

**ANALYSING THE IMPACT OF TRADE OPENNESS ON ECONOMIC  
GROWTH: EMPIRICAL EVIDENCE FROM THE GAMBIA (1990-2020)**

By

**JARJU, Kutubo**

**THESIS**

Submitted to

KDI School of Public Policy and Management

In Partial Fulfillment of the Requirements

For the Degree of

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Professor Lee, Jinsoo, Supervisor



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Approval as of May, 2023

## **ABSTRACT**

**By Kutubo Jarju**

The study econometrically examines the impact of trade opening on economic development of The Gambia using the “**autoregressive distributive lag approach**” (**ARDL**). The data for the study was extracted from World Bank Economic indicators covering a period 30 years (1990-2020). The **aim** of the thesis is to assess whether trade openness correlates with economic progress in The Gambian economy in the short term and long term from 1990 - 2020. The strand of literature has focused on cross-country comparison of the trade opening index on the economic development of The Gambia with inconclusive results. The **empirical output** of the thesis revealed that trade opening has a positive and negative effect on economic progress in the longer term and shorter term respectively. The study recommends that for The Gambia to consider policies and programs aimed at technological advancement, and human capital development to benefit from trade openness scheme.

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## **DIDICATION**

THE THESIS IS DIDICATED TO MY LATE BROTHER MR. OUSMAN JAR

## LIST OF ACRONYMS

<b>AFCFTA</b>	African Continental Free Trade Agreement
<b>ARDL</b>	Autoregressive Distributed Lag
<b>FDI</b>	Foreign Direct Investment
<b>GATT</b>	General Agreement on Trade and Tariffs
<b>GDP</b>	Gross Domestic Product Per Capita
<b>IMF</b>	International Monetary Fund
<b>LDC</b>	Least Developed Country
<b>NDP</b>	National Development Plan
<b>OECD</b>	Organization for Economic Co-operation and Development
<b>REER</b>	Real Effective Exchange Rate
<b>TOI</b>	Trade Openness Index
<b>UNEMP</b>	Unemployment Rate
<b>WB</b>	World Bank
<b>WTO</b>	World Trade Organization

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## 1.0 INTRODUCTION

### 1.1 Background of the study

In recent years, a massive amount of research has been conducted on the nexus linking economic progress and trade openness (Wacziarg, 2001; Mehic & Sabina, 2008; Ijirshar & Victor, 2019; Fatima et al., 2020). It is one of the prevailing economic arguments by researchers and policymakers around the globe. There are different outcomes from above-mentioned studies and researchers have no consensus on the consequence of trade opening on development. International trade in goods and services is among the critical pillars of the Gambia's economy.

According to the World Bank "In 2019, The Gambia exported \$376.9 million and imported \$637.3 million of good and services, resulting in a negative trade balance of -\$260.5 million. Foreign direct investment was \$32.3 million or 1.77% of the GDP, as of 2019." Furthermore, The Gambia's annual GDP growth was 6.06% per year in 2019. As a result of significant disparity between imports and exports of the Gambia coupled with low economic growth, it is of paramount importance to investigate the impact of trade opening on economic prosperity.

With regards to trade opening on the global front, The Gambia joined the World Trade Organization in 1996 and became a signatory of the General Agreement on Trade and Tariffs in 1965 (WTO, 2022). Moreover, in 2019, the country signed and ratified the Africa Continental Free Trade Agreement (AFCFTA), regarded as Africa's largest regional free trade area in terms of member states. It has the potential to catalyze economic growth which could significantly eradicate poverty and put parties on the path to economic prosperity. (World Bank, 2020). Moreover, the (AFCFTA) was forecasted to be a game changer in the development endeavors for Africa. International trade is regarded by the authorities as the catalyst for the economic development of The Gambia. This study is timely due to these current trends in the

international trade arena and the policy direction of The Gambia government to use trade as a key pillar of economic growth.

Additionally, the National Development Plan (NDP, 2018-2022) has the target of raising total exports and Foreign Direct Investment from 9.4% to 17% and 2.4% to 5% from 2018 to 2022 respectively. (MOFEA, 2018). The plan is meant to stimulate economic growth and trade openness will play a crucial role in facilitating exports of goods and services. Given that most of the inputs for exports are imported products into the country. Taking several trade openness initiatives that the Gambia is a party to with the prospect of trade openness, I pursue to investigate the effect of trade opening on The Gambia's development (GDP Per Capita) to guide future policies.

Looking at previous studies, Ijirshar (2019) claimed a positive and negative correlation linking trade opening and economic progress in The Gambia in the shorter period and the longer period from 1975 to 2017 respectively. The validity of this argument is questionable due to the fact that the study was based on a cross-country investigation. There is limited literature regarding the impact of trade opening on the development of The Gambia to the best of my knowledge. Another study by Menyah et al., (2014) of twenty-one countries in African, including The Gambia found no connection linking economic progress and trade opening. This study contradicts that the previous study by Ijirshar (2019) and highlighted the invalidity of their studies. Bourdon et al., (2017) claimed that most previous studies on trade openness and economic development have largely suffered after at least two serious flaws that call the results into question: The method which trade opening index is measured and approximation methods. For this thesis, I measured the trade opening index as the addition of total trade (imports and export) divided by GDPC. The approach is coherent with the approximation of trade openness of UNCTAD) and the World Bank.

## 1.2 Problem Statement

Examining the outcome of trade opening on economic development deserves more research attention in the era of rising trade openness schemes or agreements. One might question whether the high degree of openness or trade liberalization is detrimental or beneficial to the economic growth of The Gambia. WTO reported in 2018 that, The Gambia has had a high degree of poverty (low GDP growth) with significant efforts on trade and investment liberalization for past decades. 50 percent of the people out of two million are currently underneath the poverty benchmark of 1.9 USD in a day (WTO, 2018).

The driving force behind The Gambia taking part in multilateral, continental, and regional trade agreements among other things is to attract investment, create employment, and raise standards of living for poverty alleviation; yet poverty (low GDP per capita) remains a huge concern. It has been argued by Merale et., al (2015) that, nations with higher average income per capita, higher capital formation as well as a higher level of FDI inflow stand a better chance to gain from trade openness agreements or schemes. The central idea or focus of this thesis is knowing if trade opening is leading to technology transfer for The Gambia.

## 1.3 The objective

The core purpose of this study is to determine whether trade opening correlates with economic progress in The Gambian economy in the shorter period and longer period from 1990 - 2020.

## 1.4 Hypothesis

In this thesis, I will test the hypothesis below.

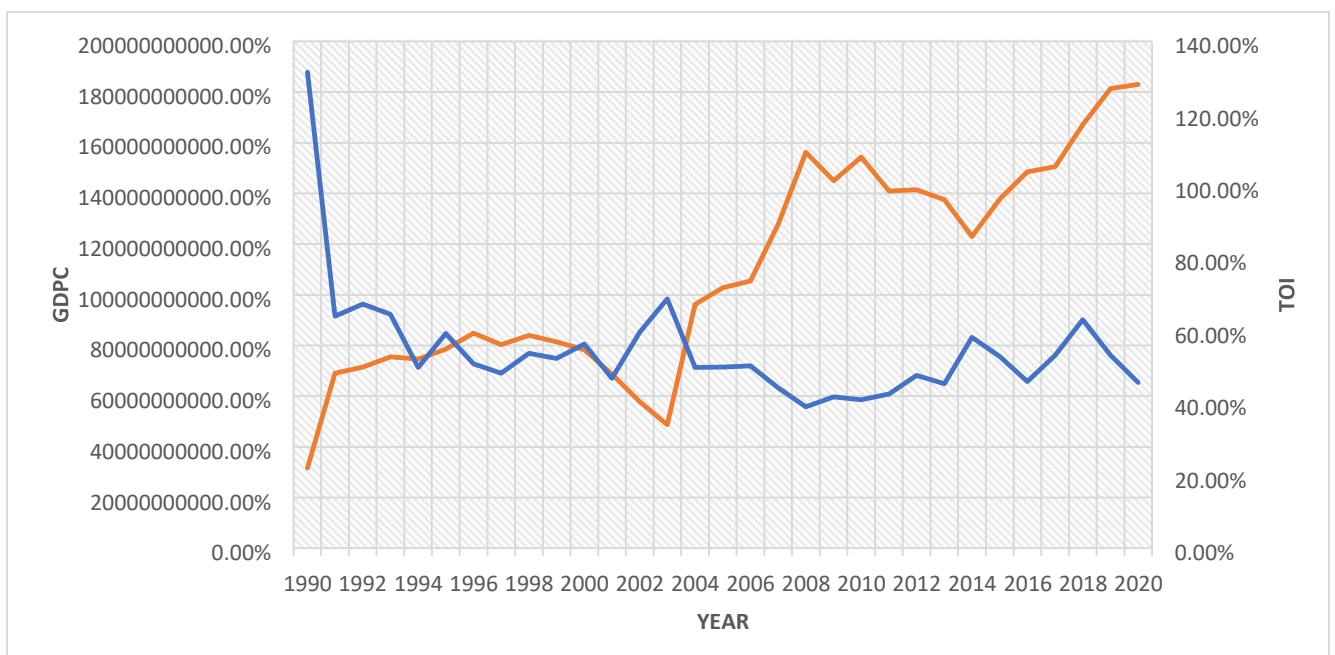
**Null Hypothesis:** Trade opening and economic progress has no relationship in the shorter period or the longer period of The Gambia's economy.

**Alternate Hypothesis:** Trade opening has a relationship with the economic progress of The Gambia in the short term and in the long term.

## 1.5 Trade openness in The Gambia

In the Gambia, government expenditure is heavily dependent on import and export taxes. This makes it a critical decision for taking part in trade openness or trade liberalization schemes with the consequence of tariff revenue losses. Taal (2007), claimed that The Gambia is mainly dependent on tariff revenue for government expenditure. So many economic theories emphasize the importance of trade openness or liberalization. Below is the trend of trade opening and the GDP per capita of The Gambia from 1990- 2020.

Figure 1: The trend of Trade Openness and Economic Growth (1990-2020)



From the table figure, it can observe that between the years 1990 -1995 the trend of trade opening index and GDP per capita are inversely related. As the GDP per capita increased from 13149% to 5928% the trade openness index falls from 33182% to 69645% from 1990 to 1995 respectively. Similarly, from 2000 to 2005, the GDP per capita decreased while the trade openness index increased, indicating an inverse association between the trade opening index and GDP per capita. Moreover, per capita GDP increased from 2005 to 2010 and decreased from 2010 to 2015 while the trade openness index decreased from 2005 to 2010 and increased from 2010. The trend analysis of the data indicated an inversely relationship with trade openness in gross domestic per capita

of The Gambia. The empirical result from this study will validate or invalidate the inverse trend of trade opening and economic development as shown by this data from World Bank.

### 1.6 Research Questions

The research will try tackle the following questions: First, what effects does trade openness have on The Gambia's economic development? What impact does foreign direct investment have on The Gambia's economic expansion, secondly? And finally, how does The Gambia's unemployment rate affect the country's economic development? This study gives a broad review of some important variables that affect economic growth, including trade openness, FDI influx, and unemployment rates.

### 1.7 Structure of the thesis

The rest of the paper is organised into Five Main Sections: In Section Two, I will review the empirical and theoretical literature to be followed by Section Three where I will examine the Methodology adopted. Consequently, in Section Four and Five, I will present the result of Regression and its Interpretation, and draw Conclusion and Policy Recommendations respectively.

## 2.0 LITERATURE REVIEW

Firstly, it is significant to define the key term “trade openness” which has been defined by many economists differently. However, the rationales of the definitions are very identical. Fatima et al. (2020) defined trade openness as the extent to which nations are exposed to global trade with their inflow and outflow of goods and services. Similarly, Ijirshar (2019) defined it as the improved amalgamation among countries through trade liberalization in the facilitation of imports and exports across borders. Moreover, Jallow, (2019) defined trade opening as the permitted flow of products and services between nations. It could be deduced that the unrestricted movement of goods, services, investment, and labor between countries is at the heart of the definitions mentioned above.

Furthermore, international organizations have also used different definitions as well in respect of trade opening. According to the WTO (1998), “it is the elimination or reduction of restrictions or barriers on the permitted exchange of products between countries” (Iloh et al., 2020, p.1). Likewise, OECD (2011) defined trade openness, “as the ratio of the average of exports and imports of goods to the GDP” (p. 176). Succinctly, a study by Iloh et al., (2020), has the most comprehensive definition of trade openness which is the act of eliminating or plummeting limitations or barriers to the unrestricted movement of products, services, and investment between nations such as duties and including technical barriers to certification rules. It is important to understand the term “openness” which may be slightly ambiguous, with a small ratio does not necessarily imply great openness toward international trade but might be related to so many factors namely: the scope of the economy, geography of the country and obstructions to external trade (OECD, 2011).

## 2.1 Theoretical Literature

Theoretically, two prominent economists in the field of international trade had different standpoints on the level of international trade between nations in their models. The Ricardian model proposed that global trade is exclusively dependent on the labor productivity of different nations. In contrast, the Heckscher-Ohlin-Samuelson model concluded that the difference in factor endowment of different nations determined the level of global trade (Krugman et al., 2012, p.86).

Several scholars have forecasted the effect of trade opening on economic development, job creation, poverty reduction, investment attraction, and domestic firm persistence (e.g., Fatima et al. 2020; see also Ijirshar & Victor, 2019; Tambunan, 2011; Wacziarg, 2001 & Mehic & Sabina, 2008). Nevertheless, the actual effect of trade opening on the global economy has remained a contentious issue on the global stage.

## 2.2 Empirical Literature

From the strand of empirical literature, Ijirshar (2019) claims a positive and negative association linking trade opening and development in The Gambia in the shorter period and the longer period respectively from 1975 to 2017. The argument was based on a cross-country investigation and there is limited literature on the effect of trade opening on the development of The Gambia. In contrast, an investigation by Menyah et al. (2014) claims no correlation on economic progress and the trade opening in twenty-one Sub-Saharan African nations, including The Gambia. Previous studies on trade opening and economic development have largely suffered from at least two serious flaws that call the results into question: The method by which trade opening is measured and the approximation methods used (Bourdon et al., 2017).

During the late 1990s, the purported “Washington Consensus” emerged, holding that growth and higher living standards are archived faster in nations with a superior international trade opening. Trade opening of a country has three notable effects on economic growth: increasing

human capital, knowledge transfer (spillover effect), and technological innovation (competitiveness effect) Siregar A. et al., (2022). Similarly, Myong-Sop Pak and Jae-Ho Lee (2022) discovered that trade openness promotes economic growth via technological innovation and efficient resource utilization in both the internal and external markets. The following section of the paper will look at the methodology used to evaluate the impact of The Gambia's trade opening and economic development.

### **3.0 METHODOLOGY**

#### **3.1 Model Specification**

As previously mentioned, the core objective of this thesis is to assess the short run and the long run impact of trade opening on The Gambia's economic development. GDPC is being studied as the proxy for economic development. It is among the most widely used measures for economic growth by researchers. According to Mankiw, (2020) “GDP is the best measure of how well an economy is performing”. Among the independent variables is the trade openness index, calculated as total trade flow (Import and Export) divided by GDPC. By contrasting the entry and outflow of commodities and services with the economy's gross domestic output, this gauges how open an economy is. Also, foreign direct investment is part of the independent variables expected to increase in times of economic growth while unemployment rate is expected to fall. The last independent variable is a real effective exchange rate that examine the power of a domestic exchange (Gambian Dalasi) to the trading partner's currency.

Theoretically, I look at how trade opening affects economic development, using the analytical context by (Baharom et al. 2008) and (Zhang et al. 2019).



The function is displayed in the following manner:

$$GDPC_t = f (TOI_t , FDI_t , UNEMP_t , REER_t) \dots\dots\dots 1$$

Equation (1) can also be expressed in the following form:

$$\ln Y_t = \beta_0 + \beta_1 \ln(TOI_t) + \beta_2 \ln(FDI_t) + \beta_3 \ln(UNEMP_t) + \beta_4 \ln(REER_t) + \varepsilon_t \dots\dots\dots 2$$

The gross domestic product is the response variable represented by  $Y_t$ . The explanatory variables in the model above include trade openness index ( $TOI_t$ ), foreign direct investment ( $FDI_t$ ), the unemployment rate ( $UNEMP_t$ ) and the "real effective exchange rate" ( $REER_t$ ). Moreover,  $\ln$  and  $\beta$  represents the slope coefficient and the natural logarithm respectively. Lastly,  $\varepsilon_t$  represents the error term.

Based on the model above, I expect the independent and dependent variables to be as follows: Foreign Direct Investment is anticipated to have a positive association with per capita GDP. Given this, investment in the economy has a knock-on effect on all sectors of the economy, from primary production to manufacturing and service provision. This relationship is expected to be positive in both the shorter and the longer term for the economy. [Carlos and Eddie \(2015\)](#) asserted that FDI is an important aspect of economic progress and countries with high growth (GDP) attract more investment.

The unemployment rate is anticipated to be inversely linked to economic development. This is because meaningful economic growth creates job opportunities and lowers an economy's unemployment rate. This is coherent with the results of (Hala et al., 2021), who discovered inverse association linking unemployment and economic development.



is checked by the total F-test statistic. Below is the co-integration hypothesis for the above model.

**Null Hypothesis:**  $H_0 = b_1 = b_2 = b_3 = b_4 = 0$  **Alternative Hypothesis:**  $H_1 = b_1 = b_2 = b_3 = b_4 \neq 0$

From the hypothesis, the long-run relationship will be established: The null hypothesis will not be accepted, if the F-test value calculated is greater compared to the higher critical value. However, the null hypothesis will be inconclusive when F-test lies within the bounds. In the next part, I will run the regression to know the long-run association.

### 3.3 Data

In this study, I employed historical series data published in the World Bank's Economic Indicators database. These data included Gross Domestic Product Per Capita (GDPC), Import and Export of goods and services, Unemployment Rate, Foreign Direct Investment for Gambia covering 30 years period (1990-2020).

## 4.0 RESULT AND DISCUSSION

### 4.1 Unit Root Test

This part of the thesis presents regression output, its statistical and economic interpretation. To assess the level of combination of the variable, the study used an augmented dickey fuller test Mushtaq (2011) argues that abovementioned method is imperative to avoid spurious regression when historical data is employed in econometrics analysis. However, the ADRL approach by [Pesaran et al.,\(1995\)](#) employed requires that all the variables in a model must be combined either in zero order, first order, or a combination of the two for the efficiency of the method. Fortunately, the variables under study such as GDPC, UNEMP, TOI FDI, and REER are integrated at (1) in table 1. Therefore, the variables of this model will undoubtedly generate a non-spurious result.

Table 1: Unit root test result

Variables	Levels	1st difference	Order of Integration
<b>GDPC</b>	-0.0165***	0.0192*	I(0) and I(1)
<b>TOI</b>	0***	0***	I(0) and I(1)
<b>UNEMP</b>	0.013*	0.0077**	I(0) and I(1)
<b>FDI</b>	0.1136	0.0001***	I(1)
<b>REER</b>	0.1343	0.002***	I(1)

**Note 1:** t statistics in parentheses \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

**Note 2:** **GDPC:** Gross Domestic Product Per Capita, **REER:** Real Effective Exchange Rate, **TOI:** Trade Openness Index, **UNEMP:** Unemployment Rate and **FDI:** Foreign Direct Investment.

4.2 ARDL Bound Test

The autoregressive distributive lag bound test has been conducted to test for co-integration and longer-term association between GDPC, TOI, UNEMP, FDI, and REER. (Pesaran et al., 2000) argues that ARDL bound tests exhibit a long-run relationship, provided that the F-test statistic has a higher value compared to the higher bound or lower than the lesser bound but provided that F-test result is within the bounds the result is inconclusive. The outcome shown in figure 2 presents co-integration and long-run association amongst the variables. As per results, the F-test statistic is 15.735 larger compared to the higher bound of 4.1 at 5% statistical significance.

Table 2: Bound test results

---

H0: no levels relationship F = 15.73 t = -8.167 Critical Values (0.1-0.01), F-statistic, Case 3

---

[I_0] [I_1]	[I_0] [I_1]	[I_0] [I_1]	[I_0] [I_1]
L_1 L_1	L_05 L_05	L_025 L_025	L_01 L_01 k_4
2.45 3.52	<b>2.86 4.01</b>	3.25 4.49	3.74 5.06

---

accept if  $F < \text{critical value for } I(0) \text{ regressors}$  reject  
 if  $F > \text{critical value for } I(1) \text{ regressors}$

### 4.3 Stability of the Model

The study employs several diagnostics to check the steadiness and reliability of the model. Firstly, the Brusch-Geoffrey test indicated no serial correlation which implied the model is not affected by homoscedasticity. Also, the white test as well for homoscedasticity indicated that the model is homoscedastic as presented below.

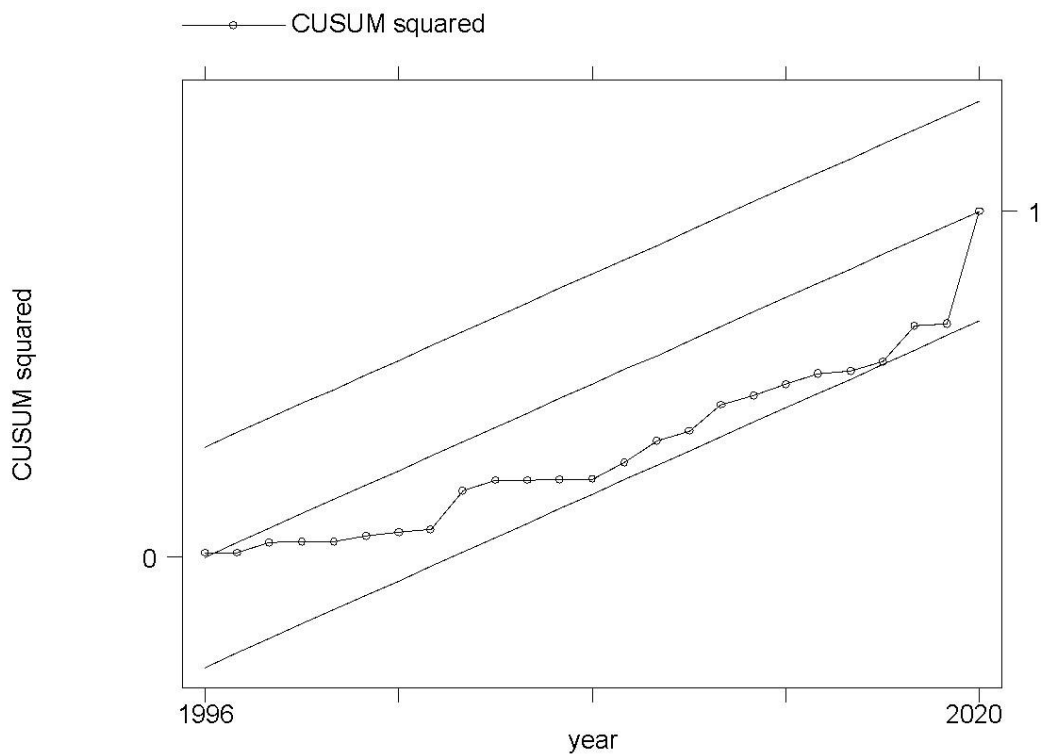
Table 3. Brusck Geoffrey and White test outcomes

White's test for Ho: homoscedasticity against	chi2(29) =	30.00	
Ha: unrestricted heteroskedasticity	Prob > chi2 =	0.4140	
Cameron & Trivedi's decomposition of IM-test			
Source	chi2	df	p
Heteroskedasticity	30.00	29	0.4140
Skewness	3.81	8	8737
Kurtosis	2.11	1	8737
Total	35.92	38	0.5658

## Cumulative Sum of Squares

Additionally, I used a CUSUM square test to examine for the firmness of the variable in the model for the interval of the regression. The result as shown in the figure 2 below indicates that all the variables are steady at 5% statistical significance. The result proposes that every coefficient of the error correction model is stable. This method was proposed by Brown et al., (1975) to gauge the permanency and reliability of variables in a model.

Figure 2: Result of cumulative sum of squares



5% Significance level

4.4 Table 4. Short Run ARDL Model Result

Variable	Coef	ss	T	P> t	[95% Conf. Interval]	
<b>GDPC</b>						
L1.	0.3581415***	0.0785965	4.56	0.00	.1946911	0.52159
TOI	-0.4380294*	0.1631056	-2.69	0.014	-0.77722	-0.87605
REER	0.3776837	0.283159	1.33	0.197	-.2111776	0.96654
L1.	-0.7161241*	0.3001761	-2.39	0.027	-1.432248	0.0918
FDI	0.0423027	0.0450616	0.94	0.359	-.0514081	0.136013
L1.	-0.1087485*	0.0520619	-2.09	0.049	-.2170171	-.00048
UNEMP	-0.2583139	0.1710774	-1.51	0.146	-.614088	0.097460
L1.	-0.5124739***	0.1580467	-3.24	0.004	-.8411501	-0.1837978
_cons	23.08061***	2.906773	7.94	0.000	17.03564	29.1255

Note 1: t statistics in parentheses \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Note 2: GDPC for Gross Domestic Product Per Capita, REER for Real Effective Exchange Rate, TOI for Trade Openness Index, UNEMP for Unemployment Rate and FDI for Foreign Direct Investment.

Note 3: All variables are converted to natural logarithm for estimation. Note

4: R-squared = 0.9462 and Number of obs = 30.

### Trade Openness Index

Based on the outcome of the short-run ARDL method, the F-test value is statistically significant for the model. The coefficient of trade opening index is negative and statistically substantial at the 5% level. *Holding entirely other factors constant, one percent rise in trade openness index shall result in a decrease in GDPC by 0.44% in the shorter period.* This result indicated an inverse association among trade opening and economic development for Gambia in the short run, it is in coherent with the work of (Fatima et al., 2020), who claimed higher trade opening was detrimental to scountries with low technology and income. I assert that this result is valid for the case of The Gambia as a least-developed country with a low level of technology.



However, the result runs counter with other strands of literature (Ijirshar 2019; Calderón et al., 2005).

### **Real Effective Exchange Rate (Short Run)**

Moreover, the value of the real REER is negative and statistically substantial at 5% level. The outcome is coherent with the work of (Tolic et al., 2015) who claimed that economic growth is inversely correlated to the real effective exchange rate. All other things being unchanged, *a one percent increase in REER is associated with 0.71% decrease in GDPC in the short run*. An increase in REER means an appreciation of local currencies against trading partners and contestants' currency in the international market. This outcome shows that appreciation of The Gambia's currency is detrimental to economic growth by making export expensive compared to our competitors in the global market.

### **Unemployment Rate**

Finally, the result for UNEMP is negative and substantial as well at one percent and five-percent levels. *A one percent decrease in the unemployment rate is related to a 0.51% rise in the GDPC in the short term, taking all other factors constant*. The outcome is strong evidence that to attain high economic growth, the unemployment rate should be kept low. The outcome is coherent with the work of Holmlund and Calmfors (2000) who claimed that a drop in the joblessness rate increases the output of the economy.

4.5 Table5. Long Run ARDL Model Result

D.GDPC	Coef.	Std. Err.	T	P>t	[95% Conf. Interval]	
<b>ADJ</b>						
<b>GDPC</b>	-0.6418585***	0.0785965	-8.17	0.00ss	-0.8053089	-0.4784081
<i>Long Run</i>						
<b>TOI</b>	-0.6824391**	0.2378403	-2.87	0.009	-1.177055	-0.1878231
<b>REER</b>	-0.5272819***	0.1323037	-3.99	0.001	-0.8024225	-0.2521414
<b>FDI</b>	-0.1035211	0.0691857	-1.5	0.149	-0.2474005	0.0403584
<b>UNEMP</b>	-1.200869***	0.2919947	-4.11	0.00	-1.808105	-0.5936326
<i>Short Run</i>						
<b>REER</b>	.7161241*	0.3001761	2.39	0.027	0.0918736	1.340375
<b>FDI</b>	.1087485*	0.0520619	2.09	0.049	0.00048	0.2170171
<b>UNEMP</b>	.5124739**	0.1580467	3.24	0.004	0.1837978	0.8411501
<b>cons</b>	23.08061***	2.906773	7.94	0.000	17.03564	29.12557

Note 1: t statistics in parentheses \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Note 2: **GDPC** for Gross Domestic Product Per Capita, **REER** for Real Effective Exchange Rate, **TOI** for Trade Openness Index, **UNEMP** for Unemployment Rate and **FDI** for Foreign Direct Investment.

Note 3: All variables are converted to natural logarithm for estimation. Note

4: R-squared = 0.9462 and Number of obs = 30.

### Trade Openness Index (Long Run)

From the longer period ARDL result, the main variable of our study trade opening index is negative and statistically substantial at 1% level. The outcome indicated an inverse association linking trade opening and development of The Gambia.  *Holding all other factors constant, a one percent rise in the trade openness index is related to a 0.68% decline in the GDPC of The Gambia in the long run.* This result is consistent with the study of (Hye and Lau 2012), who stated that a higher state of trade opening causes slow development by discouraging research and development for low-income countries.

The finding is closely related to the facts in The Gambia as LDC and a low-income country. However, the result is inconsistent with another strand of literature (Hye et al., 2016; Eleanya K. et al., 2013).

### **Unemployment Rate**

For unemployment rate (UNEMP), the coefficient is negative and statistically substantial at one percent level. *As a result, GDPC of The Gambia will increase by 1.2% if the unemployment rate decreases by 1% in the longer period, holding all other factors constant.* The result empirically supports the view that higher economic development is related to a low unemployment rate in the case of The Gambia in the longer period. This outcome is coherent with the study of Soyulu, et al., (2018), who found that a 1% rise in the GDPC is associated with a 0.08% decrease in unemployment. Therefore, policies and programs that aimed to lower the unemployment rate will significantly support economic growth of The Gambia.

### **Real Effective Exchange Rate**

Moreover, the long-term value of REER is negative and statistically substantial at one percent level. *Holding all other factors constant, a 1% rise in the real effective exchange rate is associated with a decrease of 0.53% in the gross domestic product per capita in the longer period.* This outcome is coherent with the study of (Tolic et al., 2015), who found that a high REER negatively affects development in Croatia by making its exports more expensive. As justify in the short run, the same result has been observed for the long run as well, implying that a low level of the real effective exchange rate will make The Gambia export cheap compared to its competitors in the international market. This will definitely increase export volumes leading to economic growth.

## 5.0 CONCLUSION AND POLICY RECOMMENDATION

### 5.1 Conclusion of the study

The study investigates the long and short-term relationship between trade opening and economic growth of The Gambia from 1990-2020. The strand of literature has focused on cross-country comparison of the trade opening index on the economic development of The Gambia with inconclusive results. This study has contributed to the literature by conducting country-based research on the effect of trade opening on economic development.

The results indicated an inverse association linking trade opening and economic development of The Gambia in both the short run and the long run. Therefore, trade openness was detrimental to the economic growth of The Gambia from 1990-2020. This empirical result is coherent with the work of Fatima et al., 2020 claimed that a high trade openness index with a low level of technological advancement and human resources will hamper development. This thesis is also consistent with the work of Hye et al., 2016 who claimed that low-income countries with high trade openness index will discourage incentives for research and development resulting in slow economic growth. Given that The Gambia is a least developed country and low-income country, the result is also a confirmation of the claim by Menyah et al. 2014 that nations that record high average income per capita and FDI inflow gain more from trade openness schemes.

Moreover, the empirical results indicated a negative association between unemployment rate and development of The Gambia. This outcome is coherent with the study of [Hala et al., 2021](#) who claimed that meaningful development is associated with a low level of the unemployment rate. The real effective exchange rate result is directly related to development in the longer period which is in tandem the study of Rodrick, (2008) that the undervaluation of currency contributes positively to economic growth.

## 5.2 Policy Recommendation

On the basis of my empirical results, these four policy recommendations are recommended for the policymakers: (a) They (Government, Development Partners, and Trade Support Institutions) should consider policies and programs aimed at technological advancement, and human capital development. (b) Technological advancement can be achieved by efficiently developing the human capital through education and rapid industrialization. (c) Implement strategies and plans to reduce the unemployment rate, enhance the inflow of targeted foreign direct investment, and sustainably boost the income per capita of the country. (d) More resources should be allocated to Industrialization and entrepreneurship which are key drivers of economic growth. These policies and programs are paramount for trade openness as it will positively and sustainably enhance the economic growth of The Gambia.

## 5.3 Limitation and Suggested Areas for Further Study

The findings from this thesis clearly have limitations. The sample size is quite small and the absence of some variables significant to gain benefit from trade openness such as capital formation, trade facilitation and technical barriers to trade. There is room for further research to examine the effect of trade opening of specific sectors on the development of The Gambia.

# APPENDICES

## Appendix A: Time Series Data of the Study

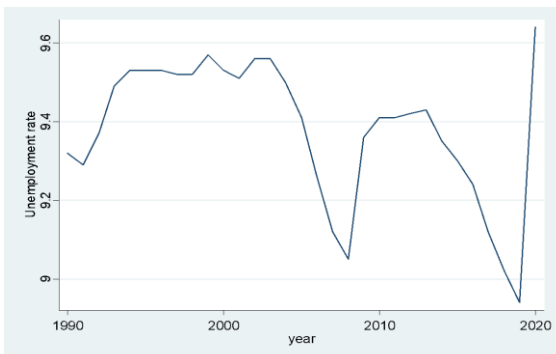
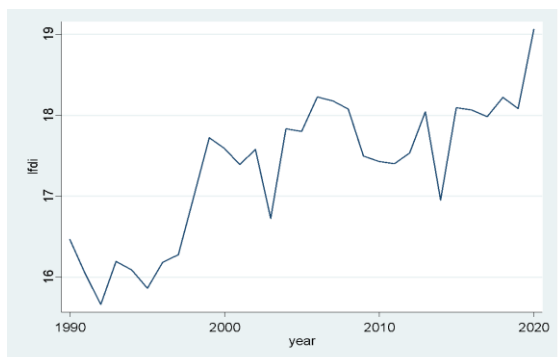
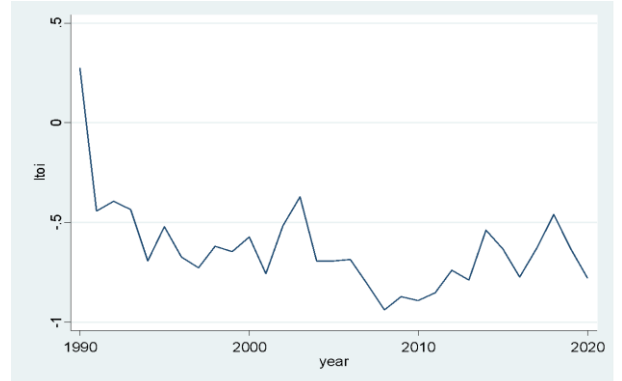
Year	Imports of goods and services	Exports of goods and services	Foreign direct investment	Trade openness index		GDP Per Capita	Real effective exchange rate
1990	226976773.7	189941617	14119999.9	1.314854153	9.32	317083373.5	205.2229417
1991	239290744.4	203221078.4	9270433.339	0.641029469	9.29	690314321.4	197.1142689
1992	263205829.8	218510077.9	6323269.186	0.674430836	9.37	714255460.5	198.7907956
1993	275121697.5	212861713.3	10741221.68	0.646299221	9.49	755042548.1	212.3845742
1994	214067398.6	158551984	9716366.67	0.499160789	9.53	746491692.6	201.1518822
1995	279037959.8	186875884	7729249.072	0.59276798	9.53	785996982.5	195.0885544
1996	247309659.9	184904421.7	10655113.98	0.509543944	9.53	848237108.6	191.5982495
1997	204004039.1	184290229.6	11666476.04	0.483174981	9.52	803630742.5	197.6531271
1998	240030742.9	212639014.9	23699999.9	0.538709623	9.52	840285264.6	196.5783132
1999	228252406.7	198771024.4	49479999.9	0.524132975	9.57	814723460.1	192.0200265
2000	239267915.8	201981794.9	43520000	0.563598199	9.53	782915402.4	183.5545276
2001	172597799.5	149998087.6	35479999.9	0.469292632	9.51	687408804.6	158.5148182
2002	187843250.8	157033783.9	42826999.9	0.596429509	9.56	578236035.1	131.571528
2003	183930243.1	151438811.1	18272720.34	0.68858793	9.56	487038821.6	95.23906362
2004	282216842.4	198101238.4	55526319.44	0.499342996	9.5	961900106.9	93.80894597
2005	309496979.9	204546568	53650280.02	0.500187234	9.41	1027702254	99.70118275
2006	309274309.9	221729727	82208102.59	0.503744686	9.26	1054113427	99.21514632
2007	336061817	230768612.3	78094820.96	0.442938445	9.12	1279704745	107.5634558
2008	384410879.4	226068383.8	70792382.32	0.390890995	9.05	1561763437	113.7505365
2009	377490204.3	228340664.5	39447343.71	0.417773944	9.36	1450140386	102.8056342
2010	406575753.2	226367271.2	37140887.81	0.41012515	9.41	1543292393	100
2011	363423450.9	237666106.6	36077136.08	0.42639702	9.41	1409694554	92.4848442
2012	394206458.8	280761041.4	41183457.77	0.477006731	9.42	1415006238	89.00341052
2013	364299149.6	261079084.8	68340322.38	0.454619194	9.43	1375608956	81.64859031
2014	447782280.2	268476026.2	23014092.04	0.582579308	9.35	1229460602	73.83439325
2015	459500320	270072130.7	71976051.7	0.529375051	9.3	1378176868	73.3798884
2016	447005385.9	236219097.4	69830172.21	0.460214037	9.24	1484579844	88.97600464
2017	549737511.5	252666151.7	64338516.04	0.533190553	9.12	1504909753	90.45120845
2018	691368339.3	362977085	81805006.6	0.631091121	9.02	1670670669	89.12844998
2019	624379525.6	341709153.6	71083305.87	0.532688723	8.94	1813608280	93.22330531
2020	689122883.3	149431535.3	189576190.8	0.458123068	9.64	1830413000	93.9472944

## Appendix B: Summary of Descriptive Statistics

Variable	Obs	Mean	Std. Dev	Min	Max
GDPC	30	20.73211	.4218273	19.57467	21.32781
TOI	30	-.6299606	.2240102	-.9393265	.2737257
REER	30	4.825753	.3738532	4.29565	5.358398
FDI	30	17.32796	.8671978	15.65975	19.0603
UNEMPR	30	9.380968	.1796915	8.94	9.64



## Appendix C: Graph of the Variables Under Study



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