FDI and the Misery Index in Saint Lucia: Analyzing the Impact on a Tourism-Dependent Economy

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ABSTRACT

This study was conducted to examine the relationship that exists between Foreign Direct Investment (FDI) and the Misery Index (MI) in Saint Lucia. Moreover, other macroeconomic variables were included in order to understand their impact on FDI inflows into a small island developing economy. The research employs the Autoregressive Distributed Lag (ARDL) model to analyze the long-run and short-run relationships between FDI and the Misery Index. In addition, the study explores the influence of macroeconomic variables such as GDP per capita growth, trade openness, money supply, and total debt service on FDI inflows. Stationarity of the variables is confirmed using the Phillips-Perron (PP) and Augmented Dickey-Fuller (ADF) tests. It was found that there exists no significant long-run relationship between FDI and the Misery Index. However, GDP per capita growth, money supply, and total debt service, play a significant positive role in influencing FDI inflows. Moreover, there exists a negative relationship between trade openness and FDI. This relationship between trade openness and FDI can be attributed to Saint Lucia's heavy reliance on tourism and not the trade-intensive sectors. In the short run, foreign direct investment has a negative relationship with money supply and the Misery Index. By examining the relationship between FDI and the Misery Index from the perspective of a small island developing state (SIDS) that is heavily dependent on tourism, this study contributes significantly to the existing literature.

Keywords: Foreign Direct Investment, Misery Index, ARDL, Tourism-Dependent Economy, Unemployment, Inflation
JEL Classifications: E31, F19, F21, J60

1. INTRODUCTION

Proposed is the view that Foreign Direct Investment (FDI) is one of the critical drivers of economic growth. Small island developing states like Saint Lucia have now become heavily reliant on those foreign investments due to their positive contributions to economic growth and job creation (Olofsdotter, 1998; Azman-Saini et al., 2010; Pegkas, 2015; Wang, 2009). Overall, FDI has been found to enhance capital inflows and technology transfer. Therefore, the important question now is, what are the drivers that enhance FDI inflows into those small developing island nations. The decision of international investors to invest in a particular country is typically influenced by that nation's macroeconomic conditions, including inflation, unemployment, interest rates, exchange rates, tax policies, and political stability. Often, inflation and unemployment are key determining factors.

One broad measure that captures these two variables is the Misery Index which was originally developed by Arthur Okun in the 1960s. This index was created to reflect the overall economic distress that is being experienced by a country's citizens. When analyzing determinants of FDI, the Misery Index is particularly relevant as it captures the macroeconomic distress that can influence the investor's decision-making process. This index has been refined since its creation in the 1960s when it initially included inflation and unemployment rates. The Misery Index has been expanded by various economists, including Barro (1999) and Hanke (2011), to incorporate additional variables such as interest rates and real GDP growth.

The Misery Index was further refined by Henderson (2015) who identified a significant limitation in the approaches of Barro and Hanke. The omission of Irving Fisher's insights in their models

was notable, particularly since nominal interest rates already incorporate the market's expectations of inflation. Consequently, including both inflation and interest rates in a single index may result in double-counting. To address this issue, Henderson proposed the Henderson Misery Index (HMI). Like Okun's original formulation from the 1960s, the HMI adds the inflation rate to the unemployment rate. However, Henderson refines this approach by subtracting the real GDP growth rate to better reflect overall economic well-being.

Policymakers in small island developing nations who seek to attract greater foreign investment must develop a deep understanding of the relationship between economic distress and investment flows, as economic volatility can significantly influence investor confidence. While some studies have suggested that higher economic misery figures could potentially deter FDI inflows (Adebayo et al., 2021; Mehmood et al., 2022), other studies have found that inflationary economies may attract speculative foreign investments due to the potentially high returns that are associated with those economies (Awan et al., 2011; Zaman et al., 2012). However, although those inflows may be beneficial to those nations, they often carry risks of volatility and capital flight. Consequently, those speculative foreign inflows may limit the long-term economic benefits of those nations.

FDI is an essential inflow, particularly for small island economies like Saint Lucia. Therefore, given that investor confidence is highly sensitive to economic uncertainty, the influence of the misery index on foreign direct investment (FDI) warrants closer examination. While previous studies have extensively explored the role of macroeconomic variables on FDI, limited attention has been paid to small island developing nations and the direct relationship between economic misery and FDI inflows. As a result, the key purpose of this study is to bridge that gap by examining both the short-run and long-run effects of the misery index on FDI inflows in Saint Lucia. Empirical insights using ARDL cointegration techniques will provide necessary insights needed by policy makers.

2. LITERATURE REVIEW

Theoretical and empirical research on the determinants of FDI inflows highlight the importance of macroeconomic and political stability, market size, openness, tax, exchange rate, infrastructure, and institutional quality in attracting foreign investments (Chakrabarti, 2001; Asiedu, 2002). The role of economic distress indicators, such as the Misery Index, in shaping investment decisions has received growing attention in recent academic research.

Mixed evidence has been found concerning the impact of the Misery Index on FDI. Specifically, Khan et al. (2022) applied the Autoregressive Distributed Lag (ARDL) model to evaluate the relationship between the two variables in Pakistan and found a significant negative relationship between the Misery Index and FDI inflows in the short run but not in the long run. On the contrary, others have argued that even with high levels of unemployment and other economic, social, and political ills plaguing a country, certain components of the Misery Index, specifically the inflation

rate, may have a positive, though statistically insignificant impact on manufacturing growth (Rahman et al., 2019).

Moreover, the nexus between FDI and other macroeconomic variables has also been explored extensively. Ditta and Hassan (2017) investigated the relationship between FDI and economic misery but also included other variables like interest rate and exchange rate. The main findings of their paper pinpointed the negative, though statistically insignificant, impact on FDI exerted by economic misery and political instability in Pakistan. On the contrary, the levels of domestic interest rates and exchange rate stability highlighted a significant positive correlation with FDI inflows. Similar results were found suggesting that exchange rate fluctuations create uncertainty, thereby discouraging foreign investors (Osinubi and Amaghionyeodiwe, 2009). Similarly, Udomkerdmongkol et al. (2006) concluded that the expectation of the local currency depreciation negatively affects FDI inflows. This finding further emphasizes the argument that macroeconomic stability is necessary to maintain investment inflows.

The study of economic misery has been explored using various economic variables to understand their impact on economic distress. Specifically, Nwogwugwu and Umeghalu (2021) examined low-human-development African nations and the role of international trade in shaping the economic misery that exists in those nations. Using a system generalized method of moments (GMM) approach, they assessed the impact of total exports, manufactured exports, balance of payments, exchange rates, and per capita GDP growth rate on economic misery. It was concluded that unfavorable trade balances and exchange rate fluctuations worsened economic misery. These findings further emphasize the need for macroeconomic stability.

Other researchers studying the determinants of FDI focus on other vital variables like trade, capital formation and infrastructure. Specifically, Kok and Acikgoz Ersoy (2009) conducted a widespread analysis of FDI determinants in developing countries and identified GDP per capita growth, trade, communication infrastructure and gross capital formation as key drivers of FDI. On the other hand, factors like inflation and debt service obligations were found to deter FDI inflows. This finding further highlights that macroeconomic instability affects investor confidence.

Pegkas (2015) found a strong, positive relationship exists between economic growth and FDI in the Eurozone. Although attracting FDI is important, the effectiveness of those inflows is just as important. Particularly, Azman-Saini et al. (2010) highlighted that the effectiveness of FDI in creating a positive impact on economic growth is heavily dependent on the advancement of financial markets. Their study, based on data from 91 countries, revealed that the benefits of FDI remain uncertain until financial markets reach a critical level of maturity. Ratombo (2024) supported the findings of Azman-Saini et al. (2010) when the impact of financial development on FDI in South Africa was investigated by employing an autoregressive distributed lag (ARDL) model. The study found a significant long-term relationship between financial sector development and FDI attraction. Consequently, in addition to putting efforts in place to attract the foreign inflows, a well-functioning financial sector is essential to maximize FDI-driven growth.

Additionally, the new growth theory posits that FDI contributes to long-term economic development through technological spillovers and productivity enhancements (Blomstrom, 1989). Olofsdotter (1998) also proved that technology spillovers from FDI positively influence economic growth. He found that this is particularly true in countries with strong institutional frameworks. Moreover, if the nations possessed strong property rights and effective bureaucracies, they would be better able to exploit the technological advancements that come with FDI.

Furthermore, De Mello (1997) argued that a country's attractiveness to foreign direct investment (FDI) inflows is shaped by a combination of regulatory frameworks, institutional factors, trade policies, and existing factor endowments. These elements also influence investors' willingness to introduce advanced technologies. Saint Lucia remains heavily dependent on Tourism as it plays a significant role in economic development. Saint Lucia's natural beauty has been a key factor in attracting investment within the tourism sector. Subsequently, Saint Lucia's resource endowments remain an important consideration in understanding the determinants of FDI. Moreover, given Saint Lucia's economic structure, which is characterized by heavy reliance on tourism, analyzing the relationship between the misery index and FDI is crucial to aid with better policy formulation.

The effectiveness of foreign direct investment (FDI) in enhancing economic growth relies on a variety of determinants that shape its impact. Numerous scholars have examined the factors influencing FDI inflows including the sectoral composition of FDI, the development of the financial sector, firm size and macroeconomic stability. Wang (2009) determined that the manufacturing sector significantly enhances economic growth while non-manufacturing FDI has a negligible impact. This finding highlights the importance of the careful consideration needed when determining the sector-specific distribution of investments. Similarly, Ayanwale (2007) found that the communication sector is a key driver of economic expansion in Africa. On the other hand, investments into the manufacturing sector have a negative correlation with growth.

Apart from the sectoral factors, host country conditions are also vital determinants of FDI inflows. Asiedu (2006) revealed that factors such as abundant natural resources, large local markets, stable inflation rates, the quality of the infrastructure, and a sound legal framework are needed to attract FDI to Africa. Conversely, major deterrents include political instability and corruption. Ayanwale (2007) further identified the key determinants of FDI in Nigeria as GDP size, macroeconomic stability, and human capital.

FDI determinants can also be viewed from a firm-level. Santiago (1987) found that firm size and macroeconomic stability are critical factors in attracting foreign investment, concluding from his study on Puerto Rico that low labor costs do not significantly drive FDI.

The Misery Index has been used in many studies to measure the level of discomfort or misery that exists in different nations; however, it has been criticized for not being a comprehensive measure of distress. Specifically, Büyüksarıkulak and Suluk (2022) examined the Fragile Five countries, particularly, Indonesia, Turkey, India, South Africa, and Brazil. This was done by calculating and

evaluating the Okun and Barro misery indices. The findings show that Indonesia consistently performs best in reducing economic misery, followed by India, which benefits from strong economic growth and declining inflation. In contrast, Brazil continues to struggle with rising unemployment and interest rates despite achieving some inflation control. Turkey ranks poorly, primarily due to persistently high inflation and interest rates, especially after 2016. With the persistent high unemployment, South Africa remains the worst performer together with Turkey. The study concluded by highlighting the key limitations of the traditional misery indices. Instead, Büyüksarıkulak and Suluk (2022) advocated for wide-ranging indicators like the OECD Better Life Index for a more accurate depiction of economic distress.

Collectively, the effectiveness of FDI has been shown to be far from uniform as it is deeply influenced by sectoral allocation, the level of development of the financial market, macroeconomic and political stability, institutional strength, technological diffusion and in unique cases the firm size. Moreover, limited research exists on small island developing economies such as Saint Lucia. Most studies focus on large and emerging economies, and not on small nations that often exhibit unique FDI dynamics due to their small market size, high dependence on external trade, vulnerability to economic shocks, and reliance on tourism-driven revenue. Additionally, understanding the relationship between the Misery Index and investment inflows is essential for formulating effective policies, given the crucial role of FDI in the economic development of these nations. Using both short-run and long-run econometric modeling techniques, this study fills the gap by analyzing the extent to which the Misery Index influences FDI in Saint Lucia. The findings will be instrumental for policymakers in designing suitable strategies to alter unemployment and inflation as necessary to enhance Saint Lucia's attractiveness to foreign investors.

3. DATA AND METHODOLOGY

3.1. Data Sources and Variables
Secondary data was accumulated from two major sources, specifically, the World Bank's World Development Indicators and the Central Statistical Office of Saint Lucia. The time series data used in this analysis include the following variables, foreign direct investment inflows, Arthur Okun's misery index, money supply, trade openness, total debt service, GDP per capita and the Price level ratio of PPP conversion factor (GDP) to market exchange rate which provides a vital measure of the differences that exists in the general price levels of countries.

In this analysis, FDI is taken as the dependent variable while the misery index, money supply, trade openness, total debt service, GDP per capita and the Price level ratio are observed as the independent variables. Moreover, the money supply variable is used as a proxy for financial market development (Shahrudin et al., 2010) and would also provide great insights into how financial market development influences FDI inflows.

3.2. Model Specification and Estimation Technique
The model of this study was developed based on that of Faroh and Shen (2015), Ditta and Hassan (2017) and Khan et al. (2022)

with added modifications. In order to examine the effect of the misery index on FDI inflows into Saint Lucia, FDI is the dependent variable while the misery index, money supply, trade openness, total debt service, GDP per capita and the Price level ratio are observed as the control variables from 1991 to 2022. Accordingly, this study adopts the following model:

$$FDI_t = \beta_0 + \beta_1 MI_t + \beta_3 MS_t + \beta_3 Trade_t + \beta_4 TDS_t + \beta_5 PLR_t + \beta_6 GPC_t + U_t \quad (1)$$

Where,
FDI=Foreign Direct Investment Inflows (% of GDP)
MI=Misery Index
MS=Money Supply (% of GDP)
Trade=Trade Openness
TDS=Total Debt Service
PLR=Price Level Ratio
GPC= GDP per Capita growth rate
t=Time Period.

β_0 is included in the above equation as an intercept while β_1, β_2, β_3, β_4, β_5 and β_6 are used to express the long run coefficients of MI, MS, Trade, TDS, PLR, and GPC respectively. Moreover, U_t represents the error term.

Sometimes, when dealing with empirical studies, the regression results can provide inaccurate or inconsistent results when the variables are non-stationary. As a result, to ensure that the variables are stationary, Dickey and Fuller (1979) created an enhanced unit root test known as the Augmented Dickey-Fuller (ADF) test. In cases where there are negative coefficient values and serial correlation, the ADF test is one of the most suitable tests for unit root. Consequently, both the Phillips-Perron (PP) and ADF tests will be used to test for stationarity as they are widely recognized in academic research. Furthermore, when the variables of the model are integrated at level, first difference, or a combination of both, the ARDL cointegration approach is considered appropriate.

The ARDL model is formulated as follows:

$$\Delta FDI_t = \beta_0 + \sum_{i=0}^{q}\beta_{1i}\Delta(FDI_{t-1}) + \sum_{i=0}^{q}\beta_{2i}\Delta(MI_{t-1})$$
$$\beta_{3i}\Delta(MS_{t-1}) +$$
$$+\sum_{i=0}^{q}\sum_{i=0}^{q}\beta_{4i}\Delta(Trade_{t-1}) + \sum_{i=0}^{q}\beta_{5i}\Delta(TDS_{t-1})$$
$$\sum_{i=0}^{q}\beta_{6i}\Delta(PLR_{t-1}) + \sum_{i=0}^{q}\beta_{7i}\Delta(GPC_{t-1}) +$$
$$\beta_{8i}(FDI_{t-1}) + \beta_{9i}(MI_{t-1}) + \beta_{10i}(MS_{t-1}) +$$
$$\beta_{11i}(Trade_{t-1}) + \beta_{12i}(TDS_{t-1}) + \beta_{13i}(PLR_{t-1})$$
$$+\beta_{14i}\Delta(GPC_{t-1}) + U_t \quad (2)$$

In the above equation, the symbol Δ represents the 1st difference. Additionally, the optimal lag is represented by q. Moreover, β_0 is the constant, β_1, β_2, β_3, β_4, β_5, β_6 and β_7 represent the coefficients

of the short-term parameters. β_8, β_9, β_{10}, β_{11}, β_{12}, β_{13} and β_{14} are all the long-term coefficient parameters.

4. EMPIRICAL RESULTS AND DISCUSSION

Stata statistical software was used to generate all of the results presented in this section. The unit root problem is a common problem encountered when dealing with time series data. As a result, it is necessary to conduct stationary tests to test the variables included in the analysis. Subsequently, Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit root tests are utilized to verify stationary variables. The results from the stationary tests are tabulated below in Table 1.

Table 1 shows that GDP per capita growth rate is stationary at level, whereas FDI, the misery index, money supply, trade openness, total debt service and price level ratio are integrated at 1st difference in both tests. Based on the findings, all of the variables are either integrated at level or at first difference. Subsequently, the ARDL approach of co-integration was adopted. Now that the unit root has been tested, bound testing can be conducted in order to determine whether cointegration exists.

The ARDL Bounds Test is applied to determine whether there is co-integration among FDI, the misery index, money supply, GDP per capita growth rate, trade openness, total debt service and price level ratio in Saint Lucia over the period 1991-2022. According to the results in Table 2, the F-statistic generated is used to test the null hypothesis of co-integration which states that there is no levels relationship. The results from the ARDL Bounds test demonstrate that the F-statistic is 10.601, which is much greater than the upper bound at all significance levels (10%, 5%, 2.5%, and 1%) indicating that there is strong evidence of cointegration. As a result, the null hypothesis is rejected and the alternative hypothesis is accepted. Subsequently, there exists a co-integrated relationship in Saint Lucia among the variables FDI, the misery index, money supply, GDP per capita growth rate, trade openness, total debt service and price level ratio.

Moreover, the cointegration of the variables is demonstrated after choosing the optimal lag length. FDI represents the dependent variable whereas the misery index, money supply, GDP per capita growth rate, trade openness, total debt service and price level ratio

Table 1: Unit root tests

Variables	ADF test		Phillips Perron test	
	(At level)	(At first difference)	(At level)	(At first difference)
FDI	−0.933	−5.797**	−1.182	−8.059**
MI	−0.282	−6.008**	−0.345	−8.358**
MS	0.442	−4.158**	0.223	−5.704**
Trade	−0.198	−6.401**	−0.027	−8.072**
TDS	−0.283	−5.775**	−0.259	−8.879**
PLR	−0.538	−2.084**	−0.539	−4.051**
GPC	−5.987*		−4.369*	

Source: Authors own work
*Indicates that the variable is stationary at level and **demonstrates the variable is stationary at 1st difference

Table 2: ARDL bound testing

Level of significance	Dependent variable FDI ARDL (2,2,0,0,0,0,1)	
	F-Statistic 10.601	
	Lower bound	Upper bound
10%	2.12	3.23
5%	2.45	3.61
2.5%	2.75	3.99
1%	3.15	4.43

Source: Authors own work

Table 3: Estimated long-run coefficients ARDL

Dependent variable is FDI (2,2,0,0,0,0,1) 1991-2022				
Independent variables	Coefficient	Standard error	t-statistic	P-value
MI	0.2140514	0.2330618	0.92	0.371
PLR	−0.0162261	0.1742928	−0.09	0.927
GPC	0.2130125	0.0813948	2.62	0.018**
TDS	1.663107	0.5430664	3.06	0.007***
Trade	−13.02673	5.744255	−2.27	0.037**
MS	0.4405687	0.1549963	2.84	0.011**
C	−1.363143	0.669954	−2.03	0.05

Source: Authors own work
***, **, and *indicates 1, 5, and 10 level of significance

Table 4: Estimated short-run coefficients ARDL

Dependent variable is FDI (2,2,0,0,0,0,1) 1991-2022				
	Coefficient	Standard error	t-statistic	P-value
FDI	0.6872933	0.1878611	3.66	0.002***
MI	−0.417675	0.2146103	−1.95	0.068*
MS	−0.6325736	0.1885028	−3.36	0.004***
R-squared	0.8757			
Adj R-squared	0.7952			

Source: Authors own work
***, **, and * indicates 1, 5, and 10 level of significance

in Saint Lucia are the selected independent variables.

The estimated long-run results are presented in the Table 3 above. The results show that there is no strong evidence that the misery index affects FDI, though the relationship is positive, it is not significant. Khan et al. (2022) also found the effect of the misery index on FDI to be insignificant. The price level ratio, though poses a negative relationship between FDI, also is insignificant. GDP per capita growth rate, trade openness, money supply and total debt service all possess a significant relationship with FDI to varying degrees. Specifically, GDP per capita growth has a 5% significance level and the results show that a 1% increase in this variable increases FDI by 0.213%. This demonstrates a positive impact on FDI as higher economic growth has been shown to attract greater foreign investment. Additionally, it has been found that only the economies that possess both a robust economic infrastructure and economic development levels benefit more from FDI inflows (Yang, 2024).

Moreover, a 1% increase in total debt service leads to a 1.6631% increase in FDI. This positive effect on FDI suggests that the investors see debt repayment as a sign of financial stability. The stable debt payments improve investor confidence.

Furthermore, trade openness has been found to have a negative relationship with FDI as a 1% increase in trade openness leads to a 13.0267% decrease in FDI inflows. One possible explanation could be that FDI in Saint Lucia is largely service-oriented, which is heavily concentrated in tourism rather than trade-intensive sectors like manufacturing. Additionally, tourism relies heavily on imported goods and services in order to cater to the tastes of the visitors and the locals alike. Consequently, increased imports may reduce the need for foreign investors to establish local manufacturing facilities.

Additionally, the seasonal nature of tourism, real estate-driven FDI, and trade imbalances contribute to the inverse correlation between trade and FDI in the country. Specifically, tourism activity fluctuates seasonally, therefore, FDI inflows into tourism infrastructure do not necessarily align with trade movements. Moreover, imports serving visitor demand tend to rise during peak seasons, while FDI inflows follow different cycles, which can result in a negative statistical relationship between the two. Furthermore, the relationship between FDI and trade is not always concrete as not every type of FDI leads to more trade (Voica et al., 2021).

The results also show that the money supply has a positive, significant impact on FDI as a 1% increase in the money supply will lead to a 0.4406% increase in FDI. This suggests that increased liquidity might improve investor confidence. The results are consistent with numerous other studies (Shahrudin et al., 2010; Khan et al., 2022). In the study of Shahrudin et al. (2010), money supply is used as a proxy for financial market development. As a result, it can be concluded that a well-functioning financial sector is essential to maximize FDI-driven growth (Ratombo, 2024; Azman-Saini et al., 2010).

Overall, it has been found that in the long-run, GDP per capita growth & financial stability and liquidity, specifically, debt repayment and money supply, are key drivers of long-run FDI.

The results of short-run relationships are depicted in Table 4. The lagged FDI which represents the dependent variable has a coefficient of 0.687 which is highly significant. This suggests that FDI is persistent over time as the previous levels of FDI strongly influence current inflows from FDI. Moreover, the lagged misery Index shows a coefficient of −0.4177 which is weakly significant. This negative relationship suggests that the past values of the misery index might discourage FDI, but the evidence is weak. Specifically, high levels of inflation and unemployment are found to discourage FDI inflows likely due to the increased crime associated with rising prices and unemployment. Similar results were found in the short run by Khan et al. (2022). Additionally, the change in money supply has a coefficient of −0.6326 which is highly significant. The findings suggest that FDI inflows decrease in the short run when the money supply increases. Subsequently,

Table 5: Diagnostic tests for model validation

Test	Statistic	df	P-value	Interpretation
Durbin-Watson d-statistic	1.80087	-	-	No significant autocorrelation (d-statistic near 2 suggests no autocorrelation)
Breusch-Godfrey LM test for serial correlation	Chi-square (2)=3.182	2	0.2037	No serial correlation (Fail to reject H$_0$: no serial correlation)
White's test for Heteroskedasticity	Chi-square (28)=29.00	28	0.4125	No heteroskedasticity (Fail to reject H$_0$: homoskedasticity)
Cameron and Trivedi's decomposition of IM-test	-	-	-	Heteroskedasticity: Chi-square=29.00 (P=0.4125) No evidence of heteroskedasticity. Skewness: Chi-square=4.10 (P=0.9668) No skewness. Kurtosis: Chi-square=1.55 (P=0.2125) No evidence of non-normality.

Source: Authors own work

Figure 1: Cumulative sum of squares of recursive residuals
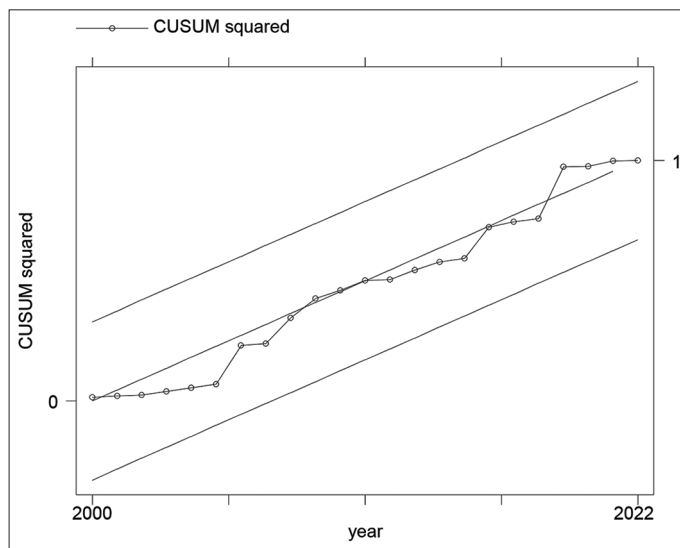
Source: Authors own work

this could denote worries among investors about inflation or economic instability.

Overall, negative short-run relationships were found between the money supply and the misery index on FDI inflows. This further emphasizes the need for economic stability in the short-run in order to ease the worries of potential investors.

Durbin-Watson d-statistic, Breusch-Godfrey Serial Correlation LM test, White's Test for Heteroskedasticity and Cameron and Trivedi's Decomposition of IM-test are the selected tests for diagnostics. The results in Table 5 show that there is no significant autocorrelation and no serial correlation. The d-statistic generated is close to 2, as a result, this indicates that there is no significant autocorrelation in the residuals. A value of 2 suggests no first-order serial correlation. Furthermore, the results from the Breusch-Godfrey Serial Correlation LM Test signify that the P-value of 0.2037 is >0.05. Subsequently, there is no serial correlation in the model residuals up to the 2nd lag.

Moreover, the results from the White's test which is used to test for heteroscedasticity shows that there is no heteroscedasticity problem in the model. Specifically, the residuals have constant variance, which is a good sign for model validity. Also, the additional tests reveal that all of the variables of the model have

a correct functional form and the time series data is normally distributed. Overall, the residuals of the model appear to be normally distributed and homoskedastic.

Brown et al. (1975) proposed using the cumulative sum (CUSUM) and cumulative sum of squares (CUSUMSQ) tests to assess the stability of both short- and long-run parameters in the estimated model. As can be seen from Figure 1, the plot of the CUSUM squared is within the bounds and is also significant at 5%. Subsequently, the results of Figure 1 ensures the stability of the short and long-run parameters.

5. CONCLUSION

By adopting the Autoregressive Distributed Lag (ARDL) model, this study investigated the relationship that exists between foreign direct investment (FDI) and the misery index. The results show that there exists no strong evidence of a direct long-run relationship between FDI and the misery index. On the other hand, other macroeconomic factors such as GDP per capita growth, trade openness, money supply, and total debt service were found to significantly influence FDI. Specifically, there exists a significantly positive relationship between GDP per capita growth, total debt service and money supply on FDI, while trade openness exhibited a negative relationship. This negative relationship between trade openness and FDI could be attributed to Saint Lucia's heavy reliance on tourism rather than on the trade-intensive sectors like manufacturing. Furthermore, the seasonal nature of tourism may lead to FDI not aligning with broader trade movements. In the short run, it was found that the money supply and the misery index showed a negative relationship with FDI. However, the significance of the misery index was weak. In order to test for stationarity, the Phillips-Perron (PP) and Augmented Dickey-Fuller (ADF) tests were used to confirm the stationarity of variables. The results of those tests reinforced the validity of the ARDL model in analyzing both the short and long-term relationships.

In retrospect, policymakers should encourage sustainable growth through infrastructure improvements, debt repayment enhancements, and education to enhance FDI. Moreover, a more balanced trade policy should be adopted since openness can prevent possible local production and investment. Furthermore, to stabilize the FDI inflows and make the inflows less vulnerable,

efforts should be made to diversify the economy beyond tourism into manufacturing. Future research should investigate the trade-FDI relationship in tourism economies and other SIDS.

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