

A Causality Analysis of Governance Indicators and Foreign Direct Investment Inflow in Sri Lanka

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Introduction

Recently, a novel type of interest is evolving in attracting Foreign Direct Investment (FDI) with the use of governance indicators. It is visible that foreign investors pay a great attention to the governance structure of the countries in which they undertake an investment (Kolstad et al, 2012). Therefore, it is emphasized in the literature that a country should try to establish strong and high quality governance structure to attract more FDI flows.

Recent empirical evidence tends to confirm the hypothesis that growth and productivity difference among countries are related to differences in governance infrastructure in different ways (Hall & Jones, 1999). This study therefore focuses on the linkage between governance infrastructure and FDI flows. It is plausible that the international business literature has acknowledged the importance of country-specific governance instruments in determining FDI and no literature found in use of governance indicators in attracting FDI in Sri Lankan context. In order to bridge this gap, the study aims to identify the causality of governance indicators on FDI. Aggregate and individual worldwide governance indicators for six dimensions of governance are Voice and Accountability (VA); Political Stability and Absence of Violence/ Terrorism (PSNV); Government Effectiveness; Regulatory Quality (RQ); Rule of Law (ROL); Control of Corruption (COC) (Kaufmann et. al., 2009).

Literature Review

Many researchers have investigated the factors influencing inflows of foreign direct investment. Rusike (2008) in his study analyzed the determinants and trends of inward FDI to South Africa for the period of 1975-2005 and he found exchange rates and openness and financial progress were key factors to determine the inflow of FDI. Further, Zeshan (2014) that VA, PSNV, GE, RQ, COC and governance index have positive and significant relationship with FDI inflows in Pakistan.

Materials and Methodology

The secondary data from 1996 -2015 has been collected from World Bank Development Database and Central Bank Report of Sri Lanka on annual basis. According to Kaufmann (2009), VA and PSNV capture the process by which governments are selected, monitored, and replaced while GE and RQ explains the capacity of the government to effectively formulate and implement sound policies in a country and further ROL and COC

explain the respect of citizens and the state for the institutions that govern economic and social interactions.

Granger Causality Test has been applied in order to determine the causality of worldwide governance indicators (WGI) including VA, PSNV, GE, RQ, ROL, and COCon inflows of FDI in Sri Lanka. The Granger-causality test (Granger, 1969) is used for the study to investigate direction of causation between FDI and governance variables. The outcome from the Granger-causality test was used to determine whether the variables under study can be used to predict each other or not. At the same time, the variables used in the granger-causality test were all assumed to be stationary. Finally, the causality test helps to ascertain whether a uni-directional or bi-directional (feedback) relationship exists between FDI and governance indicators.

Results and Discussion

Initially, Pearson Correlation technique has been used to determine the association among the dependent and independent variables and also to check the existence of autocorrelation problem among the independent variables. The results of correlation have been presented in Table 1 shown below;

Table 1: Results of Correlation Matrix

	PSNV	VA	GE	RQ	ROL	COC	LNFDI (USD)
PSNV	1	-0.366	.576**	-0.212	-0.438	-.566**	.559*
VA	-0.366	1	-.570*	.463*	.894**	0.267	-.840**
GE	.576**	-.570*	1	-.513*	-0.344	-0.359	.662**
RQ	-0.212	.463*	-.513*	1	0.411	0.236	-.559*
ROL	-0.438	.894**	-0.344	0.411	1	0.412	-.768**
COC	-.566**	0.267	-0.359	0.236	0.412	1	-0.253
LNFDI (USD)	.559*	-.840**	.662**	-.559*	-.768**	-0.253	1

****.** Correlation is significant at the 0.01 level (2-tailed).

***** Correlation is significant at the 0.05 level (2-tailed).

The results of correlation matrix depicts that there is a problem of auto correlation among the independent variables of governance indicators. At the second stage, ADF unit root test has been applied for checking stationarity of all the variables due to time series nature of the dataset. The results of Augmented Dickey Fuller (ADF) unit root test are reported in Table 2.

Table 2. Results of ADF Unit Root Test

Variables	T- ADF Statistics	Outcome
LNFDI	-6.7(0.000)	Stationary at level
COC	-4.9(0.0011)	Stationary at first difference
PSNV	-3.8(0.0115)	Stationary at level
VA	-3.97(0.0084)	Stationary at second difference
GE	-4.6(0.0029)	Stationary at first difference
RQ	-3.4(0.0236)	Stationary at first difference
ROL	-3.34(0.031)	Stationary at second difference

Stationarity results in Table 2 describes that FDI and control of corruption variables are stationary at first difference, whereas ROL and VA are stationary at second difference. Results of the Unit root test indicates that the all variables are stationary at second difference. Therefore, it can be concluded that the optimal lag length of this model is two. Thus granger causality test was carried out for FDI and other variables for lag 2 which the results were shown in Table 3.

Granger proposed that if causal relationship exists between variables, these variables can be used to predict each other. The causality test helps to ascertain whether a uni-directional or bi-directional (feedback) relationship exists between governance variables and FDI. To achieve this, we employed the granger-causality statistic to test the statistical causality between the variables as well as to determine the predictive content of one variable beyond that inherent in the explanatory variable itself. The researcher's choice for the granger procedure is because it consists the more powerful and simpler way of testing causal relationship which is explained in Table 3.

Table 3: Granger Causality between FDI and Governance Variables

Null Hypothesis	F-Statistic	Causal Inference
FDI Does Not Granger Cause COC	1.45844 (0.263)	No Causality
COC Does Not Granger Cause FDI	5.61723 (0.0175)	Causality
GE Does Not Granger Cause FDI	0.15525 (0.8578)	No Causality
FDI Does Not Granger Cause GE	2.83156 (0.0958)	No Causality
PSNV Does Not Granger Cause FDI	0.90205 (0.4297)	No Causality
FDI Does Not Granger Cause PSNV	1.45482 (0.2691)	No Causality
ROL Does Not Granger Cause FDI	0.18919 (0.8299)	No Causality
FDI Does Not Granger Cause ROL	4.29854 (0.0369)	Causality
RQ Does Not Granger Cause FDI	2.36551 (0.1330)	No Causality
FDI Does Not Granger Cause RQ	0.42033 (0.0369)	Causality
FDI Does Not Granger Cause VA	3.50093 (0.0608)	No Causality
VA Does Not Granger Cause FDI	1.05262 (0.3770)	No Causality

Based on the results in Table 3, the values of F statistics suggest that COC Granger-causes FDI (P value < 0.05). Thus, it can be argued that past index values of COC contribute to the prediction of the present value of FDI. Further, findings of the study suggest that FDI granger causes ROL and RQ index.

In conclusion, the government of Sri Lanka should provide more attention to improve COC since this governance indicator becomes a predictor for FDI inflow of the country. This finding implies that COC becomes a major determinant of FDI inflow where the policy makers should devise strategies to strengthen the control of corruption.

Further, inflow of FDI becomes a causality to determine ROL and RQ index. Indeed, foreign investors use the pattern of FDI in Sri Lanka to determine the improvement of regulatory management, regulatory reform of the government and stability of law and security of the country.

Keywords: Foreign Direct Investment; Governance indicators; Granger Causality

Reference

- Granger, C. W. (1969). Investigating causal relations by econometric models and cross-spectral methods. *Econometrica: Journal of the Econometric Society*, 424 - 438.
- Hall, R. E., & Jones, C. I. (1999). Why do some countries produce so much more output per worker than others? *The quarterly journal of economics*, 114 (1), 83 - 116.
- Kaufmann, D., Kraay, A., & Mastruzzi, M. (2009). Governance matters VIII: Aggregate and individual governance indicators, 1996-2008.
- Kolstad, I., & Wiig, A. (2012). What determines Chinese outward FDI? *Journal of World Business*, 47 (1), 26-34.
- Rusike, T. G. (2008). Trends and determinants of inward foreign direct investment to South Africa.
- Zeshan, A., & Talat, A. (2014). Impact of governance indicators on FDI Inflows: Empirical evidence from Pakistan. *Caspian Journal of Applied Sciences Research*, 3 (9).