

DETERMINANTS OF FOREIGN DIRECT INVESTMENT OF INFRASTRUCTURE INDUSTRY IN SRI LANKA

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ABSTRACT

The objective of this study is to identify influential factors which affect the attractiveness of inward foreign direct investment (FDI) of infrastructure sector in Sri Lanka. Foreign direct investment is one of the main components of the development of a country. Through FDI, new technologies, new capital goods and human capital development programs can be obtained. Even though attracting foreign investors to the developing country is relatively difficult. Though Sri Lanka is top compared to India, Pakistan and Bangladesh, which have relatively poor index value still, Sri Lanka is behind in attracting FDIs in South Asian region, according to "Ease of doing business index". With that background, this empirical study tried to identify what are the determinants which effect on inward foreign direct investment in Sri Lanka. For convenience, the research area was narrowed down and limited to infrastructure related industries. Primary data was collected through questionnaires using Likert scale including firms operate in Telecommunication, Port Services and Construction sectors of infrastructure industry. The importance of each selected factors (market size, level of transportation facility, level of telecommunication facility, economic growth, civil war existed in the country, cultural distance, geographical position, political stability, government assistance and changes made in imposed barriers on imports) were analyzed. Test and effect from each variable on the attractiveness of FDI were tested. The results obtained from the SPSS software, seven factors out of selected ten factors have shown an effect on the attractiveness of FDI in Sri Lanka. They are market size, level of transportation facility, level of telecommunication facility, economic growth, and civil war existed in the country, cultural distance and geographical position. The rest of the factors (political stability, government assistance and changes made in imposed barriers on imports) do not show effect on the FDI attractiveness. As the recommendations, government should involve in regional development such as transportation and telecommunication facility. Also, it is necessary to implement new trade agreements.

Keywords: Foreign Direct Investments, Determinants of Foreign Direct Investment, Infrastructure Industry, Sri Lanka

Introduction

Foreign direct investment is investment done by an entity in one country in another country in a form of acquisition or purchase. Foreign Direct Investment is defined as the source of acquisition of managerial control by a business enterprise of a foreign country over a business activity in a host country (Graham & Edward, 1982). Attracting FDI helps to gain many advantages to an economy. Among them, host country can use new technology, new varieties of capital inputs that cannot be achieved through general trade transactions or financial investments. Further FDI helps to boost the competition in the domestic market. Further recipients of FDI get employee training to operate new businesses and it contributes to develop human capital in the host country. Also profit generated through FDI contributes to corporate tax in the host country. When considering the net FDI inflows, throughout the time period India exists top, Bangladesh at second, Pakistan at third and finally Sri Lanka at the fourth position. But When comparing the FDI values as a percentage of GDP of each country, Sri Lanka is positioned at third place and Pakistan is the fourth. Both in net value and as percentage of GDP India is ranked top. But when analyzing the trends an increasing pattern in net FDI inflows can be identified. But in Pakistan and Bangladesh FDI inflows has fluctuated during this time period. But in Sri Lanka a declining pattern in FDI Inflows is shown. But from 1985 to 2015 period, many fluctuations in FDI inflows can be identified. Those fluctuations in inward FDI are shown with the changes in political situations in Sri Lanka. Difference in political time periods are shown from blue vertical lines. In the FDI growth rate many fluctuations are depicted. But net FDI inflow during 1985-2015 shows an increasing patter. After 1995 FDI net inflows tend to fluctuate unevenly, due to the civil war in

these period FDI flow has gradually decreased. But after the president election in 2005 FDI inflow has attained a gradual increment, but in 2008, 2009 period FDI has fallen due to civil war in Sri Lanka. But after FDI has increased drastically. Even though the increment has not been existing after 2011.

During those political regimes, government has changed the rules and regulations imposed regarding FDI. With those changes in political and legal structure, it has become difficult to be economically stable as a country. Those uncertainties demotivate the foreign investors due to incomplete information about Sri Lanka. Though there is an upward trend in FDI inflows, it has been disrupted due to many reasons such as the civil war and ethnic conflicts raised in past years. As an example, two electronic manufacturing giants, namely Motorola and the Harris Corporation which obtained BOI approval to establish plants inside the Katunayake free trade zone in 1982; but finally withdrew their investment projects from Sri Lanka with the uncertainty created by the war (Kelegama, 2006). With such background Sri Lanka has happened to face many barriers in attracting FDI inflows. But when considering ease of doing business index into Sri Lankan context, relative to India, Pakistan and Bangladesh, Sri Lanka is ranked at top. though Sri Lanka is positioned at top, the attractiveness of FDI is less in contrast with other three countries. It means though the regulatory quality and efficiency and favorable business environment is higher in Sri Lanka, still there are some unrecognized barriers in attracting FDI to Sri Lanka. Sri Lanka is still a developing country; hence it is really essential to motivate Foreign Direct Investment towards Sri Lanka. So, identifying the most influential factors or the determinants of FDI will help to increase the level of FDI in Sri Lanka. Here, both favorable, unfavorable and qualitative and quantitative factors should be detected. This identification will help to carry out an empirical investigation on determinants of FDI towards Sri Lanka. But in this study, its main consideration lies on the FDIs attracted into infrastructure, since the last few years major portion of FDI has been attracted by infrastructure facilitators in Sri Lanka. The composition of FDIs are shown in below. FDI has been categorized under four components by the Central Bank of Sri Lanka. They are, manufacturing, agriculture, services and infrastructure. Among them according to the figure 2, agriculture shows an insignificant amount of attracted FDI while FDI attracted to infrastructure putting into top. Hence in this study, it mainly focusses on identifying the important factors which effect on the attractiveness of FDI in infrastructure sector.

Literature review.

Çevi & Çamurdan (2007) carried out a study only on developing countries and transition economies. In their study, panel data regression has been used. Here they have checked the stationery and heteroscedasticity, and the heteroscedasticity was found in the data set and using White cross-section standard error and covariance the issues has been eliminated. According to their conclusion, among the explanatory variables (FDI with one lag, GDP growth, Wage, Trade rate, the real interest rate, Inflation rate, Domestic investment), only interest rate and growth rate showed a positive relationship with FDI inflows and trade rates and FDI with one lag have showed a negative relationship with FDI inflows. And finally, it concluded that every economic variable is significance in understanding the FDI attraction to developing and transition economy. Further, the resource base in the host country has a significance power on attractiveness of FDI. Even tried to differentiate their study for developing and transition economy, there was no significance difference to identify compared with the other studies done for other contexts. As mentioned by Ravinthirakumaran et al. (2015), there is a long run relationship between selected five explanatory variables (trade openness, GDP growth rate, infrastructure, and wage and inflation rate) and the FDI, for that identification Autoregressive Distributed Lag model has been used. Further, according to them market size and growth potential of a host economy, financial and natural resources endowments and quality of workforce; macroeconomic environment, law and order situation; legislative and incentive structure, openness to international trade and access to international markets, quality of physical, financial and technological infrastructure have greater impact on FDI inflows. Even though they have identified these factors, the study has been limited to only five quantitative factors.

Moreover, Albert and Stuart (2008) have done a study about FDI determinants of Sri Lanka using Vector auto-regression analysis to identify the long run relationship between Sri Lanka's FDI inflows and other macroeconomic variables. As a limitation of this study, consideration laid only on macroeconomic variables can be identified. As Athukorala and Jayasuriya (2004) stated, from 1960-1977 Sri Lanka had operated under an import substitution policy regime due to existed political regulation. But with problems raised, Sri Lanka was opened to international market. In this economic liberalization process, foreign investment development and trade policy reform had become the key elements. According Albert and Stuart (2008), many researchers do not consider about the political factors, legal situations and natural incidents happened. But when a foreign investor is going to make an investment, definitely he analyses the other qualitative factors either. Using the Vector auto-regression analysis, they have concerned accumulated effects of various shocks on FDI inflows (impact from

exchange rate shock, GDP shock, Trade shock, Interest rate shock and Wage shock). Ultimately from their study they conclude that the Sri Lanka should closely supervise the factors that have significance impact on FDI inflows such as wage rate, GDP growth rate, interest rates, exchange rates, and the level of external trade and other economic factors. Thus, the ultimate expectation of carrying out this research is identifying the most influential factors on attractiveness of FDI inflows. So as in many literature reviews, mainly market size, transportation facility level, communication facility level and economic growth under economic factor; end of civil war, cultural distance existed and influence from geographical position of Sri Lanka under Scio and environmental factor and political stability, government assistance and changes made in imposed barriers on imports have been considered.

Methodology

Initially the determinants of FDI will be identified under micro perspective (under ownership specific factors). Here mainly origin of the Investor. invested time period, business mode and other sectors parent company has invested in will be analyzed. Then under macro variables, the effect from economic factors, socio factors and political factors on FDI attraction will be analyzed. In economic factors importance of local market size, transportation facility, communication facility and growth rate will be discussed. Secondly, under socio factors, how an investor sees the importance of end of civil war, cultural differences and impact geographical features will be investigated. And finally, for political factors political stability within the country, government assistance given and changes made on imposed barriers regarding imports and their effects will be observed.

Non probability or convenience sampling method were used because through questionnaires, data was collected. And the sample size is 33. And when sampling the population, the proportion of the sample cannot be correctly mentioned, since the Board of Investment does not disclosure the total number of investors which have been registered in infrastructure related industries in Sri Lanka. Hence this it is identified as a limitation of this study.

identifying the important factors, Friedman’s Anova test is done from the SPSS software. Initially, by running K-Related sample test, checked whether there is a difference or variance among the independent variables and the dependent variable. After by running Two-related sample test the significance of each factor against the dependent variable was checked. And descriptive analysis should be done. For that through pie charts the potential industry was identified. K-Related sample test K-Related sample test is used to check the overall impact on the FDI attractiveness by the independent variables. Here it checks whether there is an impact or variance among the all dependent an independent variable. The test is done at 5% significance level using SPSS software.

Discussion and conclusion

K-Related Sample Test

Table 10Friedman Test for all variables

Test Statistics ^a			
N		33	
Chi-Square		61.661	
df		10	
Asymp. Sig.		.000	
Monte Carlo Sig.	Sig.	.000	
	95% Confidence Interval	Lower Bound	.000
		Upper Bound	.087
a. Friedman Test			

Source: Author compiled

Based on the results of the above table 1, we can reject the null hypothesis which means that there is a variance among the all independent variables and the dependent variable.

Two Related Sample Test

From Two-Related sample test, the availability of effect or variance between the relevant independent variable and the FDI attractiveness was tested.

Table 11 Two related sample test for market size

Test Statistics ^{b,c}					
Market_size - investment					
Z					-2.493 ^a
Asymp. Sig. (2-tailed)					.013
Monte Carlo Sig. (2-tailed)	Sig.				.000
	95% Confidence Interval	Lower Bound		.000	
		Upper Bound		.087	
Monte Carlo Sig. (1-tailed)	95% Confidence Interval		Lower Bound		.000
			Upper Bound		.087
	Sig.				

Source: Author compiled

Based on the results of the above table 2, we can reject the null hypothesis which means that there is an effect on the FDI attractiveness from the market size.

Table 12 Two related sample test for transportation facility level

Test Statistics ^b					
Transportation_facility - investment					
Z					-2.285 ^a
Asymp. Sig. (2-tailed)					.022
Monte Carlo Sig. (2-tailed)	Sig.				.000
	95% Confidence Interval	Lower Bound		.000	
		Upper Bound		.087	
Monte Carlo Sig. (1-tailed)	95% Confidence Interval		Lower Bound		.000
			Upper Bound		.087
	Sig.				

Source: Author compiled

Based on the results of the above table 3, we can reject the null hypothesis which means that there is an effect on the FDI attractiveness from the market size.

Table 13 Two related sample test for telecommunication facility level

Test Statistics ^{b,c}					
Telecommunication_facility - investment					
Z					-1.979 ^a
Asymp. Sig. (2-tailed)					.048
Monte Carlo Sig. (2-tailed)	Sig.				.061
	95% Confidence Interval	Lower Bound		.000	
		Upper Bound		.142	
Monte Carlo Sig. (1-tailed)	95% Confidence Interval	Lower Bound		.000	
		Upper Bound		.089	
	Sig.				.030

Source: Author compiled

According to table 4, it can be concluded that there is an effect from the level telecommunication facility on the attractiveness of FDI into Sri Lanka.

Table 14 Two related sample test for economic growth

Test Statistics ^{b,c}					
Econ_Growth - investment					
Z					-3.031 ^a
Asymp. Sig. (2-tailed)					.002
Monte Carlo Sig. (2-tailed)	Sig.				.000
	95% Confidence Interval	Lower Bound		.000	
		Upper Bound		.087	
Monte Carlo Sig. (1-tailed)	95% Confidence Interval	Lower Bound		.000	
		Upper Bound		.087	
	Sig.				.000

Source: Author compiled

As in the table 5, null hypothesis was rejected. It means that there is an effect from the level of telecommunication facility on the attractiveness of FDIs in Sri Lanka.

Table 15 Two related sample test for the end of civil war

Test Statistics ^{b,c}					
Civil_war - investment					
Z					-2.214 ^a
Asymp. Sig. (2-tailed)					.027
Monte Carlo Sig. (2-tailed)	Sig.				.000
	95% Confidence Interval	Lower Bound		.000	
		Upper Bound		.087	
Monte Carlo Sig. (1-tailed)	95% Confidence Interval	Lower Bound		.000	
		Upper Bound		.087	
	Sig.				.000

Source: Author compiled

According to table 6, it can be concluded that there is an effect from the end of civil war on the attractiveness of FDI into Sri Lanka.

Table 16 Two related sample test for the cultural differences

Test Statistics^{b,c}						
Cultural_diff - investment						
Z					-4.774 ^a	
Asymp. Sig. (2-tailed)					.000	
Monte Carlo Sig. (2-tailed)	Sig.				.000	
	95% Confidence Interval	Lower Bound			.000	
		Upper Bound			.087	
Monte Carlo Sig. (1-tailed)	95% Confidence Interval		Lower Bound			.000
			Upper Bound			.087
	Sig.					.000

Source: Author compiled

As in the table 7, null hypothesis was rejected. It means that there is an effect from the cultural differences existed in countries, on the attractiveness of FDIs in Sri Lanka

Table 17 Two related sample test for the geographical position

Test Statistics^{b,c}						
Geo_position - investment						
Z					-2.285 ^a	
Asymp. Sig. (2-tailed)					.022	
Monte Carlo Sig. (2-tailed)	Sig.				.091	
	95% Confidence Interval	Lower Bound			.000	
		Upper Bound			.189	
Monte Carlo Sig. (1-tailed)	95% Confidence Interval		Lower Bound			.000
			Upper Bound			.142
	Sig.					.061

Source: Author compiled

Based on the results of the above table 8, we can reject the null hypothesis which means that there is an effect on the FDI attractiveness from the geographical position of Sri Lanka.

Table 18 Two related sample test for political stability

Test Statistics^{b,c}				
Pol_stability - investment				
Z				-1.524 ^a
Asymp. Sig. (2-tailed)				.128
Monte Carlo Sig. (2-tailed)	Sig.			.121
	95% Confidence Interval	Lower Bound		.010
		Upper Bound		.233
Monte Carlo Sig. (1-tailed)	95% Confidence Interval	Lower Bound		.000
		Upper Bound		.087
	Sig.			.000

Source: Author compiled

As in the table 9, null hypothesis was accepted. It means that there is no effect from the political stability on the attractiveness of FDIs in Sri Lanka.

Table 19 Two related sample test for the government assistance

Test Statistics^{b,c}				
Gvt_assistance - investment				
Z				-1.191 ^a
Asymp. Sig. (2-tailed)				.234
Monte Carlo Sig. (2-tailed)	Sig.			.333
	95% Confidence Interval	Lower Bound		.172
		Upper Bound		.494
Monte Carlo Sig. (1-tailed)	95% Confidence Interval	Lower Bound		.029
		Upper Bound		.274
	Sig.			.152

Source: Author compiled

As in the table 10, null hypothesis was accepted. It means that there is no effect from the government assistance on the attractiveness of FDIs in Sri Lanka.

Table 20 Two related sample test for the changes made in imposed barriers on imports

Test Statistics ^{b,c}				
Barriers - investment				
Z				-1.844 ^a
Asymp. Sig. (2-tailed)				.065
Monte Carlo Sig. (2-tailed)	Sig.			.091
	95% Confidence Interval	Lower Bound		.000
		Upper Bound		.189
Monte Carlo Sig. (1-tailed)	95% Confidence Interval	Lower Bound		.000
		Upper Bound		.089
	Sig.			.030

Source: Author compiled

According to table 11, it can be concluded that there is no effect from the changes made in imposed barriers on imports, on the attractiveness of FDI into Sri Lanka. Through the Friedman test the influential factors have been identified. And the second objective, the potential sectors that investors are about to invest have been identified. Along with it can say that the objectives of the research have been achieved. According to the results received from the Friedman Anova test, out of the ten factors seven has an effect on the FDI attractiveness. They are market size, level of transportation facility, level of communication facility, economic growth rate, end of civil war, cultural distance and geographical position of Sri Lanka. Remaining three have not shown a significant impact on the FDI attractiveness. And they are political stability, government assistance and changes made in imposed barriers on imports. As mentioned in previous studies, it has found that there is a significance importance from quality of infrastructure and infrastructure has been identified as a dominant factor for all FDI related industries (Biswas, 2002). And the market size has identified as an important factor of FDI in Sri Lanka. According to Yasmin et al. (2003), market size is a significance factor for developing countries. As in the previous studies, economic growth has huge possibility to attract FDI. According to Cevis and Camurdan (2007) economic growth is one of the main economic factors which attract FDI. As some respondents stated, higher economic growth in the Sri Lanka was expected by them after the civil war existed even though there was not such rapid economic growth within the country. But when they were investing in Sri Lanka, they have considered the economic growth and the probability to increase the economic growth within the country.

They are civil war conditions, cultural distance existed within the country and geographical position of Sri Lanka these three factors were also have shown an effect on FDI attractiveness. According to the study done by Hellstrom & Sungur (2005) cultural distance has not affected on investors' decision. But in this study, cultural distance has shown a significant impact. Further so an in this study also, the factor geographic position has affected the investment decision in a positive manner. As some respondents stated, mainly the respondents who operate in port services, geographical position of Sri Lanka is very important factor. Since it is located in the Silk Road. And after port city project they hope that the return on their investment will be risen either. When analyzing the political and legal aspects, political stability, government assistance and changes made in imposed barriers on imports were checked. According to the results all three factors which represent the political and legal aspects of the research have not shown any impact on the FDI attractiveness. And according to descriptive part, the industry which has possibility to attract new investors is manufacturing sector. As respondents stated, if government supports by providing necessary arrangements, investors are willing to invest in new sector.

Recommendation and conclusions

This study was focused on identifying the factors that effect on the inward foreign direct investment in Sri Lanka. By performing Friedman Anova test using SPSS significant factors were identified. As per the results of the test done market size, level of transportation facility, level of communication facility, economic growth rate, end of civil war, cultural distance and geographical position of Sri Lanka have identified as influential factors of FDI attraction while political stability, government assistance and changes made in imposed barriers on imports were shown no impact on the FDI. As identified, since market size of the country is an important factor into Sri Lankan context, it is essential to pay attention on expand the current market base by increasing the gross domestic

product in Sri Lanka. Further as in the descriptive part, for the potential FDI attracting sector, the manufacturing sector, government can provide more incentives, like tax free time period for ventures, providing the licenses to utilize existing resources which have not forward for production processes, continuing the favorable legal structure that does not change political regime to regime. Furthermore authoritative parties can provide training programs to boost the human capital in the manufacturing sector and pull labour to manufacturing sector by increasing the labour productivity. Further the excess labour existed in agricultural sector, which attracts very lower amount of FDIs, can be shift to manufacturing sector by providing mentioned labour productivity programs.

Moreover, by comparing the productivity of projects to be launched which relates to especially transportation and telecommunication facilities, resources misallocations can be removed. Through that the productivity in transportation and telecommunication sectors can be enhanced. If Sri Lanka could improve the productivity by reducing unfavorable gaps, foreign investors easily can compare the productivity gaps with other countries and move to invest in Sri Lanka. Further, authoritative parties can develop transportation system in Sri Lanka from the all aspects like roads, railway, sea shipping and air freight transportation methods. And expanding transportation facilities to even in the remote areas. Remote areas are comprised with the unutilized resources. By providing the accessibility facilities they can be directed to production process. And by promoting new, unutilized resources foreign investors can be attracted. Further it will help to obtain internalization advantages. Eventually it will motivate foreign investors to invest more in Sri Lanka.

And also, policy makers should pay attention on crafting sustainable long-term policies and plans which keep the economic growth increasing rather proposing short term developing strategies to obtain political benefits. And also Sri Lanka is in post war condition, maintaining consistence economic policy within the Sri Lanka will earn positive points to attract more FDI towards Sri Lanka. As in the descriptive analysis part, most of the investors are attracted from the Asian region. But if Sri Lanka could attract more investors from Europe and American region, Sri Lanka can attain higher economic development. For that Sri Lanka can come into agreements with those countries, in order to maintain preferable environment within the country. So that it could help to attract more investors towards Sri Lanka. Research can usually be further developed and this is not an exception for that. However, there are some areas that relate to this research which need to be investigated and explored further. This dissertation is limited to the data collected from 33 Companies. So, there are more than 33 companies which we can use to get better results. But there are several macroeconomic variables in the economy that may be affected on foreign direct investment. It will be useful to execute exploratory research works to identify the impact of macroeconomic variables on FDI other than the macroeconomic variables as such as economic growth, end of civil war, cultural distance etc.

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