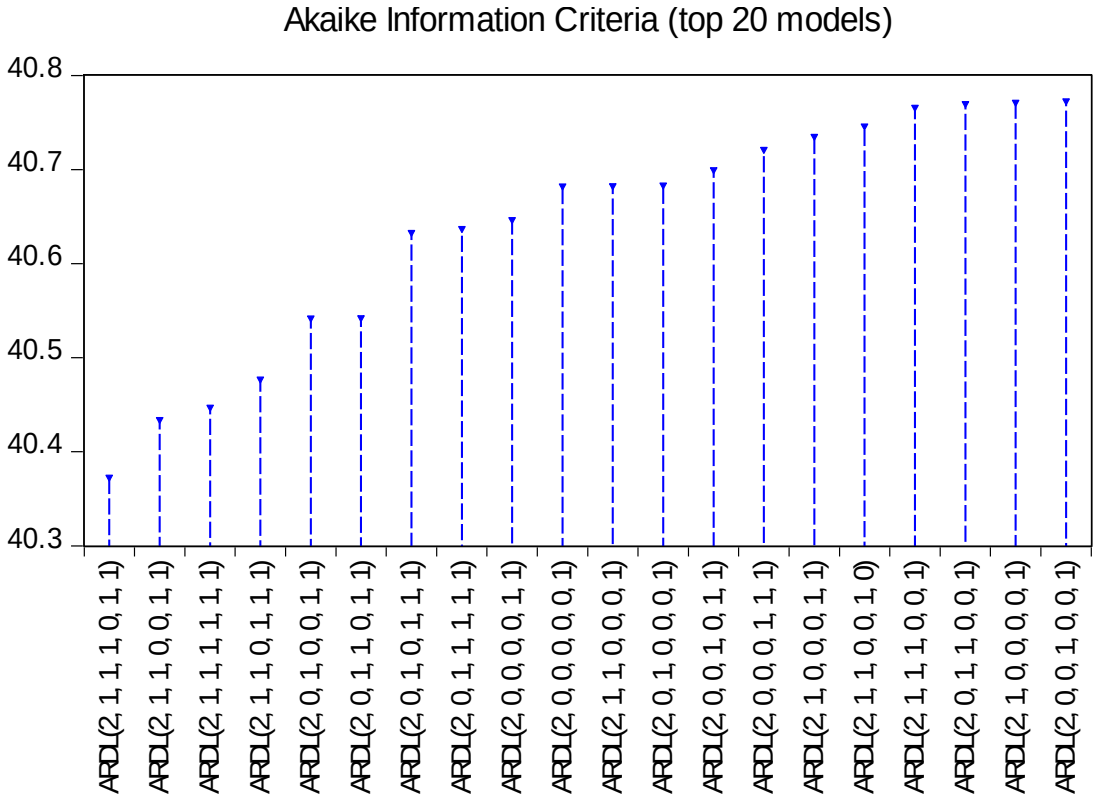
Note: Probability values are given in the Table. ***, **, and * imply the rejection of the null hypothesis at 1%, 5%, and 10% levels of significance respectively.

Source: Authors calculation

Both ADF and PP unit root test approaches confirm that all variables became stationary at their first difference form except GDPGR and OPEN which became stationary in level form when we included intercept only in the model. Thus, ADF and PP unit root test approaches with intercept only in the model confirm the presence of I(0) and I(1) variables (see Table 1 above). Therefore, we have a tendency to adopt ARDL bound testing technique to estimate the parameter.

On the basis of unrestricted VAR model and AIC criteria, we selected 2 lags as optimum lag for the model and we used this lag length for ARDL model to select the optimum number of lag for each variables that can be included in the model (ordering of the variables are COC, ER, GDPGR, OPEN, PSAV and TBR). AIC results (given below in Figure 1) suggest that to employ ARDL (2, 1, 1, 1, 0, 1, 1) model among the top 20 models in order to estimate the parameters.

Figure 1: Results of Optimum Lag Length for Each Variable (AIC)



The above model passed all the diagnostics tests (see Table 2 below). First, Lagrange Multiplier (LM) test of serial correlation between the error terms suggests that the residuals are not serially correlated since we failed to reject the null hypothesis of no serial correlation in the residual as probability value is greater than the 5% level of significance. Second, according to the Jarque-Bera (JB) test, the null hypothesis of normally distributed residuals cannot be rejected as probability value is higher than 5% level of significance, which indicates that error is normally distributed. Thirdly, Breusch-Pagan-Godfrey (BPG) test of heteroscedasticity detected that the disturbance term in the equation is homoscedastic as we failed to reject the null hypothesis

since the probability value exceed the 5% significance level. Finally, the Ramsey RESET test result confirms that there is no specification error in the estimated model since we accept the null hypothesis of no omitted variable in the model as probability value is greater than 5% level of significance.

Table 2: The Results of Diagnostics Test of ARDL Model

Test	**Probability value (F or Chi-square)**
Normality Test (Jarque-Bera)	0.5537
Serial Correlation [LM test:$\chi^2_{(df)}$]	0.2093
Omitted Variable (Ramsey's RESET)	0.1056
Heteroscedasticity (BPG Test)	0.6525

Source: Authors' calculation

Next we investigate whether there is cointegrating link between Corruption and Foreign direct investment by adopting the ARDL Bound testing method. This test confirm that there exist cointegrating relationship between the selected variables since we reject the null hypothesis of no level relationship (no cointegration) between the variables as the calculated F-statistics (4.6411) is greater than the upper bound [I(1)] critical value (3.28) at 5% level of significance (see Table 3 below). Hence, it could be concluded that there is a strong evidence to support the existence of a long run association between the foreign direct investment and Corruption.

Table 3: The Results of ARDL Bounds Test (F- Bounds Test)

Test Statistics	**Value**	**Significance Level**	**I(0)**	**I(1)**
F-statistics	4.641111	10%	1.99	2.94
K	6	5%	2.27	3.28
		2.5%	2.55	3.61
		1%	2.88	3.99

Source: Authors' calculation

Since we identified the cointegrating relationship between the foreign direct investment and Corruption variables, now we investigate the model further in order to identify the long run relationship between these variables, which are given in the Table 4 below:

Table 4: The Results of Long-run Relationship (Dependent Variable: FDINET)

COC	ER	GDPGR	OPEN	PSAV	TBR	R^2
-4532378.0 (0.0975)*	2854748.9 (0.5438)	-82593970.7 (0.0383)**	21299232.3 (0.1574)	3079182.54 (0.0430)**	-23122108.2 (0.0744)*	0.98105

Note: Probability values are given in the Table. **, and * imply the rejection of the null hypothesis at 1%, 5% and 10%, level of significance respectively.

Source: Authors calculation

Above Table illustrates a negative and weakly significant relationship between the control of corruption and FDINET in the long run. That is, if the government can effectively control corruption (increase in corruption percentile rank), it tends to raise government effectiveness and attract FDI more in the long run while other variables remain constant. This has been confirmed by Cazurra, 2007; Quazi, 2014; Castro and Nunes, 2013; Zurawichi and Habib, 2010.

Next, this study finds a significant and negative association between growth rate of GDP, and net inflow of FDI at the 5% significant level. That is, if the GDP growth rate increases by one percentage while other factors remain unchanged, foreign direct investment will fall by 82593970.75 rupees in the long run. That is,

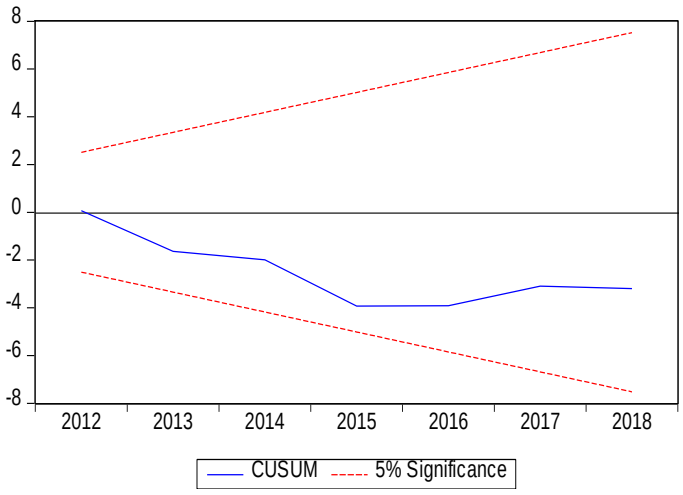
if a country's GDP increases while other factors remain unchanged, people's incomes will increase and savings will increase; Thus increasing the country's investments. Thus the government will not depend on foreign direct investment. Therefore, as far as Sri Lanka is concerned, the increase in GDP is slowing down foreign direct investment.

This study finds a significant and positive association between PSAV and net inflow of FDI, which indicates that if the PSAV increases by one unit (rank) while other factors remain unchanged, foreign direct investment will increase by 3079182.5464 rupees in the long run. In fact, this is true for Sri Lanka since there has been prolonged war until 2009, which covers most of the study period, and frequent changes and inconsistencies in government and government policies. These all lead to political instability which tends to decrease the FDI inflow in the long run since the risk is reduced to investment.

Next, this study finds a negative and weakly association between TBR, and net inflow of FDI at the 10% significant level. That is, if the TBR increases by one percentage while other factors remain unchanged, foreign direct investment will fall by 23122108.2 rupees in the long run.

The main characteristic of the model parameters is their stability in the long run. Thus, stability of the model parameters is confirmed by "CUSUM" tests. Parameters stability is identified during all the study period. The results of test are given below:

Figure 2: The Results of CUSUM Test for ARDL (2, 1, 1, 1, 0, 1, 1) Model



Source: Authors' calculation

The graphs of the CUSUM test confirm that the model is stable since the residual plot lies between the lower and upper critical bounds at the 5% level of significance. That is, the chosen model has stable parameters which might be used for long-run forecasts.

Finally, the error correction representation of the ARDL model was estimated in order to identify the short-run relationship and long-run adjustment between the variables. The results are given below.

Table 5: Results of Error Correction Representation of ARDL (2, 1, 1, 1, 0, 1, 1) Model

Dependent Variables : $D(FDINET)$			
Variables	**Lag order**		
	0	**1**	**2**
D(FDINET)		0.730493 (0.0765)*	0.091454 (0.0020)***
D(COC)	7020651 (0.6684)	-8420237 (0.6365)	
D(ER)	-7893809 (0.6901)	12018661 (0.3291)	

D(GDPGR)	-20666122 (0.5374)	-5201699 (0.8377)	
D(OPEN)	11457506 (0.5921)		
D(PSAV)	-5835374 (0.5725)	9151164 (0.5079)	
D(TBR)	15395671 (0.2237	-10594539 (0.5325)	
ECT (-1)	-0.563326 (0.0764)*		
R^2	0.725279		
F-Stat	1.218491		

Note: Probability values are given in the parenthesis. ***, **, and * imply the rejection of the null hypothesis at 1%, 5%, and 10%, levels of significance respectively.

Source: Authors' calculation

The above results reveal that in the short term, no relationship was found between foreign direct investment and the control of corruption index. It takes a certain amount of time to find out if there is corruption in a particular company or industry. However, there was no significant correlation between the two variables in the short run as foreign direct investment sometimes infiltrated the country prior to that.

Even though, Coefficient of error correction term (ECT_{t-1}) carries an expected negative sign. The absolute value of the coefficient of the error-correction term (0.563) indicates that about 56.3% of the disequilibrium in the FDINI is offset by short-run adjustment in each year one period after the exogenous shocks. Thus, it is important to reduce the existing disequilibrium over time in order to maintain long-run equilibrium.

For the purpose of our study, we have identified the causality relationship between the Foreign Direct Investment Net Inflows and independent variables using granger causality test.

Table 6: The results of the causality test

Dependent variable: FDINET		
ARDL (2, 1, 1, 1, 0, 1, 1) Model		
Variables	**Lags**	**P- value (wald test)**
COC → FDINET	1	0.0062***
ER → FDINET	1	0.0074***
GDPGR → FDINET	1	0.8088
OPEN → FDINET	0	0.0512*
PSAV → FDINET	1	0.0467**
TBR → FDINET	1	0.0652*

Note: Probability values are given in the above table. ***, **, and * imply the rejection of the null hypothesis at 1%, 5%, and 10%, levels of significance respectively.

Source: Authors' calculation

The Control of corruption has a significant causality relationship with the FDINET [p(0.0062) < α(0.01)] at the 1% significant level. Similarly, the ER has a significant causality relationship with the FDINET [p(0.0074) < α(0.01)]. The trade openness has a significant causality relationship with the FDINET [p(0.0512)< α(0.1)] at the 10% significant level. As well as the PSAV has a significant causality relationship with the FDINET [p(0.0467)<α(0.05)] at the 5% significant level. The TBR has a significant causality relationship with the FDINET [p(0.0652) < α(0.1)] at the 10% significant level.

V. Conclusions and Policy Recommendations

This economic analysis, which examines the impact of corruption on net inflows of foreign direct

investment in Sri Lanka, is essential for policymakers. FDI is an important key in promoting a country's economic growth and development and moving that country's economy to the next level. The need for foreign direct investment in Sri Lanka has also been increasing in recent times. Sri Lanka's debt repayments have been high for the past two decades. So, foreign direct investment is a way for the government to raise money to meet this need without imposing a tax burden on the people. According to the Sri Lankan experience, the government is taking a number of steps to increase FDI and naturally there are many opportunities for this. However, compared to other developing countries, Sri Lanka's FDI Inflow and outflow are low and FDI in Sri Lanka shows increasing trend with fluctuation over time. At the same time, the corruption has the major impact on FDI in recent periods.

Therefore, this study aims to examine the impact of corruption on FDI inflow in Sri Lanka and hopes to increase FDI by taking steps to resolve conflicts and corruption in trade policy with other countries. We hope that this survey will help in finding ways to attract more FDI and will be essential for Sri Lanka's economic development planning.

ADF and PP unit root test techniques confirmed that none of the series are I(2) at 5% level of significance. AIC was suggested to adopt ARDL (2, 1, 1, 1, 0, 1, 1) model as the best model among the top 20 best models. The ARDL Bounds test result confirms the co-integrating relationship between the variables at 5% level of significance. ARDL Bounds test and Error correction version of ARDL model identified a negative and statistically significant relationship between COC, TBR and FDINI both in the long run (Example: Cazurra, 2007; Quazi, 2014; Castro and Nunes, 2013; Zurawichi and Habib, 2010). Nevertheless, long run relationship was weakly significant. In addition, the impact GDP on FDINI was statistically significant and negative in the long run. Moreover, the impact of trade openness on FDINI is not statistically significant both in the long run. Although, trade is open in Sri Lanka, but there are implicit restrictions. Due to this no relationship was found significantly between the two variables. Further, in the short term, no relationship was found between foreign direct investment and the control of corruption index. It takes a certain amount of time to find out if there is corruption in a particular company or industry. However, there was no significant correlation between the two variables in the short run as foreign direct investment sometimes infiltrated the country prior to that. The selected ARDL model passed all the diagnostics tests.

Also looking at the results of the Granger causality test, the Control of corruption and ER has a significant causality relationship with the FDINET at the 1% significant level. The trade openness and TBR have a significant causality relationship with the FDINET at the 10% significant level. As well as the PSAV has a significant causality relationship with the FDINET at the 5% significant level.

Therefore, there is a negative relationship between foreign direct investment and control of corruption significantly in the long-run, and there is no relationship between foreign direct investment and control of corruption in the short run. There are Long-run adjustment and causality relationship between the variables.

Based on the results of this study, a negative correlation has been found between foreign direct investment and the control of corruption index. That is, an increase in corruption reduces foreign direct investment. The inefficiency of anti-corruption agencies, the politicization of anti-corruption agencies, and the increased political interference in anti-corruption agencies are all negative affect in attracting these foreign direct investors. Therefore, it is necessary to look at the management of corruption and the possible changes in foreign direct investment.

Effective changes in foreign policy are needed to increase foreign direct investment. In fact, one of the major problems facing foreign investors in Sri Lanka is the issue of obtaining legal approval. Although the Board of Investment is found in Sri Lanka, foreign investors have to seek permission from various companies. Most of these involve corruption. This is why the World Bank recommends the concept of ‘single window’.

That is, the World Bank points out that the concept of a single window is necessary for investors to obtain approvals under one roof.

On top of this, spending is on the rise due to Sri Lankan corrupt practices. These increase the investment costs. As a result, Asian and South Asian countries are beginning to compete instead the Sri Lanka. As a result, there is a problem in obtaining foreign direct investment for Sri Lanka. Those in high positions in Sri Lanka are involved in corruption. They have accumulated power which makes it difficult to get investment in the country. These problems can be mitigated by devolving their power.

Therefore, the Governments and their authorities in Sri Lanka must understand the current predicament of the country and make plans to promote foreign direct investment (FDI) in the development of professional development structures and to ensure that the country's development and related industries are not affected by any form of political activity or corruption. Therefore, the study recommends that the Government should act based on its long-term goals during its policy making and implementing decisions regarding its FDI policy and the control of corruption.

References

[1]. Afridi, A.G. & Shah, M. H. (2015). Significant of Good Governance for FDI Inflows in SAARC Countries. *Business & Economic Review, 7(2),*,31-52.

[2]. Castro, C. & Nunes, P. (2013). Does corruption inhibit foreign direct investment?. *Política Revista de Ciencia Política, 52(1)*, 89-113.

[3]. Central Bank of Sri Lanka, (2021). Annual Report, Colombo: Central Bank of Sri Lanka.

[4]. Cole, M.A., Elliott, R.J.R. & Zhang, J. (2009). *Corruption, Governance and FDI Location in China : A Province-level Analysis*. https://www.researchgate.net/publication/46456270. Accessed 15th January 2015.

[5]. Cuervo-Cazurra, A. (2007). Better the devil you don't know: Types of corruption and FDI in transition economies. *Journal of International Management, 14(1)*, 12-27.

[6]. Denisia, V. (2010). Foreign Direct Investment Theories: An Overview of the Main FDI Theories. *European Journal of Interdisciplinary Studies,3(1)*, 53-59.

[7]. Henri, N. and Larissa, N. (2018). 'Relevance of governance quality on the effect of foreign direct investment on economic growth: new evidence from African countries. https://mpra.ub.uni-muenchen.de/90136/

[8]. Jadhav, P. (2012). Determinants of foreign direct investment in BRICS economies: Analysis of economic, institutional and political factor. *Procedia - Social and Behavioral Sciences, 37*, 5-14.

[9]. Jayasekara, S.D. (2014). Determinants of foreign direct investment in Sri Lanka. https://www.researchgate.net/publication/327536715

[10]. Karimi, M. & Gohari, H. H. D. (2014). The study of the relationship between good governance and foreign direct investment in countries with Middle-Income. *Indian Journal Science Research, 4(6)*, 742-752.

[11]. Muzurura & Joe. (2016). Determinants of foreign direct investment (FDI) in Zimbabwe: What factors matter?. *Research in Business and Economics Journal, 11(2)*, 31-52.

[12]. Nizam, I. & Hassan, Z. (2018). The impact of good governance of foreign direct investment inflows: A study on the south Asia region. *International Journal of Accounting & Business Management, 6(1)*, 66 -79.

[13]. Quazi, R.M. (2014). Corruption and foreign direct investment in East Asia and South Asia: An econometric study. *International Journal of Economics and Financial Issues*, 4(2), 231-242.

[14]. Ravinthirakumaran, K., Selvanathan, E.A., Selvanathan, S. & Singh, T. (2015). Determinants of foreign direct investment in Sri Lanka. *South Asia Economic Journal*, 16(2), 233-256.

[15]. Saidi, Y., Ghadri, H. and Ochi, A. (2013). Governance and FDI Attractiveness: Some Evidence from Developing and Developed Countries. *Global Journal of Management and Business Research Finance, 13(6)*, 15-24.

[16]. Vijesandiran, S. and Vinayagathasan, T. (2020). An empirical analysis of the impact of economic and noneconomic determinants on foreign direct investment of Sri Lanka. *The Studies in Regional Development, 52(1)*, 1-35.

[17]. World Bank. (2021). World Bank Data Base. Washington DC: USA.

[18]. Robertson, C.J. & Watson, A. (2004). Corruption and change: The impact of foreign direct investment. *Strategic management journal, 25(4)*, 385-396.

[19]. Zurawicki, L. and Habib, M. (2010). Corruption and foreign direct investment: What have we learned?. *International Business and Economics Research Journal, 9(7)*, 1-9.