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Impact of Foreign Direct Investment Inflows on Economic Growth; the Case of the Republic of Seychelles

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Abstract:

This paper aims to research whether there is link between FDI inflows and Economic growth in the Republic of Seychelles Island. The ordinary least square results obtained shows that in the impact of FDI inflows on economic growth is low. Small Island Developing States attracts less FDI inflow because they are limited to few resources that attracts overseas firms which results in retarded development. The research lighted that impact of foreign direct investment on host countries does not only depend on the quality and quantity of the FDI inflows but some other variables such as the internal policies and the management skills, market structures, economic trends among others.

Keywords: foreign direct investment; economic growth; economies

JEL Classification: O11, A10

Introduction

Foreign direct investment (FDI) net inflows are the value of inward direct investment made by non-resident investors in the reporting economy. Different economies have different goals in emerging foreign direct investment flows. There is no doubt that FDI is a major contributor of economic development of emerging economies especially developed economies where their FDI inflows and outflows are quite significant (Echandi & Sauvé, 2013). As confirmed by Lunn 1980, Schneider and Frey 2005, Carkovic and Levine, 2002 that in general FDI inflow or inward FDI has positive impact on economic growth of a given state (Bilgili et al, 2012).

Inward FDI occurs when an overseas firm has a controlling interest in a new or existing business in an economy, other than that of the investor firm. Different countries may have varying controlling interest. The FDI inflows are stimulates domestic investment because the domestic

producers will be motivated to improve the quality of the goods and services produced in order to be competitive on the market (Borensztein et al, 1998). It has been established that, foreign direct investors use raw materials, auxiliary materials or services from the host country and therefore have a positive effect on local businesses.

The effect of FDI inflows on economic growth changes depending on the type of foreign direct investment. In some cases, the economic growth achieved due to FDI is reflected by adding new production capacities, additional jobs, the increase in consumption of the population and an increase in revenues from the contribution's taxes and fees (Barrell & Pain, 1997). When FDI takes the form of privatization, the host country is likely to benefit from technological progress. Privatized non-performing or low capacity companies also get the chance to be revamped (Yueh, 2011). After adding new technology, the FDI enterprises become a strong competitor in the market of the host country, thereby motivating the local businesses.

Literature Review

According to UNU-WIDER 2008, research on foreign direct investment (FDI) in small island developing states (SIDS) is limited. Low absolute volume of capital flows is one of the main explanations to the lack of research in economic related issues affecting small island developing states and also the general neglect of issues relating directly to SIDS in the mainstream theoretical and empirical economics literature (Read, 2008).

It must however be noted that FDI represents an important additional source of investment capital to economies especially developing economies like Seychelles Island. Such economies are referred to as transition economies, and a potentially critical contributor to growth and development of world's economies or economic growth (Seetanah, 2011).

Basic theoretical discussion on the determinants of FDI might start with posing a simple question as to why a foreign investor will invest in other countries. The decision to invest in a foreign country by a foreign investor fundamentally depends on the return on investment, which is profit (Kinda, 2010). Athukorala (2009) asserts that the issue related to the determinants of FDI is multidimensional, because different types of motives work behind the decision of investment in foreign countries by the multinational corporations (Athukorala, 2009).

According to Dunning (2009), in the 1970's, location variables such as availability, price and quality of natural resources, physical infrastructure that enabled natural resources to be exploited, government restrictions and other investment incentives tended to be the key influences of FDI location decisions. In spite of these factors that played an important role in the past years, it has assumed relatively less important role in recent years (Dunning, 2014)

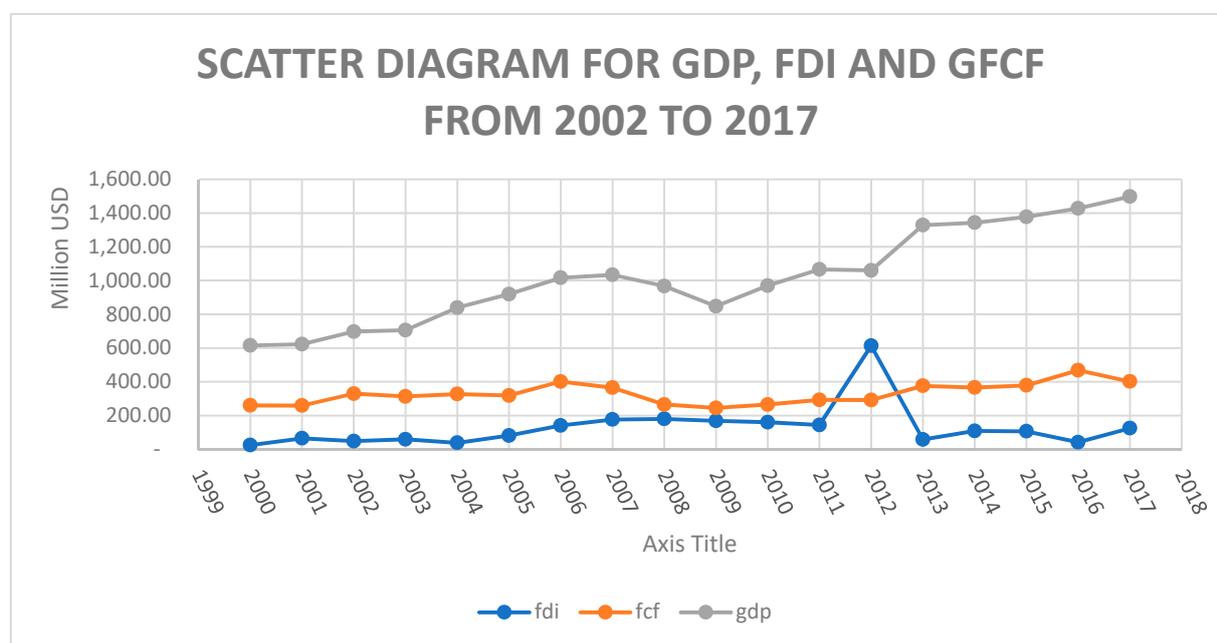
Haven analyzed existing literature on the determinants of FDI inflows, incorporating insights drawn from recent research on the determinants of growth in small states. A list used by UNCTAD for analytical purposes only states that there are twenty-eight Small Island developing states of which SIDS 7 of them are classified as least developed countries (Zhao et al, 2003). This paper represents one of the first attempts to address impact of foreign direct investment inflows on economic growth; to Seychelles even though attempt has been made by various to research to study FDI and economic growth-related issues in small and developing countries. The Seychelles was chosen for this research because, the Republic of the Seychelles is a Small Island Developing State (SIDS) situated in the Western Indian Ocean. It has middle-income country status and a high level of human development linked to a long-standing policy to invest in social protection (Iranah, 2018).

The economy of Seychelles is mainly support by tourism and fisheries. This is because the country has enormous pristine natural and physical island/marine environment (Hewawasam, 2002). This makes Seychelles extremely vulnerable to climate change and human-induced impacts, in particular urbanisation. As from 1999, growing macroeconomic imbalances, linked to financing of large capital projects, coupled with less access to external funding and constraints in debt repayment, have led to a significant slowdown in economic activity in Seychelles. In 2002, public indebtedness of the country reached a record level of 202% of GDP, with a significant decline in capital inflows and a negative growth rate. From 2003 onwards, the Government therefore embarked on its homegrown Macroeconomic Reform Programme and, since then, overall growth prospects have improved slightly, with the economy growing by 4.5% in 2006 and recording fiscal surpluses and the payment of outstanding arrears with all multilateral institutions. The Seychelles' economy reaches one billion in 2006 and maintained it position in 2007 however as a result of factors such as global increase in oil prices and interest rate increases linked to its high level of bilateral external indebtedness (Naidu, 2007). We could also link the poor performance during this

period to the global crises which reached its apex in 2008. However, because of policies in place and the focuses of their economy the economy bounced back in 2009 (Gerring et al, 2011).

Statistics from the international monetary fund (IMF) show that there was GDP growth of 3.5% in 2015, 4.5% in 2016, 4.2% in 2017, and 4% 2018. It must be noted that from 2011 to 2017 the economy of the country has been on a predominance move although there was a slight globule in 2012 (Mirowski & Nik-Khah, 2017).

Chart 1



Researcher's own work

Looking at Chart 1, in from 2007 to 2010, GDP of Seychelles drop three continues years in a role. Relatable, FDI and government fixed capital formation (fcf) also decreased in the same pattern during the same period. However, it must be mentioned that with FDI there is one-year lag; from 2008 to 2011. Their foreign direct investment inflows record a maximum value of 613million US dollars 2012 before dropping the next year (2013) to 57million US dollars.

Research objective

The objective of the study is to examine the impact of FDI on economic growth in Seychelles. However, in my regression model some additional explanatory variables were also included in order to examine their influence on the growth rate of GDP.

Hypothesis

- H_0 : FDI inflows has no impact on economic growth of a country.

Methodology

Durbin-Watson test is a statistical test, which determines the autocorrelation using the regression. Using the Durbin-Watson test, we tried to determine whether there is a link between FDI inflows and GDP in Seychelles. We will also consider the linkage between GDP and other macro-economic variables such government expenditure, export, gross fixed capital formation and population. STATA Statistical tool was use to analyze the variable. Gross domestic product of the country will be used as a proxy for economic growth.

The model specification

Endogenous growth theory holds that economic growth is primarily the result of endogenous and not external forces. Endogenous growth theory holds that investment in human capital, innovation, and knowledge are significant contributors to economic growth.

To achieve these objectives, we begin with the following Cobb-Douglas production function:

$$Y = AK^aL^b, \text{-----} \quad (I)$$

where Y represent the output level of Gross Domestic Product, A denotes the exogenous state of technology or the efficiency of production, K represent the capital and L is the labour (measured by labour force of the country) (Antras, 2004). The production function shows that output of a country depends on the productivity parameter and its input (capital and labour).

Assuming that the production function will take a linear form, the empirical regression model, we are going to use to test the relationship specifies by the following equation:

$$\text{Growth rate of } GDP_{i,t} = \alpha + \beta X_{i,t} + \varepsilon_{i,t}, \text{-----} \quad (II)$$

Where X is a set of independent variables that affect GDP, i denotes the country and t captures the time dimension (1976-2017).

Considering our variables, the following specification where drawn.

$$GDP_{i,t} = a + b_1 FDI_{i,t} + b_2 GFCAP_{i,t} + b_3 GCONS_{i,t} + e_{i,t} \text{-----} \quad (III)$$

Taken the natural logarithm to reach a common base our final model is

$$\ln GDP = a + b_1 \ln FDI_{i,t} + b_2 \ln GFCAP_{i,t} + b_3 \ln GCE_{i,t} + e_{i,t}$$

Where the dependent variable is the growth rate of GDP (Gross Domestic Product).

The explanatory variables are FDI (Foreign Direct Investment), GCE is expenditures for government, and GFCAP denotes the Gross fixed capital formation.

Table 2

Explanation of Variables

Variables	Definition	Measurement
Dependent Variable		
Growth	The growth rate of nominal GDP and GDI per capita.	GDP expressed in 100 million US\$
Independent Variables		
FDI	FDI inflows	Expressed in 10,000US\$
Government Consumption	Covcons. Defines the total expenditure for each examined province. It includes expenditure for capital construction, innovation funds of the enterprises, expenditures for science and technology promotion, for national security, for public transport etc.	Expressed in 100 million US\$
Government Fixed capital formation	Formerly gross domestic fixed investment. Fixcap	Expressed in 100 million US\$

3. Data

Using econometric models, we can assess the impact by considering gross domestic product (GDP) as dependent variable and the independent variables, foreign direct investment inflows

(FDI), export (Ex), government expenditure (GE) and gross fixed capital formation (GFCF). The data for the research extracted from the World Bank database and expressed in millions from the year 1976 to 2017.

4. Findings and Analysis

Using the DW test (Durbin-Watson test), we tried to determine whether there is a link between FDI inflows and GDP in Seychelles. STATA a software for statistic and science was use for the calculations .The coefficient of determination r^2 , measures the percentage of variation of the independent variables based on the deviation of the dependent variable.

Results of Durbin-Watson Test

$$\text{Durbin-Watson } d\text{-statistic } (4, 42) = 1.046418$$

The values obtained for the Durbin-Watson, are generally between 0 and 4. Indicator value 2 indicates that there is an autocorrelation between variables. Values between 0 and 2 show a positive autocorrelation and a value of the between 2 and 4, shows the negative autocorrelation, In our case with for dependent variables and 42 observations our **d. w. test** results is 1.0464; which indicates a positive autocorrelation between variables.

Estimated statistics for the dependent variable coefficients gross domestic product.

lnGDP	Coefficients.	Standard Error	T Test	P> t	[95% Conf. Interval]
lnFDI	.0494495	.030571	1.62	0.114	-.0124383 .1113373
lnGFCAP	.2138443	.0406438	5.26	0.000	.1315652 .2961235
lnGCE	.6947025	.0390257	17.80	0.000	.615699 .7737059
constant	2.048774	.3467977	5.91	0.000	1.346719 2.750829

Based on the equation (1), the relationship that expresses an aspect of macroeconomic balance, the calculations above, resulted:

$$\ln GDP = a + b_1 \ln FDI_{i,t} + b_2 \ln GFCAP_{i,t} + b_3 \ln GCE_{i,t} + e_{i,t}$$

$$\ln\text{GDP} = 2.0487 + 0.04944 \cdot \ln\text{FDI}_{i,t} + 0.2138 \cdot \ln\text{GFCAP}_{i,t} + 0.6947 \cdot \ln\text{GCE}_{i,t}$$

t test 5.91 1.62 5.36 17.80

R²=98 Adjusted R²=98.59 F test =959.24

The results presented above show that **lnFDI** inflows have a positive impact on the gross domestic product, with a coefficient of **0.04944**. This means that an increase in **lnFDI** inflow by a single unit will result in 4percent proportionate increase in **lnGDP**. It suggest to achieve significant economic development through foreign direct investment the country must campaign to attract more investors. The coefficient is positive, and highlights the positive impact of FDI inflows on GDP. From the table of analysis (Table 2) the impact of government consumption expenditure on gross domestic product has resulted in a positive coefficient of **0.6947**, which indicates a positive influence of government consumption expenditure on gross domestic product in the Seychelles Island economy for the analyzed period. The econometric results revealed that, gross fixed capital formation had a positive impact on gross domestic product. The value of **0.2138** obtained from the analysis show its positive impact on GDP.

From our model, we can state three possible hypothesis.

The first hypothesis, which is a null hypothesis that ‘FDI inflows has no significant effect on Economic Growth in the Republic of Seychelles’. Using gross domestic product as proxy for Economic growth; from the analysis, the **t-value** from the **t-test** in the case of **lnFDI** is **1.62**. With degree of freedom (d.f) of 3 and at 10 percent significant level, the calculated **t-statistic** compared to the **t distribution** concludes the null hypothesis is true or is accepted. We will therefore not considered any alternative hypothesis.

The second hypothesis is that “Government fixed capital formation (**lnGFCF**) has no significant effect on Economic growth of Seychelles”; which is of course a null hypothesis. Here the calculate t-value of **lnGFCF** is **5.6** which is greater than the t distribution. It implies that, we reject the null hypothesis and accept the alternative hypothesis. Which is, that, government fixed capital formation has a significant effect on Economic growth.

The final hypothesis is whether government consumption expenditure has no significant effect on Economic growth of the country. From the t-value government consumption expenditure (**lnGCE**) of **17.80** is than the t-distribution, which means that government consumption expenditure has significant effect on gross domestic product (**lnGDP**). We reject the null hypothesis and accept the alternative hypothesis.

5. Conclusion

From the regression, results obtained shows that FDI inflows has positive impact on GDP. From in-depth, analysis FDI influences economic growth in The Republic of Seychelles Island. However to ensure significant growth the country must campaign for more foreign direct development inflow. There is also a positive correlation between FDI inflow and economic growth. Which connotes an increase in FDI inflows will lead to a proportionate increase in economic growth. However, it must be noted that dues to limited resources the impact of FDI inflows on GDP is relatively low compared to other major developing economies. The research revealed that government consumption expenditure has a significant effect on GDP in the country. Therefore, we recommend that the government should pay much attention to its spending.

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Abbreviation

FDI _____ Foreign Direct Investment

GDP _____ Gross Domestic Product

SIDS _____ Small Island Developing States

UN-WIDER World _____ Institute for Development Economics
Research