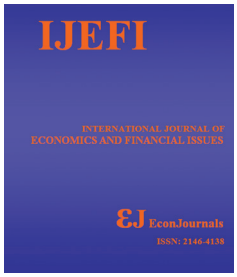

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# Investment, Exchange Rate and Exports Nexus within the South African Automotive Industry

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**ABSTRACT**

The automotive industry is one of the South African industries that contribute to the manufacturing output and exports and plays important to the country's economic performance. However, the export volume from this industry depends on various economic factors that include foreign direct investment, domestic investment and exchange rate volatility. The current study aims to determine empirically these three variables on the export volume in the South African automotive industry. To achieve this objective, the authors applied the autoregressive distributed lag (ARDL) model, ECM and causality test on quarterly time series data from 2008 to 2021. The study findings reveal that in the long run, domestic investment has a dominant positive effect on exports from the automotive industry. However, while both domestic investment and exchange rate are inversely related to the export in the short run, foreign direct investment is positively significant to increase export levels. The study recommends, based on these findings, the implementation of strategies that enhance growth in domestic investment and cautious management of foreign direct investment as the latter is more effective in the short run. Additionally, the monetary policymakers should, in each policy introduced and implemented, aim for the stability of the domestic currency and its effect on exports, especially in the automotive industry.

**Keywords:** Automotive Industry, Exports, FDI, Investment, Exchange Rate, South Africa
**JEL Classifications:** F14, L62, P33

## 1. INTRODUCTION

The relationship between foreign direct investment (FDI) and its benefit in the host country has been a subject of discussion by several researchers and scholars. Various empirical studies conducted to investigate the matter, have reached contradicting results. For example, the study conducted by Bertschek (1995), Blomström and Sjöholm (1999), Kokko et al. (1994, 1996) and, Egger and Pfaffermayr (2001) found that significant and positive spillovers of foreign direct investment in various industries within host countries. On the other hand, the study by Girma et al. (2001), Globerman (1979) and, Haddad and Harrison (1993) found that the effect of the FDI on the host county's economy or industries is either insignificant or negative. With these results, one can wonder if it could not be better to improve domestic investment rather than focusing on FDI which produces conflicting results. Unfortunately, to the best knowledge of the author, many studies were conducted to assess the influence of FDI on exports or domestic investment on economic growth but none analysed how domestic investment affects a country's or firm's export volume. This is why this study uses not only both FDI and domestic investment to determine their influence on automotive export in South Africa.

Besides the contribution of the FDI to a country's production and exports, the exchange rate is another determinant of the export level of a specific country (Habanabakize, 2020). Owing to the fast growth of globalisation of several industries, the exchange rate plays an important role in the production and sale of most firms within the global markets. The exchange rate volatility has become a source of uncertainty for manufacturing industries including the automotive industry (Juhro and Phan, 2018; Williamson, 2001). Theoretically, the weaker the domestic currency, the higher the export volume.

However, this is not always the case (Lee, 2020) as a sometimes weak domestic currency may imply difficulties in accessing the inputs leading to low production and a small share of exports.

The automotive industry was selected based on various reasons. Firstly, the automotive industry is considered one of the six key industries in the South African economy. In 2018, for instance, this industry accounted 14.3 percent of the total South African exports (NAAMSA, 2020). Additionally, in 2020 during the Covid-19 pandemic, irrespective of the severe impact of COVID-19 that reduces its contribution, the automatic industry contributed 4.9 percent to the gross domestic product (GDP) (International Trade Administration, 2021). Furthermore, the South African automotive industry created more than 110 000 jobs in 2019 which could, in return, contribute to industry export growth (Automotive Industry Export Council, 2020). Irrespective of its contribution to the national economy, the domestic market of automotive products is at a diminishing rate while South African automotive exports keep growing in global markets (Lamprecht, 2020). These results raise a question of what is the engine of the South African automotive export growth. Acknowledging the influence of investment and exchange rate on trade, the current study aims to determine the effect of FDI, domestic investment and exchange rate on the export volume in the South African automotive industry.

The following is the structure of the remaining section of the paper: the next section represents and discusses the study's theoretical framework related to the theoretical and empirical linkage between automotive exports, foreign direct investment, domestic investment and exchange rate. Section 3, provides the methodological approaches employed to explore the effect of independent variables (foreign direct investment, domestic investment and exchange rate) and independent variables (automotive industry's export). Section 4 presents and discuss the study findings, while the last section summarises the study contents and provides policy recommendations.

## 2. A BRIEF OVERVIEW OF THE STUDY-RELATED LITERATURE

### 2.1. Exchange Rate and Export Volume

The movements of a country's currency are largely thought to influence the prices and volume of trade (De Soyres et al., 2021). Irrespective of the exchange rate system adopted by a country, exchange rate volatility on trade flows captures great attention from investors, policymakers and researchers. There exist two major exchange rate systems namely flexible exchange rate system and fixed exchange rate system or managed rates. The flexible exchange rate results from changes in trading partners, prices and fluctuations in the nominal exchange rate while the fixed exchange rate system takes its origin only from price changes. Nonetheless, both exchanges are used to measure exchange rate volatility as the rate is measured using the real exchange rate (Bahmani-Oskooee and Nouira, 2020). Exchange rate volatility has been subject to various empirical and theoretical studies. Several; theoretical models argue that the effect of exchange rate volatility on exports is dependent on several factors that include the time horizon of trade transactions, the obtainability of capital markets, and hypotheses made about risk preferences (Chit et al., 2010; Sercu and Vanhulle, 1992; Viaere and de Vries, 1992). These theoretical models were supported by numerous empirical findings (Arize et al., 2000; De Vita and Abbott, 2004) suggesting an inverse relationship between exchange rate volatility and exports while others found a significant positive relationship between exchange rate and exports (Holy, 1995: Bredin et al., 2003; Chi and Cheng, 2016; Klein and Shambaugh, 2006). Besides the negative or positive effect highlighted in the cited studies, some other studies' findings suggested the absence of a significant effect of exchange rate volatility on exports. Those studies include Caglayan and Di (2010) and Hondroyiannis et al. (2008). Some other studies were conducted to compare the effect of exchange rate volatility on trade and found that generally, exchange rate volatility has a negative effect in developing countries specifically in Africa and Latin America compared to the developed ones (Arize et al., 2008; Bahmani-Oskooee and Gelan, 2018) especial in the short run.

### 2.2. Foreign Direct Investment and Export Volume

The role of foreign direct investment in the domestic economy has been a subject of discussion. Since the FDI comes in form of monetary capital, managerial skills and technology growth, it plays an indispensable role in domestic firms' production and thus contributes to the volume of exports (Zhang, 2005). Besides, the influence of foreign direct investment on domestic production which increases the availability of products for exports, the FDI opens and facilitates access to new global markets. Domestic firms might have affiliation with other firms and market within the country of foreign investors as the new technology enhance the competitiveness of local firms in the global markets.

Although many studies were conducted to investigate the relationship between foreign direct investment and exports, there exists no mutual consensus concerning this issue. Some studies found a positive relationship between the FDI and exports, others found a negative relationship between the two economic variables whilst others found no relationship at all between foreign direct investment and the hosting country's exports (Sharma, 2000; Nguyen et al., 2012; Sultanzzaman et al., 2018). For instance, the study of Eryigit (2012) investigated the relationship that may exist between foreign direct investment and exports in the Turkey economy. The results of this study suggested a positive relationship between the FDI and export volume. These results were confirming the founding of Buckley et al. (2002) whose study also confirmed a positive relationship between FDI inflows and the host country's export volume. Another study was conducted by Olayiwolaand and Okodua (2013) to examine how the export of non-oil products is influenced by the level of FDI inflows. The finding of this study indicated that a high level of foreign direct investment increases the volume of non-oil exports. Another study was conducted by Selim et al. (2016) to investigate the effect of the FDI on export volume in the Western Balkan countries, the study outcome posited a positive relationship between exports and foreign direct investment.

Nonetheless, as mentioned in the paragraph above, FDI inflow is not always friendly to the export volume. Some studies conducted to assess the effect of FDI inflow into developing countries found a negative or insignificant relationship between export performance and FDI inflows. Those studies include Durham (2004), and

Nguyen et al. (2012). Additionally, a study by Sultanuzzman et al. (2018) assessed the relationship between export volume and foreign direct investment in Sri Lanka; and their findings revealed a negative between the two economic variables.

There are also others studies conducted on the African continent to analyse the relationship that exists between export volume, investment and exchange rate. Those studies include Bahmani-Oskooee and Gelan (2018), Habanabakize (2018), Senadza and Diaba, (2017) and, Aye and Harris (2019). Findings from these studies indicated a dichotomous relationship between the analysed variables. On one hand, a positive or negative linear relationship exists among variables while on the other hand, a nonlinear or asymmetric relationship exists between investment, exchange rate and export volume.

Based on these contradictory findings on the relationship between FDI and export volume with the host country, it is important to conduct this study and examine how investment and exchange rate influence export in the South African automotive industry. The next section presents and discusses both data and approaches employed in the study.

## 3. DATA AND RESEARCH METHODOLOGY

### 3.1. Data Description and Model Selection

Over the recent decade, South Africa has been experiencing fluctuating economic growth, exchange rate and poor performance of a domestic investment. On the other side, the country's trade is not performing well as the export volume is seriously fluctuating. Consequently, it is imperative to assess whether the poor performance of South African exports is not a result of weak exchange rates and domestic investment.

The study focuses on a quantitative approach using quarterly time-series data from 2008 to 2020. The selected data for analysis consist of automotive export volume (as a dependent variable), foreign direct investment, gross domestic investment and exchange rate (as independent variables). All the series were acquired from the South African Reserve Bank (SARB). The choice of these variables and the time frame was motivated by two main reasons: firstly, all three independent variables play a significant role in the South African manufacturing sector specifically in the automotive industry's export. The dependent variable was also selected based on its share of national exports. Second, the sample started in 2008 to avoid the effect of the 2008 financial crisis and ends in 2020 owing to data availability. Table 1 below displays a summary of variable descriptions:

### 3.2. Model Selection

The autoregressive distributed lag (ARDL) model was selected as the best econometric model selected to assess the long-run and short-run relationship between automotive export volume, foreign direct investment, gross domestic investment and exchange rate. In a simple mathematic representation, the selected model is expressed as follows:

$$EXP = f(FDI, GDI, REER) \quad (1)$$

Where EXP is the total export from the automotive industry, FDI is foreign direct investment, GDI is the gross fixed capital formation and REER is the real effective exchange rate. The primary objective of the study which is to assess the effect of the FDI, GDI and REER on EXP was achieved through the ARDL model initiated by Pesaran and Shin (1998) and improved by Pesaran et al. (2001). The selection of this model was stimulated by the following three reasons: firstly, the model produces accurate results even when applied to a small sample. Secondly, the ARDL provides both short and long-run results simultaneously. Lastly, the model applies to series integrated of I(0), I(1) or a combination of the two [I(0) and I(1)] (Harris and Sollis, 2003; Pesaran et al., 2001) which is the case of the current study. Building Equation 1, the relationship among the study variable was tested using the subsequent equation 2 with variables in natural logarithm:

$$\Delta lEXP_t = \propto_0 + \sum_{i=1}^{k} \beta_i \Delta lEXP_{t-i} + \sum_{i=0}^{k} \delta_i \Delta LFDI_{t-i} + \sum_{i=0}^{k} \eta_i \Delta LGDI_{t-i} + \sum_{i=1}^{k} \psi_i LREER_{t-i} + \lambda_1 \ln EXP_t + \lambda_2 \ln EFDI_t + \lambda_3 \ln GDI_t + \lambda_4 lREER_t + e_t \quad (2)$$

Where the short-run estimated coefficients are represented by $\beta_i$, $\delta_i$, $\eta_i$ and $\psi_i$ while long-run coefficients are denoted by $\lambda_1$ to $\lambda_4$. The period is symbolised by the letter $t$ and both $\propto_0$ and $e_t$ represent the intercept and error terms respectively. Additionally, the following hypothesis was formulated to assess the cointegration among variables:

No cointegration $\rightarrow H_0$: $\lambda_1 = \lambda_2 = \lambda_3 = \lambda_4 = 0$

Variable cointegrate $\rightarrow H_1$: $\lambda_1 \neq \lambda_2 \neq \lambda_3 \neq \lambda_4 \neq 0$

The bound testing was performed to compare the Pesaran et al. (2001) critical value to the computed F-statistic. This comparison may produce one of the three subsequent conclusions: in case the lower bound critical values are larger than the computed F-statistic, the null hypothesis is not rejected and the conclusion

**Table 1: Data description**

| Abbreviation | Variable name | Description | Measurement used |
|---|---|---|---|
| EXP | Automotive export volume | Total export from the automotive industry | Index of 2010 = 100. Seasonally adjusted |
| FDI | Foreign direct investment | Total investment from foreign investors | Millions of rand (real value) |
| GDI | Gross domestic investment | Total gross fixed capital formation | Millions of rand (real values) |
| REER | Real effective exchange rate | a measure of the value of a currency against a weighted average of several foreign currencies over a price deflator | Index of 2010 = 100. Seasonally adjusted |

Source: Own construction

will be that variables do not cointegrate. The second possibility is when the computed F-statistic is larger than the upper bound critical values, the null hypothesis is rejected and the conclusion is that variables cointegrate. The last possibility occurs when the F-statistic fall between lower and upper-bound critical values, in this case, the results are inconclusive and further information or investigation is required (Habanabakize, 2020). If the second option prevails, suggesting the presence of cointegration, the next step is the error correction model (ECM) estimation. For this study the ECM is derived from Equation 2 and expressed as follows:

$$\Delta lEXP_t = \propto_0 + \sum_{i=1}^{k} \beta_i \Delta lEXP_{t-i} + \sum_{i=0}^{k} \delta_i \Delta LFDI_{t-i} + \sum_{i=0}^{k} \eta_i \Delta LGDI_{t-i} + \sum_{i=1}^{k} \psi_i LREER_{t-i} + \vartheta ECT_{t-1} + e_t \quad (3)$$

The *ECT* represents the error correction term while $\vartheta$ is the coefficient of the *ETC* used to measure the speed of adjustment towards long-term equilibrium. In addition to the long-run and short-run analysis, the study estimated also the causality relationship between variables using the Granger causality test. The next section represents and elucidates the study findings.

## 4. EMPIRICAL ANALYSIS

### 4.1. Correlation Analysis and Unit Root Test

Although the presence of a correlation between two variables does not necessarily imply causation, the correlation coefficient r is reflecting a statistical summary that indicates the magnitude of which variable *X* is related to variable *Y* (Habanabakize, 2019). The correlation coefficient varies between +1 and -1, a zero correlation coefficient means the absence of correlation between variables X and Y. Table represents the correlation between the study variables. All correlation coefficient is statistically significant meaning that a statistical correlation exists between the dependent and independent variables. The coefficients in the table suggest a positive correlation between LEXP, LFDI and LGDI. However, a negative correlation exists between LEXP and LREER. Additionally, a weak correlation exists between the dependent variable and explanatory variables as all correlation coefficients are smaller than 0.5. A summary of the correlation analysis is displayed in Table 2 below:

Before any other economic estimation of variables of interest, the author acknowledged the importance of using stationary series (variables). In this paper, the augmented Dickey-Fuller (ADF) unit root tests were performed to determine the variable's level of integration and to select an adequate model for both long-run and short-run analysis. The results in Table 3 indicate that two variables namely automotive exports (LEXP) and foreign direct investment (LFDI) are stationary at levels while the other two are stationary after the first difference. Thus, the study variables have a mixture of I(0) and I(1). Based on the stationary results, the fitting for cointegration analysis is the autoregressive distributed lag (ARDL) model.

Given the importance of lag length selection in econometric analysis. This study used the Bayesian information criterion (BIC) based on its consistency and closeness to the Akaike information criterion (AIC). Additionally, this criterion is suitable for a small sample as is the case for the current study (Habanabakize, 2020).

### 4.2. Bound Testing for Cointegration

The bound testing was employed to test cointegration amongst variables. Table 4 displays the results obtained from the aforementioned test. As shown in Table 4, all upper bounds critical values are smaller than the F-statistic of 57.73858. According to Pesaran et al. (2001), a long-run relationship exists between variables under consideration if the computed or F-statistic is larger than the considered upper bound criteria. Consequently, in the case of this study, a long-run relationship or cointegration exists between foreign direct investment, domestic investment, exchange rate and export of cars from the South African automotive industry.

### 4.3. Long-Run Effect of LFDI, LGDI and LREER on the Export of Cars in the Automotive Industry

Following equation 3, it hypnotized that the long-run elasticity of car exports depends on changes in foreign direct

**Table 2: Pearson correlation coefficients**

| Probability | LEXP | LFDI | LGDI | LREER |
|---|---|---|---|---|
| LEXP | 1.0000 | | | |
| P-value | ----- | | | |
| LFDI | 0.0619 | 1.0000 | | |
| P-value | 0.0489** | ----- | | |
| LGDI | 0.0821 | 0.8883 | 1.0000 | |
| P-value | 0.0196** | 0.0000*** | ----- | |
| LREER | −0.1407 | −0.7747 | −0.6545 | 1.0000 |
| P-value | 0.0362** | 0.0000*** | 0.0000*** | ----- |

(***, **) denotes the rejection of the null hypothesis at the 1% and 5% level of significance respectively

**Table 3: Unit root results**

| Variable | Model | Level | 1st difference | Integration Status |
|---|---|---|---|---|
| LEXP | Constant | 0.0244** | 0.0000*** | I (0) |
| | Trend | 0.0019*** | 0.0000*** | |
| LFDI | Constant | 0.0016*** | 0.0000*** | I (0) |
| | Trend | 0.5247 | 0.0000*** | |
| LGDI | Constant | 0.2563 | 0.0000*** | I (1) |
| | Trend | 0.6994 | 0.0001*** | |
| LREER | Constant | 0.3253 | 0.0000*** | I (1) |
| | Trend | 0.6236 | 0.0001*** | |

(***, **) denotes the rejection of the null hypothesis at the 1% and 5% level of significance respectively

**Table 4: Bound test results**

| Test Statistic | Value | k |
|---|---|---|
| F-statistic | 57.73858 | 3 |
| Critical Value Bounds | | |
| Significance | I (0) Bound | I (1) Bound |
| 10% | 2.72 | 3.77 |
| 5% | 3.23 | 4.35 |
| 2.5% | 3.69 | 4.89 |
| 1% | 4.29 | 5.61 |

investment, domestic investment and exchange rate volatility. The regression results in Table 5 suggest a positive effect of all independent variables on the dependent variable. Thus, a one percent increase in foreign direct investment causes cars export to increase by approximately 0.016 percent, while a one percent increase in domestic investment leads to a 0.018 increase in the level of cars export. Comparing these two types of investment, it can be seen that domestic investment possesses a high influence on cars export compared to foreign direct investment. On the other hand, long-term changes in the exchange rate have also a positive yet small effect on cars export. The automotive industry experiences 0.0089 as a result of a one percent growth in the exchange rate. This relationship between cars exported from the South African automotive industry is opposite to the well-known export theory suggesting an inverse relationship between exchange rate and exports (De Grauwe, 2000). These results are in line with the findings of Giovannini (1988), Franke (1991), Sereu and Vanhulle (1992) and Viaene and de Vries (1992) suggesting that a firm might benefit from domestic currency appreciation.

The short-term responsiveness of cars export to changes in foreign direct investment, domestic investment and the exchange rate is shown in Table 6. As is the case of the long-run relationship, all independent variables are statistically significant to influence car export behaviour in the automotive industry. However, while foreign direct investment has a positive effect on cars export, both domestic investment and exchange rate have negative short-run effects on car exports and their effect is also lagged. Taking into account the error correction model (ECM) and its error correction term (ECT), the latter is negative (-0.951458) and significant at a 1 percent level with a t-statistic of 14.089880. this implies that more than 95 percent of shocks in the model are corrected each quarter. Thus it will take only about one-quarter for the model to revert to its long-run equilibrium.

## 4.4. Causal Relationship among Variables

When two or more series or variables are cointegrated, there is a likelihood of causation among those variables. The author employed the Granger causality test for the causal relationship between variables of interest. The result in Table 6 suggests that the LFDI is significant at 1%, LGDI and LREER are significant at 10%. These results confirm those found in the short-term dynamics. Although two independent variables have the power to cause changes in the behaviour of the dependent variables, the results in Table 7 indicate that the dependent variable does not have Granger causality Note: (***, **, *) denotes the rejection of the null hypothesis at the 1%, 5% and 10% level of significance respectively changes in the independent variables. Thus, a unidirectional causality exists between two independent variables (LFDI and LREER) and the dependent variable (LEXP).

**Table 5: Long run coefficients**

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| LFDI | 0.015715 | 0.005822 | 2.699174 | 0.0113 |
| LGDI | 0.018202 | 0.009181 | 1.982549 | 0.0566 |
| LREER | 0.008944 | 0.007248 | 1.234056 | 0.2268 |
| C | 13.000321 | 0.095370 | 136.314186 | 0.0000 |

## 4.5. Diagnostic Tests

Various diagnostic tests were performed to test the model's robustness. Those tests include Jarque-Bera for normality, White test for heteroscedasticity, Breusch–Godfrey Lagrange multiplier (LM) for serial correlation and Ramsey RESET for the model fitness. The conclusion was made based on the null hypothesis and probability values in Table 8.

The result from the cointegration test suggested the presence of a long-run relationship between the analyzed variables. This implies that changes in all explanatory variables cause positive changes in the volume of exported cars from South Africa. When comparing the effect of each variable on cars export, the findings indicate domestic investment plays a significant role in increasing cars export. Nonetheless, foreign direct investment plays a role in export growth. These results support the trading theory suggesting that an increase in investment enhances the volume of export. The result from the relationship between the exchange rate and the volume of exported cars is opposite to the international trade theory suggesting an inverse relationship between export volume and exchange rate. However, as indicated by Ruiz Nápoles (2017), the linkage between exchange rate and export is not always negative as the trade does not rely only on the exchange rate as there are other economic factors than the exchange rate that can also cause fluctuation in export volume. Contrary to the positive effect of all independent variables (domestic investment, foreign direct investment and exchange rate) on the dependent variable (automotive export volume), foreign direct investment is the only variable with a positive effect on cars export in the short run. Both domestic investment and exchange rate have negative short-run effects on car exports.

**Table 6: Short Run and Error Correction Results**

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| D (LFDI) | 0.014952 | 0.005412 | 2.763074 | 0.0097*** |
| D (LGDI) | −0.007483 | 0.009696 | −0.771824 | 0.4463 |
| D (LGDI(-1)) | 0.010593 | 0.011141 | 0.950772 | 0.3493 |
| D (LGDI(-2)) | −0.048057 | 0.014317 | −3.356615 | 0.0022*** |
| D (LREER) | −0.005524 | 0.008893 | −0.621146 | 0.5392 |
| D (LREER(-1)) | 0.014946 | 0.010915 | 1.369294 | 0.1811 |
| D (LREER(-2)) | −0.030346 | 0.008601 | −3.528236 | 0.0014*** |
| CointEq(-1) | −0.951458 | 0.067528 | −14.089880 | 0.0000*** |

(***, **, *) denotes the rejection of the null hypothesis at the 1%, 5%and 10% level of significance respectively

**Table 7: Causality results**

| Null Hypothesis | F-Statistic | Prob. |
|---|---|---|
| LFDI does not Granger Cause LEXP | 8.65946 | 0.0008*** |
| LEXP does not Granger Cause LFDI | 0.54285 | 0.5856 |
| LEXP does not Granger Cause LGDI | 0.10885 | 0.8972 |
| LREER does not Granger Cause LEXP | 2.49873 | 0.0960* |
| LEXP does not Granger Cause LREER | 0.52746 | 0.5945 |
| LGDI dhoes not Granger Cause LFDI | 0.14156 | 0.8685 |
| LFDI does not Granger Cause LGDI | 0.98034 | 0.3847 |
| LREER does not Granger Cause LFDI | 2.26108 | 0.1185 |
| LFDI does not Granger Cause LREER | 2.36303 | 0.1082 |
| LREER does not Granger Cause LGDI | 1.46927 | 0.2432 |
| LGDI does not Granger Cause LREER | 0.97574 | 0.3864 |

(***, **, *) denotes the rejection of the null hypothesis at the 1%, 5%and 10% level of significance respectively

**Table 8: Diagnostic results**

| Test | Null hypothesis | Probability | Decision |
|---|---|---|---|
| LM | No serial correlation | 0.4730 | $H_0$ is not rejected |
| J-B | Residuals are normally distributed | 0.3218 | $H_0$ is not rejected |
| White | No conditional heteroscedasticity | 0.5341 | $H_0$ is not rejected |
| Ramsey RESET | The model is correctly specified | 0.2283 | $H_0$ is not rejected |

## 5. CONCLUSION AND RECOMMENDATIONS

The core aim of the present study was to assess the effect foreign direct investment, domestic investment and exchange are on exports in the South African automotive industry. Various econometric approaches were applied to achieve the highlighted objective. Those approaches comprise the autoregressive distributed lag (ARDL) model, error correction model (ECM) Granger causality test and several diagnostic tests. The results from bounding tests indicated that a long-run relationship exists between the aforementioned variables. In the long run, all independent variables were found to have a positive effect on the dependent variable. However, domestic investment was found to have a large effect on automotive exports compared to foreign direct investment and exchange rate. The short-run regression result suggested a positive effect of the foreign direct investment while both exchange rate and domestic investment are inversely related to the export behaviour with the automotive industry. The Granger causality result revealed a unidirectional causality between exports, foreign direct investment and automotive exports.

Grounded on these results, government and policymakers should create and implement strategies that encourage domestic investment as it plays a significant role in the industry's export and it can also be reliable during periods of economic challenges such as Covid-19 and other crises. Additionally, the stability of the domestic currency and its effect on both foreign and domestic markets should be highlighted when making monetary policy. Last not least, would be good or cautious management of the foreign direct investment. Based on this study foreign investments are most beneficial in the short term than the long term.

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