



Macroeconomic Stabilization Effect of Foreign Direct Investment in Zimbabwe

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Abstract: *Countries in the world undergo turbulences in economic activity known as economic or business cycles. It is the length of the cycles that differs depending on the economy's macroeconomic strengths in policy and implementation. Zimbabwe is one economy that has been faced by various episodes of economic cycles. Zimbabwe has undergone decades of economic and financial crisis. The study seeks to analyse the macroeconomic stabilization effect of foreign direct investment inflows in Zimbabwe. When national income undergoes some fluctuations some inflows may help stabilize the trend and hence aid in smooth economic growth and stability in the macroeconomic environment. The study uses annual data for the period 2009 to 2019 for its analysis. Appropriate data transformation was done to ensure good results for policy derivation. The study used a trend and correlation analysis to determine the stabilization effect of FDI. A positive correlation between national income and FDI of 78.87% was obtained, implying that FDI inflows are pro-cyclical. The correlation results have been consistent with the observed trend of the transformed data. The pro-cyclicity nature of FDI inflows means that they follow the same trend with national income; in times where national income is high (low), FDI inflows are also high (low). FDI inflows has no macroeconomic stabilization impact on fluctuation in national income in Zimbabwe. The study results, however do not imply that FDI is not crucial, the levels of inflows might only be too weak to support stabilization, and hence the levels should be raised. There is greater need to attract more FDI in the economy to reap the much cited benefits of the inflows especially for less developed nations like Zimbabwe. Macroeconomic policies overhaul is required in order to create a stable and hospitable investment climate in the country that fosters export competitiveness, trade openness and domestic capital formation. Issues of property rights should be correctly addressed not to deter potential foreign investors.*

Keywords: *Economic Cycle, Economic Growth, Foreign Direct Investment, Stability, Zimbabwe*

JEL Codes: *E22, E32, F21, F41, F43, F44, O11, O16*

I. Introduction

Most African countries face a shortage of funds to meet their investment needs (Gwenhamo, 2009), and this is caused by low levels of private savings. Foreign direct investment (FDI) refers to an investment from a party in one country into a business or corporation in another country with the intention of establishing a lasting interest (CFI, 2015). OECD (2020) defines FDI as a category of cross-border investment in which an investor resident in one economy establishes a lasting interest in and a significant degree of influence over an enterprise resident in another economy. FDI takes place when an investor establishes foreign business operations or acquires foreign business assets in a foreign company. The investor's purpose being to have an effective voice in the management of the enterprise resident in the other economy. The lasting interest differentiates FDI from foreign portfolio investments, where investors passively hold securities from a foreign country (CFI, 2015). Investment growth is key in many developing nations, and one way is to promote FDI. The scholarly debate about the set of policies needed to promote investment is of particular importance for developing countries such as Zimbabwe (Nyoni and Bonga,

2017). The role played by FDI as a source of capital which augments domestic savings is attracting close attention in all developing countries (Muzurura, 2019).

FDI is an important channel for the transfer of technology between countries, promotes international trade through access to foreign markets, and can be an important vehicle for economic development (OECD, 2020). In support, Muzurura (2019) indicated that adequate FDI inflows generate employment opportunities, augments domestic foreign exchange reserves, upsurges positive technological externalities and human capital skills. For many developing nations, FDI inflows remain crucial for economic development (Mahuni and Bonga, 2017). To move an economy on a sustainable growth path, a significant share of additional savings and investment should emanate from private sources (Nyoni and Bonga, 2017).

FDI is expanded in many ways. An investor can make a FDI by expanding their business in a foreign country. Profits re-investing from overseas operations, as well as intracompany loans to overseas subsidiaries form part of expansion. Mergers and acquisitions, joint ventures and starting subsidiary companies. These methods, among others raises the levels of FDI inflows in a country. According to CFI (2015) FDI offers advantages to both the investor and the foreign host country, and these incentives encourage both parties to engage in and allow FDI. Commonly tipped macro-benefits include economic stimulation, development of human capital, increase in employment, and access to management expertise, skills, and technology. Given these benefits, FDI becomes of great importance to developing countries like Zimbabwe. The study explores how FDI is linked to national income fluctuations. Profit repatriation and the displacement of local businesses are the main negative impact that FDI brings to an economy, and this calls for optimality to be observed as well as the cost-benefit analysis.

National income fluctuations are common. The fluctuations form business or economic cycles. Understanding business cycles has been and continues to be a major challenge of empirical macroeconomic research (Stock, 1987). Some economists, point out that whilst economies may have peaks and troughs, there is no reliable economic cycle (Pettinger, 2020). Real business cycle theories downplay the role of cyclical factors and suggest that the economy is not inherently cyclical in nature. The theories argues that the economy is influenced by long-term supply side factors such as technological innovation and investment (Pettinger, 2020). Business cycles may be stabilized and/or corrected to lessen the negative effects coming from them. Finding mechanisms through which to prolong expansions and limit, or at least alleviate, recessions is in the focus of macroeconomic theory and policy (Škare and Stjepanović, 2015). Counter-cyclical policies done by the Central Bank and government usually attempt to reduce the nature of the economic cycle. Fisher (1999) indicated that there is considerable interest in devising government policies and institutions to influence prospects for economic growth and mitigate the distress associated with economic downturns.

1.1 Research Problem

Africa is one region on the global map with countries still struggling to attract meaningful FDI and hence economic growth rates, which are often low (Bonga and Mahuni, 2018). Muzurura (2019) indicated that FDI inflows to Sub-Saharan Africa have increased significantly, but Zimbabwe has not benefited from this boom. Zimbabwe is one of the richest countries in SADC with respect to mineral endowment (Sikwila, Karedza and Sikwila, 2017). The levels of FDI inflows in Zimbabwe, have remained relatively low as compared to other developing nations (Mahuni and Bonga, 2017). The low FDI trends are not consistent with the country's potential, human capital development and its vast natural resource endowments which are mature for exploitation by resource-seeking investors (Muzurura, 2019). Private investment can be regarded as the backbone for SSA countries and without it, sustainable economic growth will remain a pipeline dream (Ngoma, Nyoni and Bonga, 2019). Zimbabwe as a country has undergone many episodes of economic cycles and efforts have been made to bring the economy to stability. Economic theory and debates cite FDI as one of the possible macroeconomic stabilizers. While no noticeable change have been witnessed for the economic crisis in Zimbabwe, the study seeks to deeply explore the possibility of FDI in the stabilization efforts. While some authors praise FDI to promote stability and economic growth, it is the aim of this study to empirically check on the facts. The incapacity to attract FDI to the desired levels has been taken into account hence the study explores the cyclicity nature of FDI inflows to Zimbabwe.

1.2 Research Objectives

The objective of this paper is to undertake an empirical investigation of macroeconomic stabilization effect of foreign direct investment inflows in Zimbabwe for the period 2009 to 2019. The results of this study will be valuable to economic policy makers, as it would enable them to understand the link between FDI and economic growth in Zimbabwe. Zimbabwe is in the recovery mode from economic crisis and hence requires the rightfull policy mix to adequately address its economic challenges.

1.3 Organisation of the Study

To attain its objectives the study is organized into five equally important sections. Section I being the introduction, Section II being a glimpse on theoretical and empirical literature, Section III explains the study methodology, Section IV present data analysis and discussions, and Section V presents the conclusion and policy recommendations.

II. Literature Review

There exist numerous studies on various aspects of FDI in the world. Many models do exist to explain levels, trends and importance of FDI on economic development. Determinants of FDI have been explored both micro-factors and macro-factors. Theories do exist to explain FDI, and the main theoretical perspectives, are the modernisation theory, the dependency theory, the neoclassical growth theory and the endogenous growth theory. However, patterns of FDI have proved to be different for various nations, times and quality. Such differences have led to not be able to generalize some facts on individual nations. Perpetual economic crisis in Zimbabwe calls for deep analysis of some inflows that were originally thought to bail-out the economy, yet no significant turn-around being witnessed. The study acknowledge the theoretical and empirical support that FDI has in bringing about stability and growth. However, the study seeks to empirically determine the level at which FDI inflows contribute to stability and growth relating to economic cycles.

Some studies classifies determinants of FDI in terms of pull and push factors. The studies investigate what pulls a firm to become a foreign investor (Muzurura, 2019). Other studies examines the FDI drivers that are exogenous to investors, classifying FDI factors using supply-side factors, demand-side factors and institutional factors. Another group of studies consider FDI being impacted by three basic economic factors being trade, the exchange market policies and investment climate. Issues of political instability and policy reversal are at the core of these studies among other uncertainties like possibility of property confiscation.

Alfaro (2017), examines the benefits of FDI to host-country at both micro and macro level of activity and concluded that FDI inflows to host country were beneficial in that it brought with it technology, knowledge transfer and improved capital stock that led to an increase in employment and economic growth. Asheghian (2011), employed causality technique on FDI and economic growth and found that FDI had no influence on economic growth in Canada. Jilenga, Xu and Gondje-Dacka (2016), reports that FDI inflows had insignificant effect on economic growth rates in Tanzania. Yan and Pokhrel (2011) could not find a direct way of identifying the linkage between FDI and GDP in Nepal. Lean (2008) also found that FDI in the manufacturing sector of Malaysia and economic growth were independent of each other. Sothan (2017) examined the causal link between FDI and economic growth in Cambodia and concluded that FDI had a strong effect on economic growth in Cambodia. Tsauroi and Odhiambo (2012) examined the dynamic causal relationship between foreign direct investment (FDI) and economic growth in Zimbabwe, their study showed that there is a distinct causal flow from economic growth to FDI. Ekanayake and Ledgerwood (2010) concurred in their study on the issue of the positive and significant impact of FDI on economic growth in developing countries. Wang (2009) discovered that only the manufacturing sector FDI inflows had a positive and significant impact on economic growth, whilst the non-manufacturing sector FDI inflows had a positive but very insignificant influence on the economy. Borensztein *et al* (1998) indicated that the growth-enhancing effects of FDI depend on the absorptive capacity of the recipient country, which in turn depends on educational levels and the development of the financial markets, among other factors. Prasad *et al.* (2003) also narrated that FDI is viewed as relatively stable during financial crises when compared to short-term foreign capital inflows.

In conclusion, studies on the impact of FDI on economic growth rate were inconclusive and that further research remains necessary especially for individual countries. Zimbabwe presents an interesting case to test the macroeconomic stabilization effect of FDI. In support, Tsauroi and Odhiambo (2012) indicated that the relationship

between FDI and economic growth in Zimbabwe, just as in other sub-Saharan African countries, has not received enough and satisfactory attention in the literature. A greater need exist to shed more light on the relationship between FDI and economic growth in Zimbabwe.

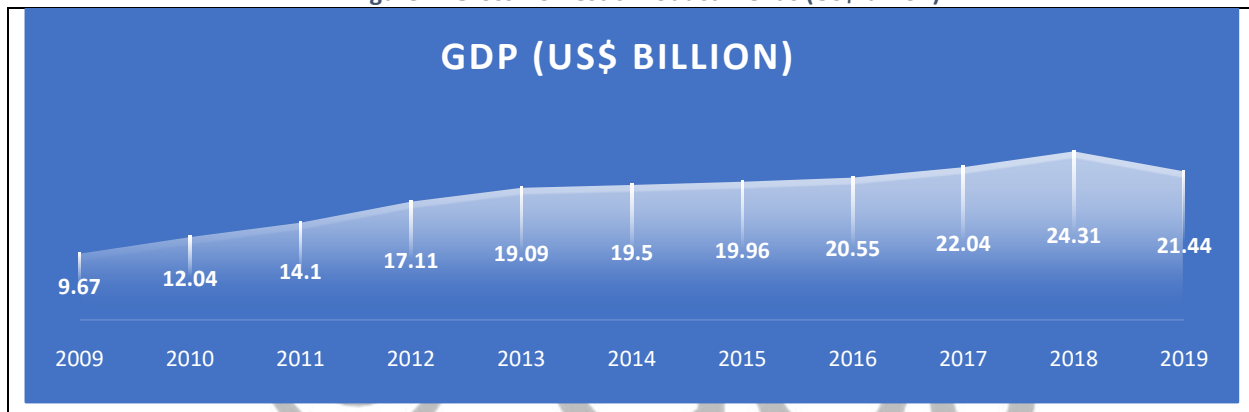
III. Methodology

To attain study objectives, the study utilized the trend analysis and the correlation analysis. Data used in the study was obtained from reliable sources such as Reserve Bank of Zimbabwe publications and also handlers of data like Macro trends. Annual data was gathered for GDP and FDI for analysis from 2009 to 2019, being the most current data in existence. The study covered the multi-currency era that started in 2009 after the formation of the Government of National Unity in an effort to stabilize the economy from various economic and political upheavals that have bedeviled the country for a long period.

IV. Data Analysis and Discussion of Results

The main variables in the study are GDP and FDI. Figure 1 below shows the trend of GDP for the period 2009 to 2019.

Figure 1: Gross Domestic Product Trends (US\$ billion)

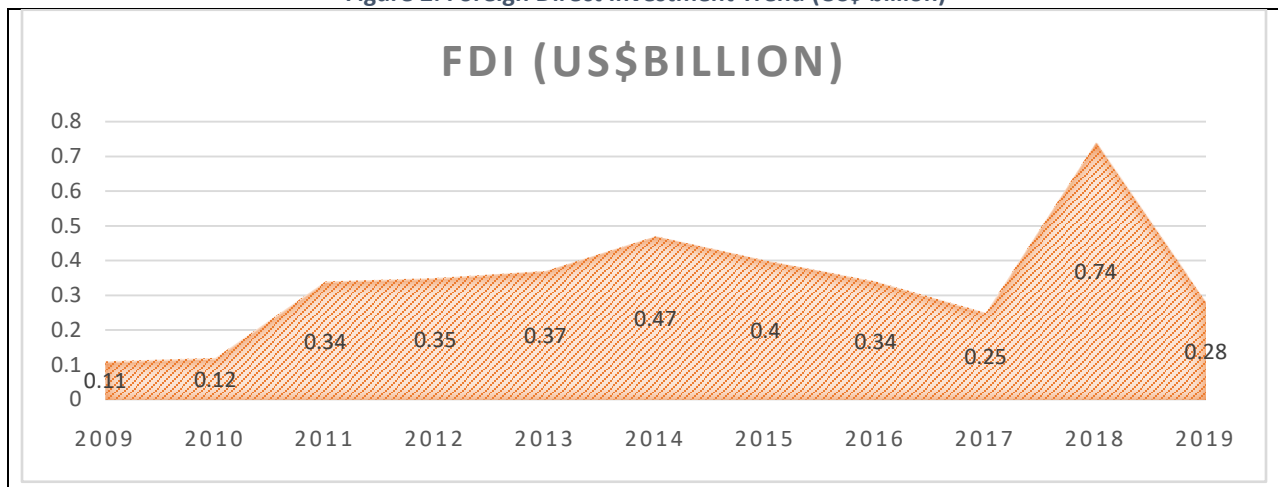


Source: www.macrotrends.net

As shown in Figure 1 above, there is a rising trend for GDP from year 2009 reaching a peak in 2018 (US\$24.31 billion), and a drop in year 2019 (US\$21.44 billion). The trend from 2009 to 2019 is not an even trend, it changes the gradient between periods.

Figure 2 below shows the trend for FDI.

Figure 2: Foreign Direct Investment Trend (US\$ billion)

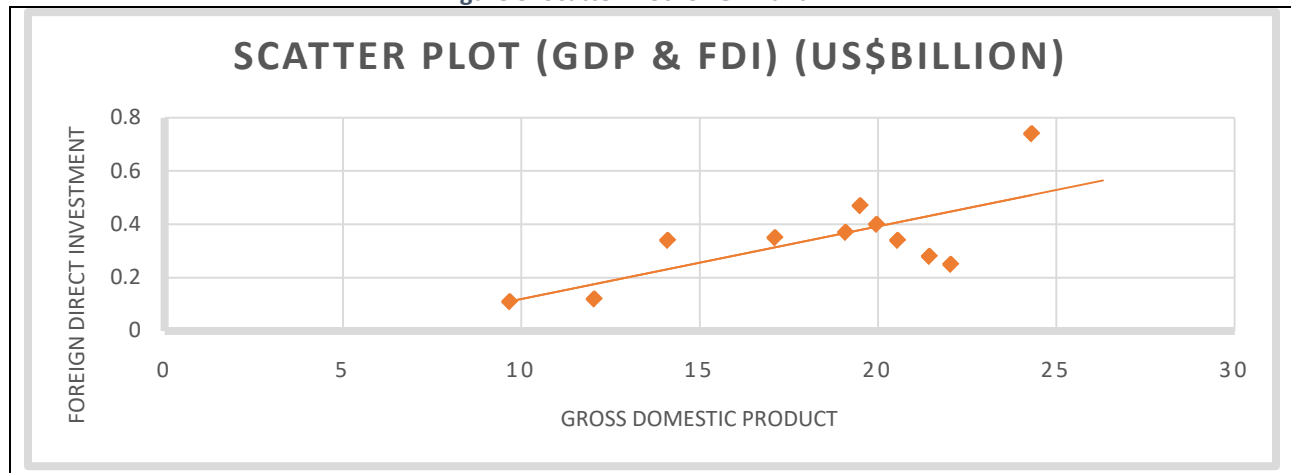


Source: www.macrotrends.net

Figure 2 above shows the trend of FDI inflows in the country for the period 2009-2019. Visible fluctuations are seen over the period. Years 2009 and 2010 have almost similar magnitude, with a sharp rise in 2011 to US\$0.34 billion, there after a gentle rise through years 2012, 2013 and 2014. A gentle decline was also noticed from 2014 (US\$0.47billion) through years 2015, 2016 and 2017 (US\$0.25billion). There was a very significant rise from 2017 to reach an all-time peak in 2018 (US\$0.74billion) and a significant drop again in 2019 (US\$0.28billion). FDI inflows are just volatile for the period under study.

A scatter plot for observed values of FDI and GDP for the period 2009-2019 is shown in Figure 3 below;

Figure 3: Scatter Plot for GDP and FDI



Source: Microsoft Excel

Figure 3 above shows the relationship between FDI and GDP for the study period 2009-2019. From the scatter plot a positive relationship is observed as shown by the positive linear trend line.

The summary statistics for the two variables are shown in Table 1 below;

Table 1: Summary Statistics (GDP and FDI)

	GDP	FDI
Mean	18.16455	0.342727
Median	19.50000	0.340000
Maximum	24.31000	0.740000
Minimum	9.670000	0.110000
Std. Dev.	4.498536	0.171586
Skewness	-0.648644	0.836087
Kurtosis	2.337240	3.891590
Jarque-Bera	0.972679 (0.614873)	1.645921(0.439130)
Anderson-Darling (A2)	0.430529 (0.3072)	0.507393 (0.2001)

Source: Eviews Software

For the period under study average GDP stands at US\$18.16 billion, while average FDI flows stand at US\$0.343 billion. GDP has a higher variability as reported by the standard deviation of 4.498 as compared to FDI with a standard deviation of 0.172. Both data values can be said coming from a normal distribution, since their skewness fall within the acceptable range of between -3 and +3, and their kurtosis ranges between -10 and +10. The distribution of the variable is normal as explained by the p-values of the Jarque-Bera statistics, being 0.614 for GDP and 0.439 for FDI. For the Jarque-Bera statistic, if p-value is greater than 0.05 it means the data follows a normal distribution. The Anderson-Darling normality test indicated that for both GDP and FDI no significant departure from normality was found, the p-values are 0.3072 and 0.2001 respectively and are greater than 0.05 for normality to be rejected.

For the attainment of study objectives the study works with stationary data. Time series analysis requires working with stationary variables to avoid spurious results. Taking away the trend help in separating fluctuations

around the trend of each time series thereby allowing the examination of the statistical properties of the co-movements of deviations of real GDP and real FDI. The initial variables data are in billions. To manage data behavior the study logs the variables. When logs are applied, the distributions are better behaved, and taking logs also curtails the effects of outliers.

The results of unit root test are shown in Table 2 below;

Table 2: Augmented Dickey-Fuller Test (GDP and FDI)

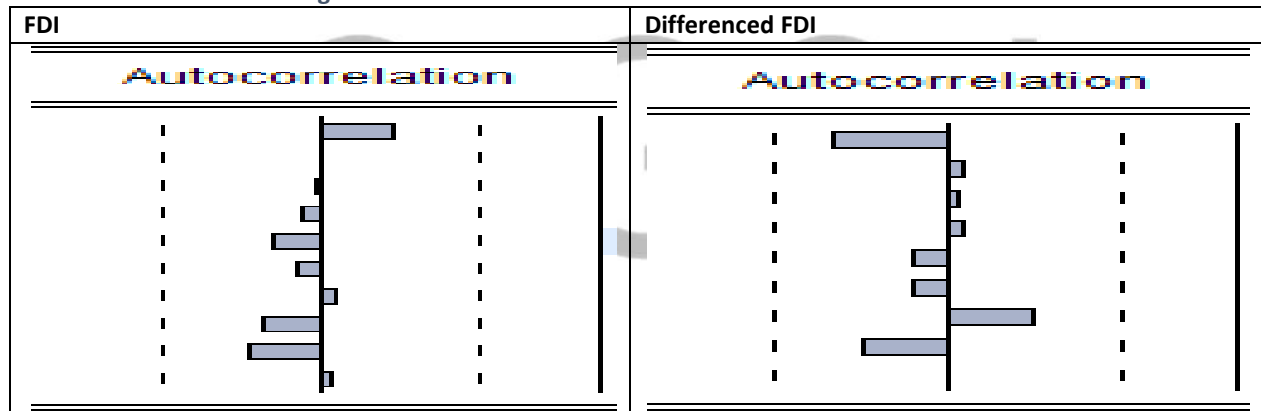
Logged variables	Augmented Dickey-Fuller test statistic	Probability
GDP	-3.386331	0.0418
FDI	-2.734900	0.1019
DFDI	-4.115236	0.0151

Source: Eviews Software

Table 2 above, report the ADF-statistics for GDP and FDI. The ADF-statistic for GDP is -3.386 which is significant at 5 percent level, implying the variable is stationary. The ADF statistic for FDI is -2.735 with a p-value of 0.1019 which is marginally insignificant at 10 percent level. By rounding off the ADF-statistic for FDI fall in the 10% acceptable region. Differencing the variable leads to stationarity with an ADF-statistic of -4.115 significant at 5% level. Since FDI is marginally insignificant at 10% level, the study to avoid over-differencing the variable will accept stationarity at 10% level. The right order of differencing is the minimum differencing required to get a near-stationary series which roams around a defined mean and the ACF plot reaches to zero fairly quick (Prabhakaran, 2018).

Comparison of the ACF for logged values of FDI and the differences series is shown in Figure 4 below;

Figure 4: Auto-Correlation Function for FDI and Differenced FDI

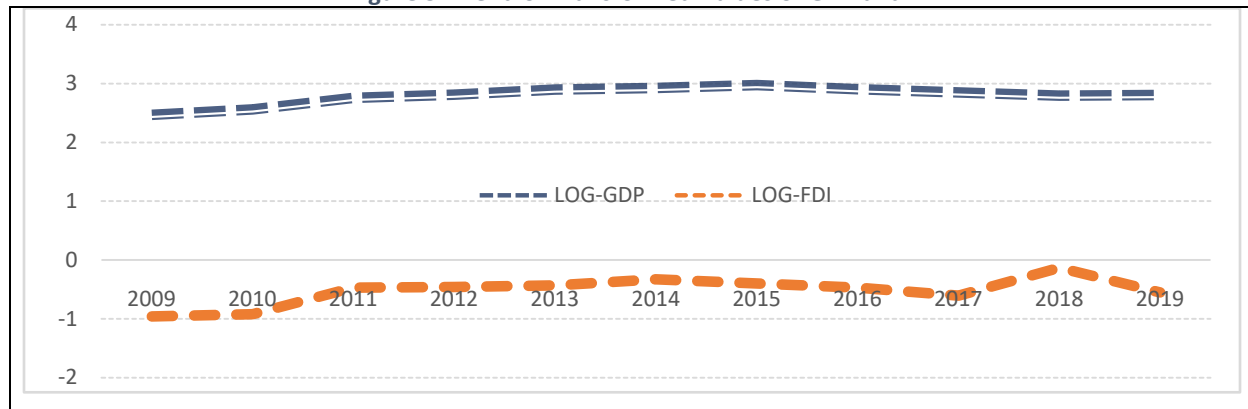


Source: Eviews Software

From Figure 4 above, the ACF favors logged values of FDI to differenced values. The ACF approaches zero fairly quickly for level FDI, hence differencing the variable will not be statistically efficient.

The study transformed GDP and FDI values from billions in levels through logging. The logged variables can be compared better as compared to the data in levels. The trend of GDP and FDI after taking logs is shown in Figure 5 below;

Figure 5: Trend of Transformed Values of GDP and FDI



Source: Microsoft Excel

From Figure 5 above the two variable GDP and FDI shows almost the same pattern until 2016, and thereafter significant differences can be noticed in the trends, with FDI having greater fluctuations. The country may have some policy changes that have led to significant changes in the flow of FDI. Such structural break may be caused by new economic developments, changes in political landscapes and/or changes in resources availability. According to Figure 5 above the break-point is 2017, and in 2017 Zimbabwe has witnessed change in leadership, removal of Robert Mugabe, the log-time president, and this might have affected the flow of FDI into the country.

The study calculates the correlation between GDP and FDI. GDP and FDI are linearly related. Two series have been used, data in levels and the logged variables. Correlation results are presented in Table 3 below.

Table 3: Correlation Statistic (GDP/FDI)

	Data in Levels	Variables in logs (Stationary)
Correlation		
<i>GDP/FDI</i>	0.714168 (71.42%)	0.788689 (78.87%)

Source: Eviews Software

From Table 3 above a positive correlation is reported between GDP (national income) and FDI. A correlation of 71.42% is reported for untransformed data, while a correlation of 78.87% is reported using transformed data. The transformed data shows a stronger relationship between the two variables. A positive correlation of 78.87% means that **foreign direct investment inflows are pro-cyclical**.

Pro-cyclicality implies that FDI inflows would be expected to move in the same direction with periodically observed fluctuations of national income (GDP), decreasing whenever there is an economic crisis, and increasing whenever there is a boom in the country. FDI inflows are not macroeconomic stabilizers since results shows that they do not help in smoothening out large fluctuations in national income during economic episodes.

V. Conclusion and Policy Recommendations

The study examined the macroeconomic stabilization effect of FDI inflows in Zimbabwe. The study aim was to check whether FDI is counter-cyclical or pro-cyclical. The study attained its objectives by using two variables in its analysis; the national income as measured by GDP and FDI. The study used annual data for the multi-currency era (2009-2019). The study relied on the correlation analysis as its main tool after appropriate data transformation. A positive correlation between national income and FDI of 78.87% was obtained. The correlation results have been consistent with the observed trend of the transformed data. A positive correlation derives the study to conclude that FDI inflows are pro-cyclical.

The pro-cyclicality nature of FDI inflows means that they follow the same trend with national income; in times where national income is high (low), FDI inflows are also high (low). FDI inflows do not help in stabilizing the economy. As has been noted by World bank (2013), challenges exist that affect both FDI and economic growth in the country, causing both variables to fall together - the economy is fragile, owing to political uncertainties, debt distress, downside risks in agriculture, low domestic liquidity and high real interest rates, high wages, the dilapidated infrastructure, and an unreliable power supply.

In literature increased FDI inflows are crucial for the development of the economy. The efficiency of the financial system of the host country is a prerequisite to realising the economic benefits from FDI (Ang, 2009). To

receive more FDI inflows, the study recommends improvement in the macroeconomic environment. A more stable economy and/or a growing economy promotes increased FDI inflows. The country should work on issues of property rights, and this help in boosting investor confidence and attracts more of the much needed FDI. The country should as well work to rely on inward-looking policies to back up inflows from foreigners to build the economy. FDI alone do not help in stabilizing fluctuations in national income, rather it falls (rise) with the fall (rise) in national income.

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