Factors Affecting Foreign Direct Investments: Evidence from Sri Lanka

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Abstract

This research highlights the critical significance of Foreign Direct Investments (FDIs) for Sri Lanka's economic development by examining the key factors influencing FDI inflows. The study employs the Autoregressive Distributed Lag (ARDL) model and the Chow test, utilizing annual data spanning from 1972 to 2018. Three baskets of independent variables are considered: macroeconomic factors (GDP growth rate, inflation, trade openness, and external debt), infrastructure (communication as a proxy), and qualitative indicators (political rights index). The analysis reveals that external debt negatively impacts short-term FDIs, while trade openness has a positive effect. In contrast, GDP growth rate and inflation prove insignificant in both short and long terms. Infrastructure, represented by communication, demonstrates a long-term positive influence on FDIs, while the political rights index exhibits a negative impact in the short run, displaying the highest level of significance at 1 percent. Furthermore, the Chow test confirms a significant impact on FDI inflows resulting from the civil war in Sri Lanka (1983–2009). These findings suggest that Sri Lanka can enhance FDI levels by prioritizing trade openness, improving communication infrastructure, and addressing political rights issues. These factors play a crucial role in creating a favorable investment climate and promoting sustainable economic growth. Additionally, the study underscores the importance of political stability and security in attracting foreign investors, as evidenced by the influence of the civil war on FDI inflows.

Keywords: FDI inflows, ARDL and Macro-economic variables
Introduction

The factors affecting Foreign Direct Investment (FDIs), which are simply the determinants affecting FDIs have been discussed and tested across a plethora of worldwide literature. According to the International Monetary Fund FDIs are defined as: “category of international investment that reflects the objective of a resident in one economy (the direct investor) obtaining a lasting interest in an enterprise resident in another economy (the direct investment enterprise).” Therefore, FDIs are simply an investment with regards to a business venture made by a firm or an individual from one country (foreign) in another country (FDI host country). The internal investment capability of the country is constricted due to the almost negligible level of low domestic savings (Bosworth and Collins, 1999; Jayasekara, 2014). This acts as a large obstacle to investment growth of the nation. Therefore, the country relies on FDIs to bridge the deficiency between domestic savings and investment to achieve the expected prosperity in the nation. Further, it was expected for the country to increase domestic investment post the civil war (1983-2009). However, all efforts were in vain due to the savings and investment gap in the nation. (Jayasekara, 2014).

Therefore, FDI inflows are of paramount importance to Sri Lanka. Further, it is also the nation’s largest source of external finance. FDIs have superseded aid, remittances, and foreign portfolio investment. FDIs also have added benefits in contrast to other sources of external financing. For instance, foreign portfolio investments (FPIs) (which are investments in financial assets of a foreign country, such as stocks or bonds available on an exchange) do not have direct spillover benefits, which is a benefit that can be exclusively observed in FDIs. As FDIs are inherently a business venture, unlike a short-term FPI, it generates benefits such as human and financial capital development, and improvements to the physical and technological infrastructure of the country (Jayasekara, 2014).

Further, FDIs are needed for the arena of financing external debt. The unsustainable external debt pile in Sri Lanka can no longer be financed, without making a dent in the economic structure of the country. The gross external debt of the country was a staggering $51.72 billion (79.1% of GDP) as of 2018 (World Bank, n.d.). Since the growth of FDIs are low, Sri Lanka finances the existing debt, with more external borrowings. Moreover, on the converse studies show that since the external debt of the country is high it deters FDI flows (Alguacil, Cuadros, & Orts, 2011). Hence, creating a vicious cycle, where the high external debt discourages FDIs and the low FDI flow creates a higher external debt.

However, even though there have been favourable policies made by successive governments to induce FDI inflow into the country, Sri Lanka has performed below par to its post war expectations. Though the country has experienced growth in infrastructure and macro-economic conditions Sri Lanka has still failed to attract a significant amount of FDI inflows in contrast to its South Asian neighbours. Sri Lanka’s current position, with regards to inward FDI inflow on the world stage is thereby unsatisfactory. Thus, taking into account its strategic
location, natural resource advantages, and access to major markets, Sri Lanka's performance is considered substandard. The nation’s contribution to the GDP via FDIs are hovering at less than 2% of GDP, in contrast to its peer developing countries such as Malaysia (3 – 4 percent of GDP) and Vietnam (5 – 6 percent of GDP). Hence, countries such as Vietnam and Malaysia rely less on going to capital markets and raising debt to balance its budgets. Sri Lanka's poor performance in attracting FDIs in contrast to its peers can be discerned from figure 1. Therefore, though some developing countries have been successful in attracting FDIs, Sri Lanka has lagged behind. Hence, to understand the ways in which a country can attract FDIs, it needs to comprehend the factors that are of significance in attracting FDIs into the country. Identifying such factors is an arduous task, however the fruits of the task will facilitate the country to attract FDIs. There is a wide range of empirical and theoretical evidence that explores the realm of the factors affecting FDIs. However, there is a limited amount of studies within Sri Lanka that has explored this area of research. Therefore, considering the background and significance of FDIs in Sri Lanka, the following are the primary aims of the research show: FDIs are paramount to bridge the Savings and investment gap in Sri Lanka. Thereby, increasing capital growth of the country, FDIs are considered to be the largest source of external finance in the country, in contrast to aid, remittances and FPIs, FDIs are needed to finance the large external debt pile in the country. Further, according to literature, large external debt also discourages FDIs, Events of war and political volatility were frequent in Sri Lanka's contemporary history. Such events, therefore, disrupted and discouraged FDI inflow into the country and FDIs in Sri Lanka are performing below par in contrast to its peer developing nations. Thus, in conclusion, to encourage FDI inflows into the country, Sri Lanka will need to make concerted and ambitious efforts to capitalize on its strengths and marginalize its weaknesses with regards to the ways in which it can attract FDI inflows. Therefore, to do this the significant factors that affect FDI inflows should be deduced.

Research Objectives
The following primary objective is in essence based upon the said research problem and research question:

- Identify the factors that affect FDIs in Sri Lanka?

This research objective can be broken down to the following sub-objectives:

- Identify the short run and long run macro-economic factors of FDI.
- Identify the short run and long run qualitative and infrastructure factors of FDI.
- Identify the nature of the relationship of each identified independent factor on FDI.
- Identify the effect of war (1983–2009) on the inflow of FDIs into the nation.

If the research achieves the said objectives it would lead to the accurate identification of the long-run and short run effect of major macro-economic and non-macro-economic factors on
FDI in Sri Lanka, while also identifying the nature of their relationship with FDIs. Further, whether the period of war had a structural impact on FDIs will be deduced from the achievement final sub-objective using the Chow test.

Research Problem

The research problem can be primarily seen in the basket of variables that will be taken into consideration in this study. External debt is a determinant that has been explored in global research with regards to FDIs but has not been considered in Sri Lankan research articles.

It is quite clear when analyzing the economic environment of the country, external debt is a large burden the nation has to bear. Further, external debt is also a good proxy for the macro-economic stability of the nation (Alguacil et al., 2011). Therefore, it could be an important determinant for foreign investors, in order to evaluate the economic environment before investing in Sri Lanka.

Moreover, another determinant which has not been explored in Sri Lankan literature is the political rights index. Therefore, this determinant will be an apt tool to explore the political climate of the nation. Though global literature present that political rights does have an impact on FDIs (Shneider,1989; Steve Onyeiwu and Hemanta Shrestha, 2004), this study will attempt to prove its impact through a statistical analysis, in the context of Sri Lanka.

Further, the Chow test will be used in this study, to discern whether war had a quantitative impact on FDIs. This test has not been used in prior Sri Lankan studies to observe the impact of war.

Empirical and Theoretical Review

There are various FDI theories ranging from the most predominantly used theory the OLI ((Ownership, Location, Internalization)) eclectic paradigm to more ubiquitous theories such as the product life cycle theory. However, the FDI theories are more or less indirect theories as they do not have a direct causal relationship with every specific FDI determinant.

Further, when analyzing empirical determinants it can be observed that there are several factors that impact and dictate the level of foreign direct investment (FDI). Nearly every study has included economic growth and inflation rate as determinants that affect FDI inflows (Chakrabarti, 2001). Some studies even categorize the factors affecting FDI into three groups: policy framework, economic, and business facilitation factors respectively (Nations, World Investment Report, 2020).

However, studies also show that the determinants identified for FDI are subject to the country in which the factors are considered (Wijeweera and Mounter, 2008; Arben, Skender and Hysen, 2018). Hence, each country will have its own unique set of determinants that affect FDI considering the current context of its economic background.

Further, although there is a plethora of worldwide literature available with regard to this area of study, there have been only a few published articles in the context of Sri Lanka (Wijeweera & Mounter, 2008; Konara Mudiyanelage Palitha Senarath Bandara, 2013; Jayasekara, 2014; Kalaichelvi Ravinthirakumaran, E. A. Selvanathan, Saroja Selvanathan and Tarlok Singh,2015).
Therefore, through the study identifying the determinants that are unique and significant to Sri Lanka is of paramount importance, as it will allow study to accurately present an overview of factors that will truly affect FDI flow.

Through the analysis of literature, the afore mentioned research gap and a few observations can be discerned: all studies include the macro-economic variable of economic growth rate of the country as a key determinant of FDIs (Li and Liu 2005), the chow test has not been employed in Sri Lankan studies to discern the effect of war on FDIs, the macro-economic variable of external debt has not been observed in any Sri Lankan research with regards to FDIs and its factors and the qualitative variable, the political rights index has not been considered in any Sri Lankan study with regards to FDIs and its factors.

Further, political instability and despotic regimes, deter and disrupt FDI flow into the country. This is because volatile political climates increase the risk of investment and adds to the direct cost of investment. The Black July of 1983 (ethnic riots) and the onset of the civil war between the government of Sri Lanka and the Liberation Tigers of Tamil Eelam (LTTE) created a ripple effect where it made FDIs less attractive (Konara, 2013). Since the end of the War, there has been a spectrum of political crises ranging from the recent economic crisis (aragalaya) and constitutional crises. It has even been reported that The Government’s Foreign Direct Investment (FDI) target of about $3 billion for 2019 was not met as investors were greatly discouraged after the Easter Sunday attacks and the subsequent anti-Muslim violence.

Therefore, these factors portray that a stable political environment is needed to encourage FDIs into the country (Konara, 2013).

Moreover, FDI investors are motivated by cost and location advantages (Jayasekara, 2014). Hence, identifying the significant factors which give this advantage in attracting FDIs is of paramount importance.

Methods

Research Approach

The key econometric techniques which will be used are the: test of stationarity, the Autoregressive Distributed Lag (ARDL) bounds test, the error correction model (ECM), appropriate diagnostic tests and the Chow test.

Identification of the Sample Period

The study has been identified over the sample period for the study 1972–2018, based on annual data frequencies. The year 1972 onwards, is an important period for the Sri Lankan economy, as a new constitution was created where Sri Lanka became a republic, where the country changed its name to ‘Sri Lanka’ to ‘Ceylon’, officially cutting ties with the British. 1972 was also known as the second independence from the British. However, following a protectionist regime, the economy was subsequently closed, thereby adversely affecting the inflow of FDIs and imports into the country.

However, when trade liberalization policies were introduced in 1977, FDI inflows increased. Nevertheless, the inflows were again stunted due to the civil war over the period 1983-2009. But over the early 1990s, privatization
became popular, which created a second wave of an increase of FDI inflows into the country.

Another significant event which occurred in the stipulated time period is the passing of the 19th amendment in 2015 which diluted the powers of the executive president. This had an effect on the political climate of the country, which would have had an impact on a key determinant of this study: the political rights index.

Further, it is likely that this event also affected key regression variable which is FDI inflows and as well on other respective determinants considered in this study. Therefore, the time frame selected is apt as there were significant changes in the economic and political environment of the country, which could have an impact on FDI inflows and its determinants which are taken into consideration in this study.

Sources of Data

In this study, two specific sources were chosen as they provide access to comprehensive annual data from secondary sources.

The World Bank Open Data offers a wide range of variables and proxies, making it a valuable resource. Additionally, the Freedom House, being a U.S. government-funded non-profit organization focused on political rights and civil liberties globally, offers reliable research and advocacy in this domain.

The selected data sources, the World Bank Open Data and the Freedom House, are particularly suitable for FDI research due to their extensive coverage, credibility, and relevance in providing comprehensive information on economic variables, political rights, and civil liberties, thereby enabling a robust analysis of the factors influencing foreign direct investments (refer table 1)

Results and Discussion

Conceptual Framework of the model

The following equation will demonstrate the conceptualization of the selected independent variable (FDI inflows) as a function of the dependent variables (shown below) of the study.

\[ FDI = f(GDP + INF + TRD + ED + POL + INFR) \]

Where,

FDI = Foreign direct investment inflows into Sri Lanka
GDP = GDP growth rate
INF = level of inflation in the country
TRD = trade openness
ED = level of external debt
POL = political rights index
INFR = level of infrastructure in the country

Results of the ARDL approach

The ARDL model is also suitable for this analysis as a key objective of the study is to find the long run and short run effect of the variables on FDI. This objective is facilitated through the Wald test and the error correction model. Hence, the unrestricted model of the series is as follows:
Another significant short run variable is the first lag term of political rights index at high level of significance of 1%, with a negative coefficient (-0.28). This relationship is coherent with the literature as when the political rights index is higher, it implies there is less political freedom and rights in the country.

Hence, literature and the empirical findings present a negative relationship between the political rights index and FDIs. However, the political rights index is rather novel in literature, and even the African study which discusses this variable finds an insignificant relationship (Steve Onyeiwu and Hemanta Shrestha, 2004). Therefore, the results of the political rights index of the study under consideration could be deemed important not only for Sri Lankan literature on FDIs but for global literature as well, as it shows a significant and negative relationship, hence empirically corroborating with the theoretical basis of the index’s relationship with FDIs.

The absolute term of external debt, which is also a novel variable for Sri Lankan FDI determinant literature. The absolute term of external debt shows a significant relationship at a level of 5%, and shows a negative relationship (-0.13 coefficient).

This negative and significant relationship is also corroborated in literature (Steve et al, 2004; Eli, 2006). This article suggests that high external debt implies macro-economic instability in the country, hence becoming a deterrent to FDI inflows. The GDP results for the absolute term and the first lag term are statistically insignificant. However, both respective coefficient of GDP gives mixed results. The absolute GDP term

\[ + \theta_6 \text{lnCOM}_{t-1} + \sum_{i=1}^{p} \beta_1i \Delta \text{FDI}_{t-1} \]

\[ + \sum_{i=1}^{q} \beta_2i \Delta \text{GDP}_{t-1} \]

\[ + \sum_{i=1}^{q} \beta_3i \Delta \text{INF}_{t-1} \]

\[ + \sum_{i=1}^{q} \beta_4i \Delta \text{TRD}_{t-1} \]

\[ + \sum_{i=1}^{q} \beta_5i \Delta \text{ED}_{t-1} \]

\[ + \sum_{i=1}^{q} \beta_6i \Delta \text{POL}_{t-1} \]

\[ + \sum_{i=1}^{q} \beta_7i \Delta \text{lnCOM}_{t-1} + u_t \]

Discussion – short-run results

According to the identified results from the error correction model it can be deduced that there is an array of variables that are significant when determining the factors affecting FDIs in Sri Lanka in the short run.

The absolute term of trade openness is identified as statistically significant at 10% level of significance while the coefficient (0.03) implies a positive relationship with FDIs as corroborated in the theory and literature (Walsh & Yu, 2010).

Further, interestingly the first lag term of the dependent variable (FDI) is also identified as statistically significant in determining FDIs in Sri Lanka in the short run with a coefficient value of 0.34, at a 5% level of significance. This shows that the FDIs of the previous period will be an incentive for investors to invest in a FDI in the short run.
implies a positive relationship (0.02 coefficient). This relationship is supported by literature (Al Nasser, 2010; Chakrabarti, 2001). The negative coefficient of the GDP first lag is also supported by literature (Jensen, 2003).

The absolute term and first lag of the inflation determinant portrays a positive coefficient in the short run; however the respective variables are insignificant.

Further, the absolute term and lag term of the infrastructure variable proxied by communication presents an insignificant relationship in the short run. Therefore, the level of infrastructure does not affect FDI inflows into the country in the short run.

Moreover, the error correction term with a coefficient of -1.13 is highly significant at 1% significant level. This implies that any disequilibrium caused in the previous period would be corrected by 113% during the next period.

**Discussion – Long-run results**

According to the long-run results it is only the communication independent variable that has a positive long run relationship with FDI, at a level of 5% significance. This corroborates with the literature (Ravinthirakumaran, 2015; Jayasekara, 2014; Lydon, 2005; Recep Kok, 2009 and Suliman & Mollick; 2009). This shows that when the number of phone lines increase, the infrastructure of the country becomes better, thereby making a more conducive environment for investors.

Further, all other independent variables, exclusive to the communication variable, are deemed to be insignificant in the long run. However, FDIs which is the independent variable does affect FDI inflows into the country in the long run as it shows a significance level of 1% at an unusually negative coefficient. This portrays that before an investment is made, the other FDI inflows which exist within the country are also considered by foreign investors. This unusual negative relationship in the long run could be because of competition, as when there are a large amount of FDIs in the long run in the country already, there is a likelihood of the cost of factors (for example wages to increase), therefore discouraging investors. However, this is only an assumption made through common economic knowledge and it should be noted that this analysis is not one found in literature.

**Chow Break Point Test**

The Chow break point test has been employed to discern whether war has affected FDI inflow into the country during the period 1983–2009. Hence, the following hypothesis has been developed:

\[ H_0: \text{There has been no structural break during the period of war.} \]

\[ H_1: \text{There has been a structural break during the period of war.} \]

According to the results of the Chow break point test it can be observed that there has been a structural break during the period war (rejecting the null hypothesis), as the F-statistic probability has been largely significant during the periods 1983–2004 at a level of 1% significance and over 2005–2007 at a level of 5% significance. But, as the war ended, the significance of the war’s effect on FDI also reduces as during 2008. This
is observed as the F-statistic is marginally significant at a level of 10% and becomes insignificant in 2009. Therefore, it can be concluded that war did have an impact on FDI and its determinants.

Conclusion

According to the results of discerned in the table 2.1 it can be observed that there have been several variables that have a significant impact on FDI.

It is interesting to note that it is the political rights index that has the highest significance level (0.00 probability) on FDI in the short run, at a level of 1%. Further, as the coefficient is positive, it implies as the political rights index increases (which means as when political rights and freedom of the country reduces the index will increase. Which implies a poor political climate) the FDI inflow into the country will be affected negatively. This is important as no Sri Lankan study has used the political rights index to assess its effect on FDI.

Further, external debt was also considered marginally significant in the short run at a level of 10%. The negative coefficient (-0.13) also corroborated with global literature. This finding is also important as external debt and its effect on FDI has also not been researched in Sri Lankan literature.

Moreover, trade openness and the first lag term of FDI also proved to be significant in the short run, having a positive effect on FDI inflow according to its respective coefficient.

In the long run however, the only independent variable that has significantly affected FDI inflows into the nation is the infrastructure variable proxied by communication. As the variable also has a positive coefficient at a level of 5% significance, it shows that in when the infrastructure of the country improves, FDIs are induced in the long run.

The GDP and Inflation determinants, however, do not prove to be significant in the long run or short run. Studies such as Akinlo (2004) have deduced that the insignificance of GDP with FDI could be because the investors focus on factor price differentials rather than the economic growth of the country. This analysis is appropriate for Sri Lanka as investors are interested in the cheap wage rate of the country prior investment.

Moreover, when evaluating the effect of war on the model under consideration it was deduced through the chow test that the period of war had a significant impact on FDIs and its determinants.

Recommendations and Policy Implications

It should be noted that in conclusion that all the variables considered in the study had a significant short run or long run impact on FDIs, exclusive to inflation. Further, the nature of the relationship of such variables was in line with the theoretical reasoning found in empirical research.

Accordingly, there are two macro-economic variables that have a short run significant effect, which are trade openness and external debt. Therefore, making the economy more liberal will attract FDIs into the country. This could be because it would reduce the transaction costs of investors (Walsh & Yu, 2010).

Further, external debt is an umbrella variable that portrays the political environment of the country, infrastructure level and macro-
economic stability of the country. Therefore, its significance is of important for policies that strive to attract FDIs into Sri Lanka. Hence, reducing the external debt of the country, will have a positive effect on FDI inflows.

Moreover, considering the qualitative variable of the study (which is a novel determinant considering Sri Lankan literature in this area of work) the political rights index, the researchers discovered a positive significant short-run relationship. This is important for policy implications as it is both empirically and econometrically proven that a healthy political environment will attract FDIs into the country. This analysis was also supported by the chow test as it showed that war had a significant impact on FDI inflows in Sri Lanka.

With regards to the infrastructure variable proxied by communication, it was found that there is a long run positive and significant relationship. This shows that in the long run, foreign investors are incentivized by good infrastructure facilities of the country, before investing in FDIs.

Therefore, this research can be used as a tool for FDI policy making when deciding which determinants of FDIs to maximize and which factors to reduce when attracting FDIs into Sri Lanka.

**Figures and Tables**

**Figure 1**
*Sri Lanka’s FDI Inflow Performance, in Relation to Peer Developing Countries*

![Graph showing FDI inflows as a % of GDP from 2010 to 2019 for Sri Lanka, Malaysia, and Vietnam.](image)

*Note: Compiled with World Bank Data*
Table 1
*Summary of proxy used and the data source of each variable*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Proxy</th>
<th>Sources of Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDI inflows</td>
<td>FDI net inflows as a percentage of GDP</td>
<td>World Bank Data</td>
</tr>
<tr>
<td>GDP growth rate</td>
<td>The change in GDP from one year to another</td>
<td>World Bank Data</td>
</tr>
<tr>
<td>Trade Openness</td>
<td>Trade ratio as a percentage of GDP</td>
<td>World Bank Data</td>
</tr>
<tr>
<td>Inflation</td>
<td>Consumer price index</td>
<td>World Bank Data</td>
</tr>
<tr>
<td>External Debt</td>
<td>Outstanding amount due to nonresidents by residents of Sri Lanka</td>
<td>World Bank Data</td>
</tr>
<tr>
<td>Political Rights and Freedom</td>
<td>Political Rights Index</td>
<td>Freedom House annual reports</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Fixed telephone lines (per 100 people)</td>
<td>World Bank Data</td>
</tr>
</tbody>
</table>

Table 2
*Significant Factors Determining FDI in Sri Lanka*

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Model</th>
<th>Variable</th>
<th>Coefficient</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual</td>
<td>Short Run</td>
<td>Trade</td>
<td>0.03</td>
<td>0.07*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>External Debt</td>
<td>-0.13</td>
<td>0.01**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1st lag of Political Rights Index</td>
<td>-0.28</td>
<td>0.00***</td>
</tr>
<tr>
<td></td>
<td>Long Run</td>
<td>Infrastructure (Communication)</td>
<td>0.34</td>
<td>0.01**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FDI (dependent)</td>
<td>-1.19</td>
<td>0.00***</td>
</tr>
</tbody>
</table>

*Note: *, ** and *** denote the statistical significance at 1%, 5% and 10% levels respectively.*
References


Carrasco Gutierrez, C. E., Castro Souza, R., & Teixeira de Carvalho Guillén, O. (2009). Selection of optimal lag length in
cointegrated VAR models with weak form of common cyclical features.


Green, Robert T., Political Instability as a Determinant of U.S. Foreign Investment (Bureau of Business Research, Graduate School of Business, University of Texas at Austin. 1972).


Lydon, Reamonn P and Williams, Mark, Communications Networks and Foreign Direct Investment in Developing Countries. Communications & Strategies, No. 58, p. 43, 2005.


