THE IMPACT OF TRADE POLICY ON UGANDA'S COFFEE EXPORT GROWTH RATE: A Case Study of Uganda 1995 to 2015

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DECLARATION

I, **ATEKIT BELINDA LUCY**, hereby declare that this dissertation entitled **"The Impact of Trade Policy on Uganda's Coffee Export Growth Rate and the Ultimate Impact on Economic Growth (GDP); A Case Study of Uganda 1995 to 2015"** is the result of my original work, is not plagiarized and has not been submitted for any other degree at Uganda Christian University or any other institution for any award. Credit has been given to all other writers' works that were used in any part of this research.

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APPROVAL

This research report titled "**The Impact of Trade Policy on Uganda's Coffee Export Growth Rate and the Ultimate Impact on Economic Growth (GDP); A Case Study of Uganda 1995 to 2015**" has been submitted by **ATEKIT BELINDA LUCY** to the faculty of business and administration in partial fulfilment of the requirements for the award of a Bachelor of Science in Economics and Statistics of Uganda Christian University with my approval as a supervisor.

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ABSTRACT

International trade has been considered as an important tool to boost the economic growth of Uganda and achieve its aspirations (A Transformed Ugandan Society from a Peasant to a Modern and Prosperous Country by 2040). This research was intended to investigate the effect of trade policy on Uganda's coffee export growth rate and the ultimate impact on the economic growth (1995 - 2015). Several scientific research, as well as some economic theories, advocate a positive relationship between trade and economic growth.

The purpose of this study was to examine the impact of Tariff barriers, Non-Tariff Barriers and Free Trade Policy on Uganda's coffee export growth rate and the ultimate impact on the economic growth of Uganda.

In order to analyze a 20-year time series data of coffee export growth and economic growth expressed as Gross Domestic Product (GDP), from 1995 to 2015 that was collected from the World Bank databases, the quantitative research approach was applied. The tariff Barriers, Non-Tariff Barriers, and Free Trade Policy on Uganda's Coffee Exports were examined using econometric analysis and Ordinary Least Square linear regression.

The study's conclusions showed a significant and positive relationship between Uganda's coffee export growth rate (GDP), Tariff Barriers by Uganda, and Free Trade Policy. However, they also showed a negative relationship between coffee export growth rate (GDP) and Non-Tariff Barriers imposed by other countries in the East African Community. The study recommends continuing to execute export- or import-led policies while promoting the BUBU in Uganda initiative, the National export strategy, and technology to add value to coffee exports and as well as diversify Ugandan exports in general.

DEDICATION

This research report is dedicated to my dear mother Mrs. Akello Rose Lilly, and my beloved Family for the courageous effort, support, love, care and tireless work they have done for my success. May the Almighty God reward them abundantly.

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May the Almighty God bless you all abundantly.

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LIST OF ACRONYMS AND ABBREVIATIONS.

BUBU Buy Uganda Build Uganda

ELG Export Led Growth

TWAT Trade Weighted Average Tariff

DFTS Duty Free Tariff Share

TRI Trade Restrictive Index

EMP Index of Export Market Penetration

GDP Gross Domestic Product

TB Tariff Barriers

NTB Non-Tariff Barriers

FTP Free Trade Policy

H_o Null Hypothesis

H_1 Alternative Hypothesis

ILG Import Led Growth

MS Excel Microsoft Excel

OLS Ordinary Least Squares

STATA Statistics and Data

UBOS Uganda Bureau of Statistics

USD United States Dollars

WB World Bank

WTO World Trade Organization

ANOVA Analysis of Variance

1 Chapter 1

1.1 INTRODUCTION

This chapter introduces the research topic by describing the contextual background, the problem statement, which was the basis of the objectives and convenient research questions formulation. The relevance of the research topic is as well provided.

1.2 Background of Study

Trade policy refers to a nation's formal set of practices, laws, regulations, and agreements that govern International Trade practices, or imports and exports to foreign countries. It is a government's stance on International Trade or simply a combination of laws and practices that affect imports and exports with the major aim of strengthening the domestic currency. Some trade policies are codified into law; others are part of the practices that a nation's bureaucrats and diplomats follow; and are intended to reflect a national Philosophy about International Trade. Trade Policies can be aimed at a number of issues related to importing and exporting such as foreign retaliation, jobs, or tariffs; or, they may focus on protecting intellectual property, setting standards that promote collaboration and reduce trade barriers, or establishing trade agreements and trade laws. Furthermore, they create trade Unions which work together to reduce export costs, increase exporting efficiency hence enabling firms to compete better in the global market, and as well as provide anti-trust protection to firms that collaborate on exporting activities. As a result, these firms get advantages of reduced shipping costs, better negotiating power, and the ability to fill larger export orders.

Additionally, trade policies emphasize finding export markets for goods produced in the country, encouraging travel and tourism from other countries or limiting and heavily taxing imports to protect local producers. This is when a country pursues a more aggressive protectionist policy designed to favor its domestic industries over International Competitors in the form of imposing Tariff and Non-Tariff Barriers, and Quotas on the number of imported goods allowed in the country. On the other hand, however, a nation may want to increase International Investment and hence pursue Free Trade Policy or Open Trade Policy that reduces the barriers to doing business. Nonetheless, the decision to implement a trade policy is a complex one as the government must weigh the potential benefits and costs of the trade policy before making a decision. Estimates show that more than half of the total world trade occurs through regional blocs/agreements and that world trade under Regional Integration Arrangements (RIAs) grew from 43% to 60% between 2001 and 2005 (OECD, 2005). However, by December 2006, the total number of RIAs that had been notified to the World Trade Organization (WTO) were two hundred and eleven (211), of which fourteen (14) were in Africa.

The Resurrected East African Community (EAC) is among the most recent RIA notified to the WTO. Although a previous unsuccessful EAC was established in 1919, it ceased to function in the 1970's (UNECA, 2006). Nonetheless, the treaty establishing the current EAC was signed on 30th November, 1999 and came into force on 7th July, 2001 upon its ratification by the Republics of Kenya, Uganda, and Tanzania." The main objective of the current EAC is to promote cooperation in a political, economic, and social fields by encouraging economic development (including trade liberalization, monetary and financial integration, the free

movement of persons, capital, goods, and services); Science and technology (including infrastructure, health and education) as well as political and legal matters. It envisages deepening regional integration by establishing a Customs Union (CU), Common Market, a Monetary Union and ultimately a political federation among the partner countries. (Article 5.2: EAC Treaty, 2001)

Trade is greatly supported and influenced by trade policy and negotiations (Ciuriak et al. (2015). This facilitates market access, multilateral agenda and services, standards, trade, procurement and innovation in the industries and firms. Therefore, there is need for trade policy and models that shape trade so as to counteract the multifaceted impacts of trade policy. This explains the struggles in the Ugandan Agricultural sector when marketing their produce which has in turn affected the growth of their economies. This is attributable to the fact that poor countries face higher trade barriers for their exports because they also tag further restrictive trade policies. (Nicita and Olarreaga, 2009). This, therefore, explains why developing countries like Uganda have continuously performed poorly in the world market. Consequently, despite the high trade barriers on raw agricultural products from poor countries, some tropical commodities such as cocoa and coffee have been partially liberalized.

In Uganda, coffee production was hard hit by drought in the 2014 – 2015, leading to a downward revision of production forecast to 3.55 million bags. In 2015 – 2016, FAS/Nairobi forecast recovery of the coffee plants and a production increase of about 250,000 bags for both Robusta and Arabica. Despite the production setback, UCDA continued implementing the government-sponsored coffee program that aimed at increasing production to over 4.5 million bags by the year 2018 by improving husbandry practices and the planting of improved varieties. (Uganda Annual Coffee Report, 2015).

Coffee has continued to play a leading role in the economy of Uganda. It contributes between 20-30 percent of the foreign exchange earnings (Uganda Coffee Development Authority, 2009). In 1995, the National Union of Coffee Agribusinesses and Farm Enterprises (NUCAFE) was founded. This has led to the coming up of some large scale coffee farmers. Though large scale coffee producers are gradually emerging, the coffee sub-sector is almost entirely dependent on about 500,000 smallholder farmers, 90 percent of whose average farm sizes range from 0.5 to 2.5 hectares. Therefore, the coffee industry employs over 3.5 million family members through coffee related activities (UCDA, 2009). However, new studies on the flow of international trade in Africa have shown a significant transformation in the continent and identified promising signs of progress. These developments have led to the emergence of numerous agendas on the continent that emphasize fostering free trade among African countries in order to advance economic integration and development.

1.3 Problem Statement

International trade, which is the interchange of products and services between nations, played a significant role in the development of the nation's economy. Since the classic era in the 18th century, when David Ricardo and Adam Smith felt that trade could have a positive impact on

economic progress, researchers have been examining the relationship between international trade and economic growth (Frieden & Rogowski, 1996) and (Baines, 2003). East African countries including Ethiopia, Kenya, Uganda, and Rwanda are among the leading producer exporters of high-quality Arabica Coffee (Coffee Arabica L.) (Nzeyimana et al. 2013; Wang et al. 2015), which is a strategic commodity for these countries with significant contributions to foreign currency earnings.

Furthermore, East African countries account for over 80 percent of Africa's total coffee production and share 26% of the world's coffee market (Hoebink and Ruben 2015). The livelihoods of an estimated 30 million people in smallholder houses in East Africa depend directly on coffee production. (Hoebink and Ruben 2015). These coffee smallholders usually produce a wide variety of annual and perennial food crops and fruit species for household consumption or income in diverse farming systems called coffee-based farming systems. This is supported by the favorable climate and soils only found in the tropics that accentuate the quality of the coffee being produced. Uganda is Africa's second-largest coffee producer. Its 1.7 million smallholder coffee house-holds represent 10 percent of global coffee farms. The annual production of 3-4 million bags of coffee accounts for 18 percent of the country's annual exports. About 77% of annual production is Robusta coffee produced in Central Uganda. Arabica is produced on the borders with Rwanda and Kenya.

However, Uganda's economic growth has been a difficult topic, mainly because, like other developing nations, Uganda seeks to raise the GDP level in its economy by determining the most effective ways to boost productivity. Even though Uganda is a country blessed with a significant raw material deposit and a very fertile area combined with favourable weather for agriculture, it is at the wrong end of an uneven trade environment that favours countries that are already industrialized since it nearly entirely depends on the exports of mostly primary products, which are characterized by lower pricing.

Consequently, despite the numerous benefits of trade policy, it has not wholly benefited Uganda's economic growth. As a result, these advantages cannot be directly translated into economic growth because of various macroeconomic policy distortions brought on by trade such as tariff and non-tariff barriers, which appear to be transforming the nation's economy into one that is importing more than it exports. Moreover, the markets for such exports like coffee are largely unstable in terms of volume, prices, and hence carry a high degree of risk combined with low income elasticity. Ultimately, such features hinder the GDP of the economy as foreign earnings from exports fluctuate. When coffee prices peaked in coffee season 1994-1995, farmers decided to invest well over half of their windfall profit (Seaman, 2001), which is the rational response in an economic environment. A sufficiently large share of the border price accrued to farmers with well diversified income sources. As a result, a temporary shock was thus converted into an increase in the stock of private capital, and Uganda's economy grew rapidly during the rest of the decade, possibly spurred by the coffee boom. GDP per capita increased from $277 in 1994 to $348 in 2000, with an annual growth rate of 4.16 percent.

This is proof that Uganda, like many other developing nations, has used trade-led economic growth strategies to achieve economic growth and poverty reduction as well, in light of the argument that trade policy (Tariff barriers, Non-tariff barriers, and Free Trade) lead to economic growth. However, the empirical validity of the trade policy strategy has been called

into question by numerous researches undertaken in numerous nations regarding the relationship between trade policy and economic growth. This is the driving force behind the undertaking of this research, which aimed at contributing to the closure of the empirical knowledge gap by testing the trade policy and coffee export growth hypothesis solely for Uganda, apart from other sub-Saharan African nations, by examining the effects of the trade policy implementations on Uganda's coffee export growth rate, whilst ascertaining the impact of the coffee export growth rate on the GDP of Uganda.

1.4 Purpose of the Study

The purpose of this study was to examine the impact of tariff barriers, non-tariff barriers and free trade policy on Uganda's coffee export growth rate and ultimately, the overall impact on the economic growth (GDP) of Uganda.

1.5 Research Objectives

- To establish the relationship between Tariff Barriers and Uganda's Coffee Export growth rate, 1995 – 2015.

- To establish the relationship between Non-Tariff Barriers and Uganda's Coffee Export growth rate, 1995 – 2015.

- To establish the relationship between Free Trade policy and Uganda's Coffee Export growth rate, 1995 – 2015.

1.6 Research Hypotheses

The study was guided by the following research hypotheses stated in their null form;

- **Ho:** There is no significant statistical relationship between tariff barriers and coffee export growth rate.
- **Ho:** There is no significant statistical relationship between Non-tariff barriers and coffee export growth rate.
- **Ho:** There is no significant statistical relationship between Free Trade Policy and coffee export growth rate.

1.7 Scope of the Study

1.7.1 Content Scope

The study focused on the establishment of the relationship between Tariff Barriers and coffee export growth rate (1995 – 2015), the relationship between Non-Tariff Barriers and coffee export growth rate (1995 – 2015), the relationship between Free Trade Policy and coffee export growth rate (1995 – 2015), and their overall impact on the Economic Growth of Uganda in terms of GDP.

1.7.2 Geographical Scope

The study was conducted in Uganda within a timeframe of 20th May, 2023 to 22nd August, 2023. The landlocked Republic of Uganda is found in East Africa and is bordered by South

Sudan in the North, Kenya in the East, Tanzania and Rwanda in the South and the Democratic Republic of Congo in the West.

1.7.3 Time Scope

The Study was conducted for four months and it was used to review the fifteen year time series data collected from 1995 to 2015 in Uganda.

1.8 Conceptual Framework

The dependent variable in the study was the coffee export growth rate combined with economic growth (GDP) of Uganda, and the independent variables were the Tariff Barriers, Non-Tariff Barriers, and Free Trade Policy. This Research Study was trying to analyze the relationship between the dependent variable and the independent variables in addition to how their relationship affect the economic growth / GDP of Uganda.

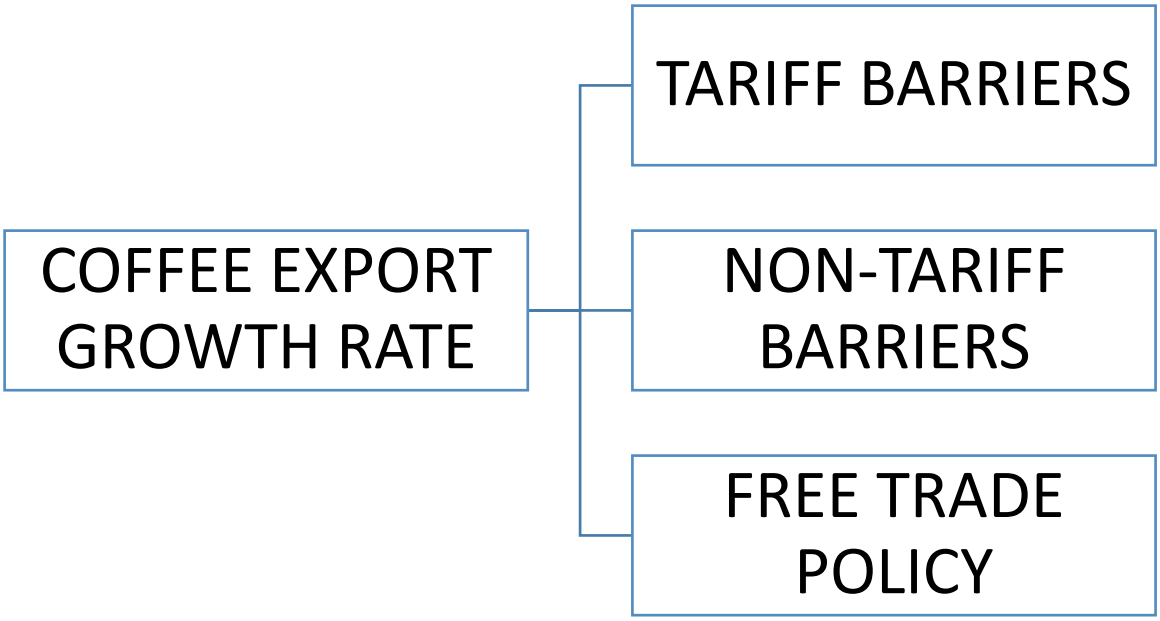

Figure 1 Conceptual Framework

Source: Author's Illustration on MS Excel

1.9 Justification of the Study

Research shows that, in the long run, increased trade is associated on average with higher economic growth. Indeed, no country has ever developed sustainably without trading extensively with other countries. Trade allows countries to specialize in the production of goods and services that align with their comparative advantage. It further enables consumers and producers to access a wide range of products at lower prices. Ultimately, trade policy matters for poverty and shared prosperity. This is because certain goods that are important to the poor such as agricultural products are likely to face the highest import and export tariffs

and non-tariff barriers in many countries. Therefore, eliminating tariffs and lowering barriers helps to reduce poverty and hence increase real incomes in the bottom quartiles of the people. Consequently, the economy is bound to grow through increased government revenues from export earnings, which is injected into developmental projects in the country such as infrastructure, social services like health and education.

1.10 Significance of the Study

In light of the fact that Uganda's trade policy aims to promote employment, economic growth, export diversification and promotion (particularly non-traditional exports), and vertical diversification is to be achieved through additional processing of primary export products, it is significant to conduct this search for empirical evidence that quantifies the impact of trade on the country's economic growth so that the government can obtain more information (WTO, 2001). Policymakers will therefore utilize the study's findings to determine whether Uganda should continue its coffee trade-led economic growth.

2 Chapter 2

2.1 LITERATURE REVIEW

The purpose of this chapter, in the context of this research, is to establish important theories that help us talk in-depth about the connection between Tariff barriers, Non-Tariff Barriers, Free Trade policy and Uganda's coffee export growth rate; in addition with its ultimate impact on economic growth (GDP). This chapter also emphasizes, both conceptually and empirically, empirical research that was conducted to evaluate the effects of trade policy on coffee export growth rate and on economic growth in connection to **export-led growth (ELG) policies, free trade policies, Tariff and Non-Tariff Barriers.**

In studies on global trade and economic expansion, a connection between economic growth and trade has been shown. Discussions about how trade affects economic growth have prevailed for a couple of years now. Therefore, it is crucial to comprehend some theories in order to analyze how trade policy has impacted Uganda's coffee export growth rate and as well as its GDP.

2.2 THEORETICAL LITERATURE REVIEW

2.2.1 Export-Led Growth School (ELG) Theory.

The term "export-led growth" is used to define policies of countries that have been successful in developing their export markets. Because export orientation promotes specialization, which raises national output and lowers local prices, many nations, especially LDCs, are motivated to adopt it. Exports help the economy use its resources more efficiently in producing goods and services that can then be sold in excess to meet foreign demand. This increases national output and brings in foreign exchange earnings that may be used to finance economic growth (Krueger, 1985; Lal, 1992).

The export led growth hypothesis claims that there are numerous theoretical reasons why exports are the main driver of economic growth. First, Keynesian theory states that increasing exports will increase income growth in the near run due to the foreign exchange multiplier. Second, exports generate more foreign exchange, which is utilized to buy goods like fuel, food, machinery, electricity and transportation equipment, and other essentials that stimulate any country's economy. Third, through increased competitiveness, economies of scale and scope, technological advancement, and increased capacity utilization, exports indirectly support growth. Fourth, increased exports result in a number of positive externalities, such as improved management or a decrease in organizational inefficiencies, better production processes, positive learning from foreign competitors, and technical competence in product design (Henry & Wilfred, 2012).

Several tenable empirical reasons are presented in this literature review to support the idea that exporting activities and total economic growth are related. Export is a function of international trade flow, where products made in one country are transported to another for sale or trade. This implies that a country has access to a larger external market, which stimulates domestic output and subsequently economic growth. It is often stated that small domestic markets might not expand continuously and that any favourable economic shock that causes the domestic market to grow is more likely to deflate fast. Large overseas

markets, however, are not always accompanied with demand-side growth constraints, which encourages the exploitation of economies of scale (Bbaale and Mutenyo, 2011).

2.2.2 Tariff Barriers

Institution Barriers to trade are government-induced restrictions on trade. There are several different types of trade barriers. They include tariffs and non-tariff barriers. A tariff is the amount of import duty charged on a particular type of goods. Non-tariff trade barriers are measures intended to favor local industry (Maskus, 2001). They can include trade regulations, labeling rules, and unfair government subsidies The World Trade Organization (WTO) deals with the global rules of trade amongst nations and its main purpose is ensuring that trade flows as smoothly, predictably and freely as possible.

Most countries are limited by their natural resources and ability to produce certain goods and services. They trade with other countries to get what their population needs and demands. However, trade isn't always conducted in an amenable manner between trading partners. Policies, geopolitics, competition, and many other factors can make trading partners unhappy.

In nowadays, tariff and non-tariff barriers have affected the trends and structure of international trade, the geographic direction, and importing and exporting countries relations (Stigler, 1971).

2.2.3 Non-Tariff Barriers

A growing share of modern trade policy instruments is shaped by non-tariff barriers (NTBs). Based on a structural gravity equation and the recently updated Global Trade Alert database, we empirically investigate the effect of NTBs on imports. Our analysis reveals that the implementation of NTBs reduces imports of affected products by up to 12%. Their trade dampening effect is thus comparable to that of trade defense instruments such as anti-dumping duties. It is smaller for exporters that have a free trade agreement with the importing country. Different types of NTBs affect trade to a different extent

- **Quotas**

These can be defined as ceilings imposed on the importation of a certain product based on its amount or value, and which apply during a specific period of time. Quotas can be implemented both as a measure of protectionism to allow infant industries to nurture properly and as an economic tool for the regulation of imports, by preventing foreign products from entering the local market ‘en masse’. As the effects of a quota are more predictable and certain than those of tariffs, governments can resort to them on a short-term basis to rectify any anomaly in market conditions. By contributing to limit the amount of foreign currency that would be spent on buying imports, quotas could also reduce a deficit in the balance of payments of a country, which would have the effect of bringing its economy back on track.

However, one of the major drawbacks associated with quotas is that they often incite countries against which they have been imposed to retaliate with similar measures, thereby creating a trade war. Moreover, the imposition of import quotas can put certain firms, especially those who have been given import licenses, in a monopoly position in the industries to which they apply. This implies that the increase in price subsequent to the application of a quota could be fully born by consumers. Similarly, restricting the supply of a product by means of an import quota would cause part of the domestic demand to be diverted towards locally manufactured substitutes, and the increase in demand for these domestic

products would in turn lead to a rise in their price. All this would end up with consumers being quite limited in terms of choice.

- **Embargoes**

Amongst all NTBs that have come to be known so far, embargoes are certainly viewed by many as the most extreme way of restricting trade. By definition, an embargo is an order from the government prohibiting any form of trade with a specific country, and generally applies to both imports and exports. The rationale justifying the recourse to embargoes against certain nations has been proved to be purely political. For example, the US has been implementing them primarily to sanction those countries with which it shares tense diplomatic relations. These include states such as North Korea, Iran, Cuba, Libya and Ivory Coast but to mention a few of them.

Notwithstanding the fact that they might be acting as a hindrance to free trade on the global market, evidence suggests that NTBs could also have a beneficial impact from an economic point of view. It has been seen that they can for instance be implemented as part of a plan aiming at reducing imports, with the end result being a neat improvement of a country's balance of payments. Advocates of NTBs might as well put forward the protection of infant industries as an argument justifying their application. As these industries are unable to face foreign competition due to their apparent fragility, protectionist measures might be adopted on a short-term basis to provide them with adequate support necessary for their progressive development. But the risk of seeing infant industries fall into complacency and getting used to preferential treatment should not be overlooked. In limiting the influx of imports on the domestic market, NTBs can indirectly lead to the creation of many job opportunities, especially in the export sector, and have also proved to be effective mechanisms for ensuring the protection of ailing industries.

In order for NTBs not to obstruct the fluidity of trade relations and for them to have the expected positive outcome, governments should seriously consider to apply them temporarily and to remove them at the right time to prevent their respective countries from being engaged in endless trade conflicts.

2.2.4 Free Trade Policy

Free trade is the process of liberalization of markets from governments' interventions. Under free trade policy, all economic resources from all countries involved are subject to price as a reflection of supply and demand, thus making price as the sole determinant for resource allocations. Free trade ensures the same playing rules for a competition, although does not necessarily ensures a fair competition for all the parties involved.

Free trade creates an equal business environment. By signing the agreement, countries will put their private sectors to compete with other countries' private sectors in equal terms. For poorer countries, it means their private sectors, which are relatively weaker, will compete against much stronger companies. The regulation may be equal, but the players, capabilities are certainly not.

The characteristic of free trade are:

- Trade of goods without taxes or any kind of barriers
- The free movement of labor between countries involved in the agreement
- The free movement of capital between and within countries involved in the agreement
- Free access to markets

The strive for trade liberalization has been on the upswing since the establishment of the World Trade Organization (WTO) following the negotiations undergone at the Uruguay Round in 1995. The WTO, which counts 153 member countries till now, covers at least 97% of global trade (Sloman, 2006). In the same way as its predecessor, the General Agreement on Tariffs and Trade (GATT), the WTO's main objective is to remove any unnecessary hurdles that prevent trade to flow as fluidly as possible. In that respect, it urges all its members to abide by a well-defined set of rules governing trade relations.

If it is more about poor third world countries having an equal trading terms with the U.S or the E.U for the promise of economic growth, HOW will FTA succeed in this? Because when it comes to economic freedom regarding the development of a country including all of its citizens, promises and assertions will not stand. There is little or no evidence to support claims that free trade lifts people out of poverty, and it is the burden of the opposition to prove otherwise.

2.3 EMPIRICAL LITERATURE REVIEW

2.3.1 Export-Led Growth School (ELG).

There is a ton of empirical data on the relationship between exports and economic growth that has been investigated using time series techniques in a number of different nations. It is interesting that there is no agreement on the direction of causality between the two series despite the evidence that has been produced. In addition, researchers and scholars continue to disagree on the connection between exporting and economic growth. Others have provided evidence in support of the growth-led-export hypothesis (GLE), arguing that economic growth is a function of international trade flow whereby goods produced in one country are shipped to another. Some authors have argued that export growth precedes economic growth, thereby supporting the export-led growth (ELG) hypothesis. Additionally, B.N. Tripathy, a researcher, claimed that exports are the main drivers of economic growth. In his research on India's exports and economic development, he followed Adam Smith's concepts on export, which provided historical context for his work and allowed him to make an attempt at analyzing the contribution of the Indian economy to international trade. The author claimed that the Indian economy has always combined growth led exports and export led growths. Mr. B.N. Tripathy also made the point that small nations with scant natural resources are more likely to find that export specialization can speed up economic growth (Tripathy, 2008).

Sentsho (2002) used annual time-series data from 1976 to 1997 in Botswana to evaluate the ELG hypothesis. He performs a regression using the OLS approach and comes to the conclusion that exports have a long-term beneficial effect on economic growth. In 2003, research was done on the applicability of the ELG hypothesis across 21 Sub-Saharan African nations. Exports have been shown to have a positive and considerable impact on economic growth in each of those nations (Njikam, 2003).

Nidugala's empirical study also examined the effect of exports on economic growth in India from 1960 to 1989. The study found that whereas the rise of primary exports rarely had any impact on GDP growth, the growth of manufactured exports showed a strong positive link

with GDP growth. He attributed this change in the link between export growth and GDP growth to higher levels of development as well as a shift in the export composition in favour of manufactured goods (Nidugala, 1990).

Abu Shihab Ruba (Assistant Professor AlBlqa Applied University Jordan) in a study on the causal relationship between exports and economic growth in Jordan from 2000 to 2012, Thikraiat Soufan and Shatha Abdul-Khaliq (Assistant Professor Al Zaytoonah Private University of Jordan, Amman, Jordan) used data from the World Bank and the International Monetary Fund. They used the unit root test, and the findings showed that after the first difference, the variables became stationary. Although a previous study on export-led growth by Abu al-Foul (2006) over the period from 1976–1997 revealed a unidirectional causation from exports to output, this supported the export-oriented growth strategy pursued by the Jordanian government. They also adopted the Granger methodology, in which they discovered that there is a causal relationship going from the economic growth to Export (unidirectional). The authors believe that in order to increase its export opportunities, the government should also include a number of export development projects, such as the growth of non-traditional exports of steel, engineering goods, chemicals, and readymade garments. They also advocated for export promotion incentives through tax and duty breaks, marketing support through trade shows, and an increase in technology transfer (Ruba, Thikraiat, & Shatha, 2014)

2.3.2 Free Trade Policy

Despite the relentless efforts made by the WTO, the free trade objective is far from being attained, judging by the rapid proliferation of non-tariff barriers (NTBs) to trade that has been witnessed on the global scene since the Tokyo Round of negotiations (1973-1979), where they have been first dealt with.

Empirical evidence has shown that non-manufactured goods are those which are most likely to be exposed to NTBs. This has been the case notably with agricultural products, where export subsidies granted to EU and US based farmers have been the subject of virulent criticism from developing countries on the basis that farmers within these economies could not compete against subsidized agricultural products originating from wealthy countries. This culminated in an interim agreement being concluded at Geneva in July 2004 pertaining to the matter in question, whereby the EU was asked to cease the subsidizing of its agricultural exports.

Without the government intervention, the private sectors, commonly farmers or small companies, will fail to protect their production. It happened in Senegal, when it opened its market, and lowered the tariff of tomatoes during 1994 to 2001. The country was producing about 73,000 tons of tomato concentrate by 1990. In 1996/7, hit by the imports from EU, the production decreased to 20,000. The EU's exports of tomato concentrate to Senegal increased from 62 tons in 1994 to 5,348 tons in 1996 due to the increased access to Senegal's market (an 8625,81% increase). Since then, there has been stagnation in Senegal's tomato processing industry with declining prices of tomato concentrate and a lack of credit and investment resources available to processors.

This is attributed to the fact that the EU has easy access to credit and qualified labour compared to the Senegalese counterparts, and they are able to produce tomatoes more cheaply for the European processing industry.

Therefore, the price for free trade is more expensive than the benefit it brings. The practice of free trade agreements will undoubtingly give market access to much richer country. This then will, so they claim, give chances for poorer countries to attract investment and improve growth prospects, and in some cases, even expand their own corporate sector – a fine answer for all the problems in this world.

However perfect it may sound, the hypothetical condition can only be valid in a circumstance where particular industries in the poorer countries has comparative advantage. In truth, most of the companies does not have (if any) comparative or competitive advantages. Being so, these companies whenever a free trade agreement is applied, left alone to compete without government's protection, will never develop and then in the long run will die. Harsh reality portrays that after a country opens their market, the first sector to suffer is the employment sector. Poorer countries will find their skilled workers moving to greener pasture (Seeking higher wages) thus leaving the workforce inside the country being cheap labor (the main attraction for foreign companies). Meanwhile foreign corporations will also compete for commodities with higher financial capital and stronger purchasing power, raising the living standard of the whole poorer country's society.

No matter how beneficial it might seem by getting access to the new market, the practical thing can differ so much because free trade premise is based only on the potentials that can be reaped, but not on the technical requirements that need to be fulfilled before it can reap the potential.

THAILAND CASE

The economic indicator of Thailand after the FTA

- Inflation rate in Thailand rose every year from 2003 – 2007
- Growth rate of the GDP decreased every year
- Thailand's account balance decreased from 8 trillion USD to deficit 4 trillion USD in four years (a 150% decrease of their account prior to the FTA)

When in contrary, China enjoyed a steady increase in their account balance of 400% in those same four years while Thailand, sadly to say did not increase their GDP.

Therefore, it is not only about poor countries who should not engage in FTA but for countries in general who are poorer compared to their trading partners.

2.3.3 Tariff Barriers

During the past seventy years or so, the multilateral trading system has been remarkably successful in reducing traditional policy barriers to international trade. From 1947–95, eight rounds of multilateral trade negotiations were conducted under the auspices of the General Agreement on Tariffs and Trade (GATT), a multilateral treaty focused on international trade in goods. These eight GATT rounds delivered substantial multilateral trade liberalization, eventually reducing the average ad-valorem tariff on industrial goods to under four percent (Bagwell et al., 2016).

Holding tariffs constant, we find that national patent protection levels are substitutes across countries. In particular, a country is less likely to protect a firm (regardless of whether it is domestic or foreign) if that firm receives patent protection from the other country. An important implication of this finding is that countries have incentives to free ride on each other, so that the Nash equilibrium features insufficient patent protection. Such strategic substitutability and the under-provision of patent protection also arise in trade models of variety-expanding R&D (Grossman and Lai, 2004, Geng and Saggi, 2015)

In addition, it is well-known that patent protection is not necessarily the most effective means for incentivizing innovation as it increases monopoly power and can also give rise to various other problems that tend to reduce efficiency (Boldrin and Levine, 2013)

3 Chapter 3

3.1 METHODOLOGY

The study adopted the descriptive survey design but cross sectional in nature. The quantitative approach to data collection was used.

3.2 Research Design

A quantitative research methodology was employed in the statistical analysis of collected time-series data from 1995 to 2015. The framework of this study was used to examine the relationship between Tariff Barriers and Uganda's coffee export growth rate, the relationship between Non-Tariff Barriers and Uganda's coffee export growth rate, and the relationship between Free Trade Policy and Uganda's coffee export growth rate, and the ultimate relationship between all these factors and GDP in order to accomplish the goals of this work. In order to incorporate the short-term and long-term association between tariff barriers, non-tariff barriers, free trade policy, and economic growth in the model, the expected analysis for this study covered annual time series data from 1995 to 2015, over a twenty-year timeframe.

The data set includes observations for the GDP, exports and imports of coffee, coffee products, and services in current US Billion dollars. All data sets have been collected directly from the World Bank development indicators.

The research design refers to the overall strategy developed to combine the numerous study components in a coherent and logical manner, ensuring that it would successfully address the research problem. It is the underlying plan for data collection, measurement, and analysis. It is crucial to keep in mind that the study's design choice is based on the research problem. As a result, time-series data from 1995 to 2015 were collected and statistically analyzed using a quantitative research technique.

3.3 Data and Source

The study made use of secondary data gathering, which is information gathered by someone other than the researcher for a purpose unrelated to the current study effort. The secondary datasets contained details on tariffs, non-tariff barriers, free trade policies, and coffee imports and exports. "The World Bank's database" was used to get the quantitative information. The test evaluations methodology, the indicators used to record the program's results, and the kind of analysis to be done are all determined by the quantitative structure of the data that is required.

3.4 Econometric Model

The Ordinary Least Square (OLS) technique was used to create a linear multiple regression model, which was then properly analyzed and interpreted in order to meet the goals of this work. This is because it aims to reduce the sum of squared errors, or the variance between the actual and expected observations. As a result, the error between the estimated regression line and the observed regression line decreases.

We stated the model as follows:

$$\mathbf{GDP_t = \beta_0 + \beta_1 TB_t + \beta_2 NTB_t + \beta_3 FT_t + U_t}$$

Where;

GDP_t = Gross Domestic Product (dependent variable)

TB_t = Tariff Barriers (independent variable)

NTB_t = Non-tariff Barriers (independent variable)

FT_t = Free Trade Policy (independent variable)

U_t = Error term (residual)

β_0 = Constant term (intercept)

β_1, β_2 and β_3 = Parameters to be estimated

3.5 Variables' definitions and Measurement levels.

GDPt is a measure of the entire market value of goods and services produced inside Uganda's borders, independent of the nationality of the producers, and it is utilized in this study. Economic growth, in the opinion of (Todaro and Smith 2009), is boosted by a consistent increase in the GDP's rate of growth through time. As a result, it approximately predicts economic growth. GDP figures were also expressed in billions of US dollars at the current currency exchange rates.

Tariff Barriers, TB_t represent tariffs imposed which are the entire amount of taxes imposed on Uganda's coffee. Tariffs were measured in this study in billions of the United States of America dollars at current exchange rates.

Non-Tariff Barriers, NTB_t which are represented by the trade restrictive index are government-imposed trade restrictions that limit the number or monetary value of goods that a country can import or export during a particular period. Countries use quotas in trade to help regulate the volume of trade between them and other countries. In this research, the Non-Tariff Barriers were quantified using the amount of Quotas available on Uganda's coffee exports. However, the quotas are quantified using the Trade Restrictive Index. It is measured by taking into a variety of factors including tariffs, quotas, and other non-tariff barriers.

Free Trade, FT_t is a free trade policy where goods and services can be bought and sold across borders with little or no government tariffs, quotas, subsidies, or prohibitions to

inhibit their exchange. In this research, free trade is quantified using the total amount of duty free coffee exports from the year 1995 to 2015.

3.6 Research Instrument and Data Collection Procedure.

The Record spreadsheet was used to enter the yearly data on Tariffs, Non-tariff barriers (Quotas), Free Trade Policy, and economic growth (GDP) in Uganda for twenty years from 1995 to 2015, observed and extracted from the World Bank development indicators' online database.

3.6.1 Diagnostic Tests

- **ANOVA (Analysis of Variance):**

For example, to study the effectiveness of different diabetes medications, scientists design and experiment to explore the relationship between the type of medicine and the resulting blood sugar level. The sample population is a set of people. We divide the sample population into multiple groups, and each group receives a particular medicine for a trial period. At the end of the trial period, blood sugar levels are measured for each of the individual participants. Then for each group, the mean blood sugar level is calculated. ANOVA helps to compare these group means to find out if they are statistically different or if they are similar.

The outcome of ANOVA is the 'F statistic'. This ratio shows the difference between the within group variance and the between group variance, which ultimately produces a figure which allows a conclusion that the null hypothesis is supported or rejected. If there is a significant difference between the groups, the null hypothesis is not supported, and the F-ratio will be larger.

- **Autocorrelation:**

Testing the residuals for autocorrelation is necessary because the study will be working with time- series data, which greatly increases the likelihood of autocorrelation. Autocorrelation, in other words, ascertains the existence of correlation between the values of variables based on related characteristics. It resembles how two signals cross-correlate with one another. The premise of instance independence, which the majority of statistical models rely on, is violated by autocorrelation (Gujarati & Porter, 2022/2009).

3.7 Data Analysis

To perform econometric analysis, STATA 15 and Microsoft excel software were used to run econometric tests that enable us to determine if there is a relationship between tariffs, non-tariff barriers (quotas), free trade policy and economic growth expressed as the Gross Domestic Product (GDP) in this study. Below are different analysis tests that were performed in this study.

- **Descriptive Analysis**: It covers the methods of data analysis as well as how numerical facts or statistics are presented in tables or graphs. In terms of central tendency and variability, the data for this study was descriptively analyzed. The mean, median, and mode are central tendency measures, whereas the standard

deviation, skewness, and kurtosis are variability measures. Data must undergo descriptive analysis in order to determine the distribution's normalcy.

- **Correlation Analysis**: It refers to the process of examining the associations between two or more variables in order to ascertain whether there is a statistical correlation between them, the strength of that association, and whether one variable can be predicted from another (Gujarati & Porter, 2022/2009). The following precise objectives served as the study's direction: To investigate how tariffs, quotas, free trade policy and economic growth are related: Establishing whether there is any association of any kind and assessing the strength of the relationship, if any, between tariffs, quotas, free trade and economic growth will be used to make this determination.

- **Multiple Regression Analysis**: When we want to forecast the value of a variable based on the values of two or more other variables, we utilize this extension of simple linear regression. The dependent variable is the one we're trying to forecast (or sometimes, the outcome, target or criterion variable). You may alternatively describe this as an equation that shows how two or more variables relate to one another. The regression equation is the equation for the line that is used to estimate Y based on X. The regression line is determined using the mathematical technique known as the least square's principle, which removes judgment. The "best fitting" line is produced by this procedure (Gujarati & Porter, 2022/2009).

3.8 Ethical considerations

Ethical considerations in this research are a set of principles that guided the research designs and practices. When gathering information from various sources, researchers are required to constantly abide by a set of ethical principles (Bhandari, 2021).

The World Bank's development indicators provided the data for this study, which is available for free use for commercial or non-commercial purposes to reproduce, distribute, adapt, display, or incorporate into other works under the terms of a Creative Commons Attribution 4.0 International License (WORLD BANK, n.d.).

The dissertation has utilized the APA 7 reference style to properly credit all other writers' works that were used in any part of this research. As a result, all communication on this research has been done in an honest and open manner.

3.9 Methodological constraints.

The Ordinary Least Square (OLS) technique was used to create a linear multiple regression model; however, the nature of linear regression only looks at linear relationships between dependent and independent variables. That is, it assumes there is a straight-line relationship between them (Flom, 2018). However, most times, this is incorrect. For example, the relationship between trade policy and economic growth is not linear. Different trade policies affect the economy in different ways depending on the outcome desired by the economy. For instance; trade policies like free trade encourage growth whereas trade policies like quotas

actually hinder the growth of the economy. Despite the fact that they encourage domestic production, they limit export led growth.

4 CHAPTER 4

4.1 DATA ANALYSIS AND INTERPRETATION OF RESULTS

4.2 Descriptive and Empirical Findings

Descriptive Analysis

```
. summarize gdp tradeweightedaveragetariff dutyfreetariffshare traderestrictiveindex emp
```

Variable	Obs	Mean	Std. Dev.	Min	Max
gdp	21	14714.52	10387.61	5756	32472
tradeweigh~f	21	7.733333	1.9978	5.32	12.39
dutyfreeta~e	21	32.40048	7.282082	21.07	42
traderestr~x	21	.1157143	.1084238	.02	.42
emp	21	1.721429	.13843	1.59	2.1

.

Table 1 *summary statistics*

Source: Author's Calculations on STATA 15

The table above shows that the mean gdp, trade weighted average tariff, total duty free exports, trade restrictive index, and EMP are 14714.52, 7.733333, 32.40048, 0.1157143, and 1.721429 respectively.

4.3 Correlation Analysis

The statistical method of correlation analysis examines the degree of a relationship between two numerically measured continuous variables (e.g., height and weight). When a researcher wishes to determine whether there may be connections between variables, this particular form of analysis is helpful. Contrary to popular belief, correlation analysis does not determine cause and effect because other factors that were not considered in the study may have had an impact on the findings.

If there is a correlation between two variables, it means that over the course of some time, whenever one variable undergoes a regular change, the other also undergoes a regular

change. If a correlation is observed, it may or may not be positive or negative depending on the numerical values examined (Correlation Analysis - Market Research, 2019).

- If two variables rise at the same time, there is a positive correlation, meaning that the high numerical values of one variable are related to the high numerical values of the other.

- If one variable falls when the other rises, or if the high numerical values of one variable connect to the low numerical values of the other, then there is a negative correlation.

```
. correlate gdp tradeweightedaveragetariff dutyfreetariffshare traderestrictiveindex emp
(obs=21)
```

	gdp	tradew~f	dutyfr~e	trader~x	emp
gdp	1.0000				
tradeweigh~f	0.5556	1.0000			
dutyfreeta~e	0.8171	0.7676	1.0000		
traderestr~x	-0.4567	-0.2837	-0.3744	1.0000	
emp	0.9230	0.3955	0.7705	-0.4107	1.0000

Table 2 *Correlation Analysis*

Source: Author's Calculations on STATA 15

From the table above,

1. The quantity of coffee exports (gdp) and the trade weighted average tariffs imposed by Uganda have a positive and moderate correlation of 0.5556. This explains that as Uganda imposes a higher tariffs on its goods, the gdp increases too.

2. There is a high and positive correlation of 0.8171 between quantity of coffee exports (gdp) and duty free tariff share which quantifies free trade policy. This shows that as free trade policy is applied, the gdp is bound to increase.

3. There is a moderate and negative correlation of -0.4567 between quantity of coffee exports (gdp) and the trade restrictive index which quantifies tariffs in general. This goes to show that as tariffs increase moderately, the gdp decreases by the same rate.

4. The quantity of coffee exports (gdp) and the EMP (index of export market penetration) have an extremely high and positive correlation. This explains that a high index of export market penetration positively influences the amount of coffee exported as well as the gdp

4.3 Analysis of Variance (ANOVA) test

Between gdp and trade weighted average tariff

Ho: All groups have equal variances

Ha: Not all groups have equal variances

```
. oneway gdp tradeweightedaveragetariff

                        Analysis of Variance
    Source              SS         df      MS            F     Prob > F
------------------------------------------------------------------------
Between groups      2.0321e+09     15    135470782      5.38     0.0365
 Within groups       125986005      5   25197201.1
------------------------------------------------------------------------
    Total           2.1580e+09     20    107902387

Bartlett's test for equal variances:  chi2(1) =  15.2637  Prob>chi2 = 0.000

note: Bartlett's test performed on cells with positive variance:
      14 single-observation cells not used
```

Table 3 *ANOVA TEST*

Source: Author's Calculations on STATA 15

From the table above, since the Prob > F = 0.0365 which is less than the level of significance alpha 0.05; therefore, there is a highly significant relationship between the quantity of coffee exports (gdp) and the trade weighted average tariff.

Since the Prob > chi2 = 0.000 which is less than the level of significance of 0.05, we reject the null hypothesis and conclude that not all groups have equal variances.

Between gdp and duty free tariff share

```
. oneway gdp dutyfreetariffshare

                        Analysis of Variance
    Source              SS         df      MS            F     Prob > F
------------------------------------------------------------------------
Between groups      2.1577e+09     16    134853570   1380.97     0.0000
 Within groups        390604.8      4      97651.2
------------------------------------------------------------------------
    Total           2.1580e+09     20    107902387

.
```

Table 4 *ANOVA TEST*

Source: Author's Calculations on STATA 15

From the table above,

The Prob > F = 0.0000 which is less than the level of significance alpha (0.05). Therefore, there is a highly significant relationship between quantity of coffee exports (gdp) and free trade policy (duty free tariff share).

4.4 Autocorrelation Test

Ho: No serial autocorrelation

Ha: Serial Autocorrelation

```
. estat bgodfrey, lag(1)

Breusch-Godfrey LM test for autocorrelation
```

lags(*p*)	chi2	df	Prob > chi2
1	0.446	1	0.5041

H0: no serial correlation

Table 4 *ANOVA TEST*

Source: Author's Calculations on STATA 15

Since the corresponding probability is more than 5% as it is 0.5041, we therefore accepted the null hypothesis and concluded that there is no serial autocorrelation.

4.5 Regression analysis

A multiple linear regression analysis is created in which trade weighted average tariff, duty free tariff share, trade restrictive index and index of export market penetration (EMP) are regressed upon Uganda's GDP from 1995 to 2015 in order to validate the dependence of GDP on these four factors.

```
. regress gdp tradeweightedaveragetariff dutyfreetariffshare traderestrictiveindex emp

      Source |       SS           df       MS      Number of obs   =        21
-------------+----------------------------------   F(4, 16)        =     35.23
       Model |  1.9380e+09         4   484503783   Prob > F        =    0.0000
    Residual |   220032599        16  13752037.4   R-squared       =    0.8980
-------------+----------------------------------   Adj R-squared   =    0.8726
       Total |  2.1580e+09        20   107902387   Root MSE        =    3708.4

------------------------------------------------------------------------------
                         gdp |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----------------------------+------------------------------------------------
tradeweightedaveragetariff |   1091.532   742.3585     1.47   0.161    -482.1972    2665.262
       dutyfreetariffshare |   18.37079   291.8151     0.06   0.951    -600.2495    636.9911
     traderestrictiveindex |  -5934.023   8479.791    -0.70   0.494    -23910.38    12042.33
                       emp |   60374.46   11010.49     5.48   0.000     37033.26    83715.66
                     _cons |  -97565.55   15328.86    -6.36   0.000    -130061.3   -65069.82
------------------------------------------------------------------------------

.
```

Table 5 *Multi Regression Analysis*

Source: Author's Calculations on STATA 15

From the table above,

The result of the regression equation as displayed in the above table detects that our overall model is statistically significant (prob.= 0.0000) at the 5 % level of significance and eighty nine (89.8%) percent of variation in the quantity of coffee exports (gdp) is explained by the independent variables 'trade weighted average tariff', 'duty free tariff share', 'trade restrictive index' and 'index of export market penetration (R-squared = 0.8980).

The resulting regression equation is based on this outcome and is as follows:

GDP = 1091.532**TWAF** + 18.37079**DFTS** – 5934.023**TRI** + 60374.4**EMP** + U_t

Whereby;

GDP = gdp

TWAT = trade weighted average tariff (Tariff Barriers)

DFTS = duty free tariff share (Free Trade Policy)

TRI = trade restrictive index (Non-Tariff Barriers)

EMP = emp (Index of Export Market Penetration)

$\mathbf{U_t}$ = Error term

The coefficients of the regressors which comprise of trade weighted average tariff (TWAT), duty free tariff share (DFTS), and EMP are the only variables positively associated with the dependent variable.

OBJECTIVE ONE

A one unit increase in TWAT (trade weighted average tariff) (Tariff Barriers) is responsible for $1091.532 million increase (β1=1091.532) in GDP and it is statistically insignificant by its corresponding probability (prob =0.161).

OBJECTIVE TWO

While the coefficient of the regressor TRI (trade restrictive index) (Non-Tariff Barriers) is negatively associated with the dependent variable and a one unit increase in TRI will lead to a decrease in GDP by $-5934.023 million (β3= -6.389207) and it is statistically insignificant by its corresponding probability (prob = 0.494).

OBJECTIVE THREE

On the other hand, a one unit increase in DFTS (duty free tariff share) (Free Trade Policy) is accountable for only $18.37079 million increase (β2= 18.37079) in GDP and it is statistically insignificant by its corresponding probability (prob = 0.951).

On the other hand, a one unit increase in EMP (index of export market penetration) is accountable for only $60374.46 million increase (β4= 18.37079) in GDP and it is statistically significant by its corresponding probability (prob = 0.000).

The R squared value is 0.8980 with a root mean standard error of 0.0254. This implies that 89.80 percent of the variations in the GDP is being explained by the joint contribution of trade weighted average tariff, duty free tariff share, trade restrictive index, and EMP. The remaining (100 – 89.80) = 10.2% are the other variables not explained or mentioned in the model (error term).

Due to the high R squared of 89.80%, the model is therefore fitted very nicely.

To confirm if the four independent variables are jointly significant to explain GDP,

H_0: Null = TWAT, DFTS, TRI, and EMP do not jointly impact GDP

H_1: Alt = TWAT, DFTS, TRI, and EMP jointly impact GDP

Since F- statistic of the model is 0.0000 which is less than 5% we can reject the null hypothesis meaning that the alternative should be accepted. Hence concluding that TWAT, DFTS, TRI, and EMP jointly impact GDP.

5 CHAPTER 5

5.1 DISCUSSION OF RESULTS

This section analyses empirical data in accordance with the literature review. By studying the connection between the validity of export-led growth and import-led growth, it also provides more discussion points about the conclusions made in chapter four to offer potential answers to the research question. Statistical interpretation based on the model examined to investigate the research questions was utilized to explain this.

Basing on the study results, the study showed that in the period from 1995 - 2015, there was a linear growth of exports of coffee and negative insignificant linear impact of Non-Tariff Barriers (trade restrictive index). That growth impacted the economic growth of the country, as discussed below based on regression coefficients.

5.2 The TWAT (trade weighted average tariff) Coefficient / TARIFF BARRIERS

The result of the regression shows that tariffs imposed by Uganda positively affect Uganda's economic growth (gdp). This therefore suggests that tariffs imposed by Uganda help the country's real GDP to increase. This emphasizes the necessity for increased sources of government revenue and also supports the hypothesis that there is a correlation between revenue volume and economic growth. Basing on Adam Smith and David Ricardo’s theories, a country benefits from foreign trade through exported commodities that it produces itself (Nyasulu, 2013; Usman, 2011).

This finding supports the empirical data of other researchers, including Njikam (2003), who found that exports of commodities and services are one of the main drivers of GDP growth in sub-Saharan African developing nations. This result is consistent with that of (Sentsho, 2002), who discovered that exports have a major influence on economic growth in developing nations.

The positive correlation between exports and economic growth's implications for policy indicate that the economy's reallocation of resources to productive purposes was aided by economic reform programs and the move toward a liberalized market. The graph below shows a trend of how GDP increases with increase in tariffs from the period of 1995 to 2015.

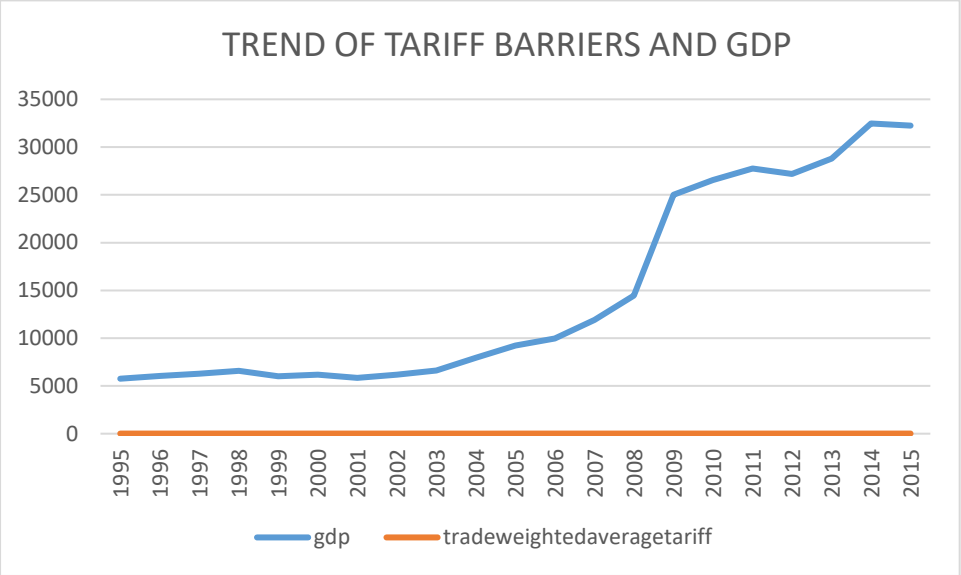

Figure 2 trend of trade barriers and gdp 1995 - 2015

Source: Author's Illustration on MS Excel

5.3 The DFTS (duty free tariff share) Coefficient / FREE TRADE POLICY.

The empirical findings, which show that Free Trade boosts the country's real GDP by utilizing ordinary least square regression estimate methods on data from 1995 to 2015, show that free trade policy has a beneficial impact on Uganda's economic growth by encouraging imports and exports. However, the import-led growth hypothesis (ILG) is supported by the correlation between imports and GDP. The primary justification that may be offered here is the fact that most imports into Uganda, a nation that is heavily dependent on imports, are capital goods, machinery, equipment, raw materials, capital, or technology, compared to direct consumables, which dominated in previous decades and included primary food and pharmaceuticals.

As a result, the country's capital stock grows, which raises Uganda's national productive capacity and ultimately raises GDP over time. These higher expenditures on imported non-consumables used in industries also boost the country's capital stock. According to theories, increasing imports of capital and intermediate goods that are unavailable on the domestic market may boost industrial productivity, which in turn spurs the nation's economy (Lee, 1995; Sun & Heshmati, 2010). This suggests that the import-led growth (ILG) theory is true. The graph below shows how GDP increases with increase in free trade.

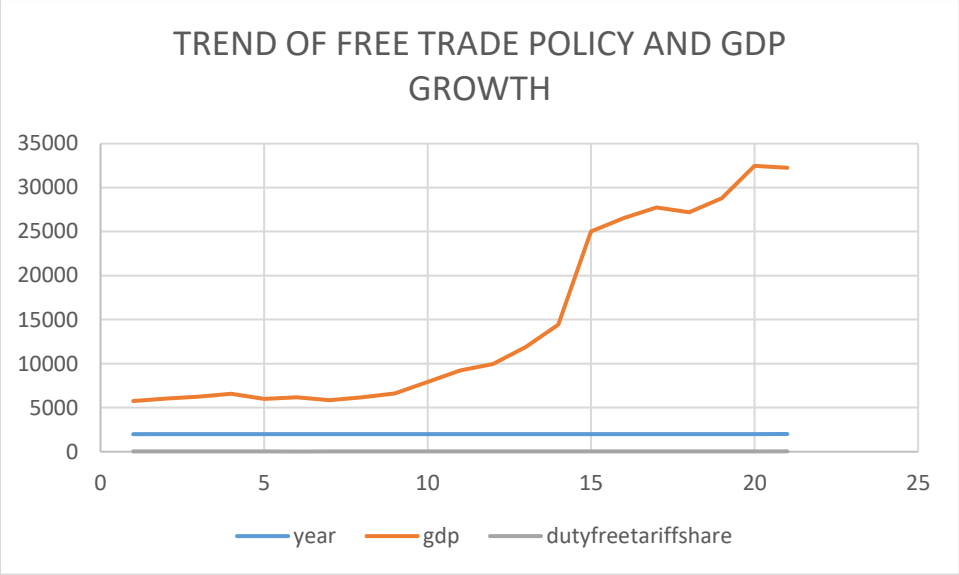

Figure 3 trend of free trade policy and gdp 1995 - 2015

Source: Author's Illustration on MS Excel

5.4 The TRI (trade restrictive index) Coefficient / Non-Tariff Barriers

TRI was discovered to have an insignificant negative impact on Uganda's economic growth, several analytical tests led to empirical findings indicating that TRI lowers Uganda's real GDP. Uganda being the most open country to foreign direct investment we anticipate that FDI will have a favorable, large impact on GDP growth over time because all sectors of the economy are fully open to investment and 100% foreign ownership of investments is allowed (UIA, 2017). This has been made possible by the investment strategy mentioned above since it will eventually draw in more international investors. However, the imposition of non-tariff barriers results into a low GDP as low quantities of coffee are exported. The graph below shows the impact of TRI on GDP growth FROM 1995 - 2015.

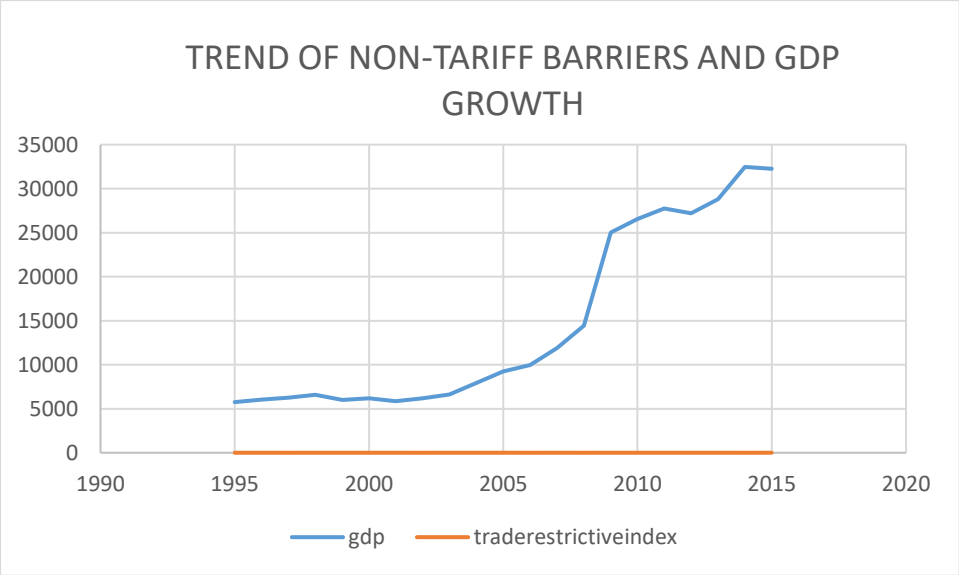

Figure 4 trend of non-tariff barriers and gdp 1995 - 2015

Source: Author's Illustration on MS Excel

5.5 The EMP (Index of Export Market Penetration) Coefficient

The Index of Market Penetration measures the extent to which a reporter's exports reach proven importers of those products worldwide.

A one unit increase in EMP (index of export market penetration) is accountable for only $60374.46 million increase (β4= 18.37079) in GDP and it is statistically significant by its corresponding probability (prob = 0.000).

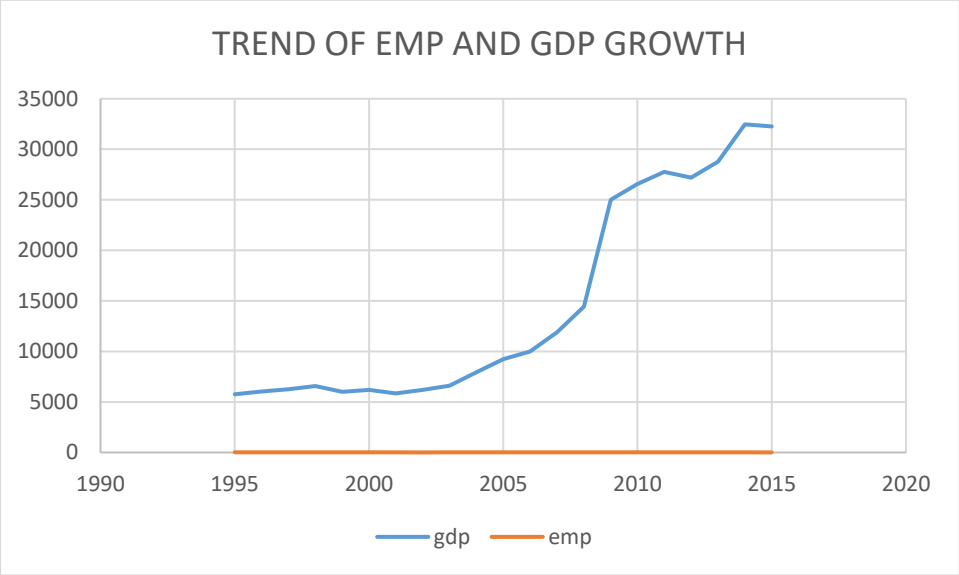

Figure 6 trend of EMP and gdp 1995 - 2015

Source: Author's Illustration on MS Excel

5.6 Conclusion

The purpose of this study is to examine the impact of Tariff Barriers, Free Trade Policy and Non-Tariff Barriers on the coffee export growth rate and economic growth (gdp) of Uganda. The analysis was based on the econometric analysis of time series in two decades covering the period 1995 to 2015.

Referring to OLS regression results, all of the variables except trade restrictive index (Non-Tariff Barriers) under study have positive coefficients. This means that an increase in tariffs by one unit led to a $1091.532 million increase in GDP while a one unit increase in duty free tariff share (Free Trade Policy) led to a $18.37079 million increase in GDP within the time

period from 1995 to 2015. However, a unit increase in the trade restrictive index (Non-Tariff Barriers) led to a $5934.023 million decrease in the GDP, and a unit increase in EMP (index of export market penetration) led to a $60374.46 increase in the GDP.

The Adjusted R-squared were 0.8726 and explains that the model best fits. This means GDP is explained by Tariff Barrier, Free Trade Policy, Non-Tariff Barriers, and EMP.

The effect of Trade Policy on economic growth in Uganda was positive and statistically significant. This finding is in line with many other researchers namely; (Njikam, 2003), Sentsho (2002); and (Thangavelu & Rajaguru, 2004) who found that in developing countries, exports and imports significantly have an impact on the economic growth. Therefore, the Ugandan government should keep enhancing export-led or import-led economic growth policies.

5.7 Policy Implications and Recommendations.

The study's findings have important implications for Ugandan economic development policy. The study's policy implications were subdivided according to the affecting factors like exports and imports. Important policy recommendations were also deduced from these implications, as emphasized below.

The statistically significant positive outcome for exports has substantial policy implications for the growth of the country's economy. The export-led growth policy is very valid, as this study has demonstrated. The Ugandan government should continue to support policies like the Buy Uganda Build Uganda (BUBU) Policy that promote export-driven economic growth. This policy, which was introduced in 2017, is regarded as very helpful in that it encourages the purchase of domestically and locally manufactured items, thereby bridging the import-export gap. In order to benefit from trade, this policy also attempts to strengthen local industries' capacity to create, meet demand, and export excess goods.

The Ugandan government should promote the diversification of exports to include non-traditional export items that are required in the region (tea and vanilla). Due to this, imports may be restricted and foreign goods and services would be reduced.

Manufacturing sectors should raise the quality of their output to make their exports more competitive on the international market. To improve the quality of its exports and the amount of revenue it can earn, the government of Uganda must advance in technologies that can aid in processing its main export goods (Coffee). The government of Uganda is the most recent nation to follow a number of others to ban the export of raw material. The majority of the nation's exports, or close to 80% of all exports, are agricultural products. The top exports of the nation include coffee, tea, cotton, tobacco, copper, oil, and fish. This action is considered as a step to improve the value of exports and income by encouraging the growth of value chains.

The government of Uganda should increase the number of subsidies it provides to producers who are focused on exports, especially smallholder farmers and medium - sized enterprises (SMEs). Additionally, export producer prices ought to be moderately raised. Smallholder farmers will be encouraged to continue export production by these subsidies and high producer prices, increasing the nation's export earnings. Uganda ought to make the most of its

physical and institutional infrastructure in order to test, accredit, and certify its export goods in accordance with the technical requirements of the international trading system.

The Import-led Growth hypothesis is supported by the positive and statistically significant relationship between imports and the GDP level in Uganda. The Ugandan government is urged to strengthen its import policy by encouraging non-direct imports of consumables that are used in the production of commodities so that any surplus can be exported.

A robust government initiative is needed to encourage the increase of foreign direct investment into Uganda, both to attract more investors and to ensure that these investors' actions have a positive impact on the nation's economic development.

5.8 Areas for further research

The effect of trade policy on Uganda's economic expansion was examined in this study. According to comparative advantage trade theory, further studies could look deeper into the specifics of each export good to identify the main financially beneficial goods that Uganda can suggest producing at a low cost and exporting to the rest of the world, as well as the non-advantageous goods that Uganda cannot put much effort into producing. Studying this also applies to imported goods. Furthermore, research should be done to determine how government policy affects trade policy which has a counter-effect on the GDP of the country.

The study has shown that there is a significant effect of coffee export on economic growth of Uganda. Therefore, research of this kind is a useful tool for the government to make policies that promote Uganda’s agricultural exports given the fact that Uganda has a lot of potential in Agriculture. The studies will generate information that establish empirical relationships between exports and economic growth hence highlighting the role which coffee plays in the growth of Uganda’s GDP.

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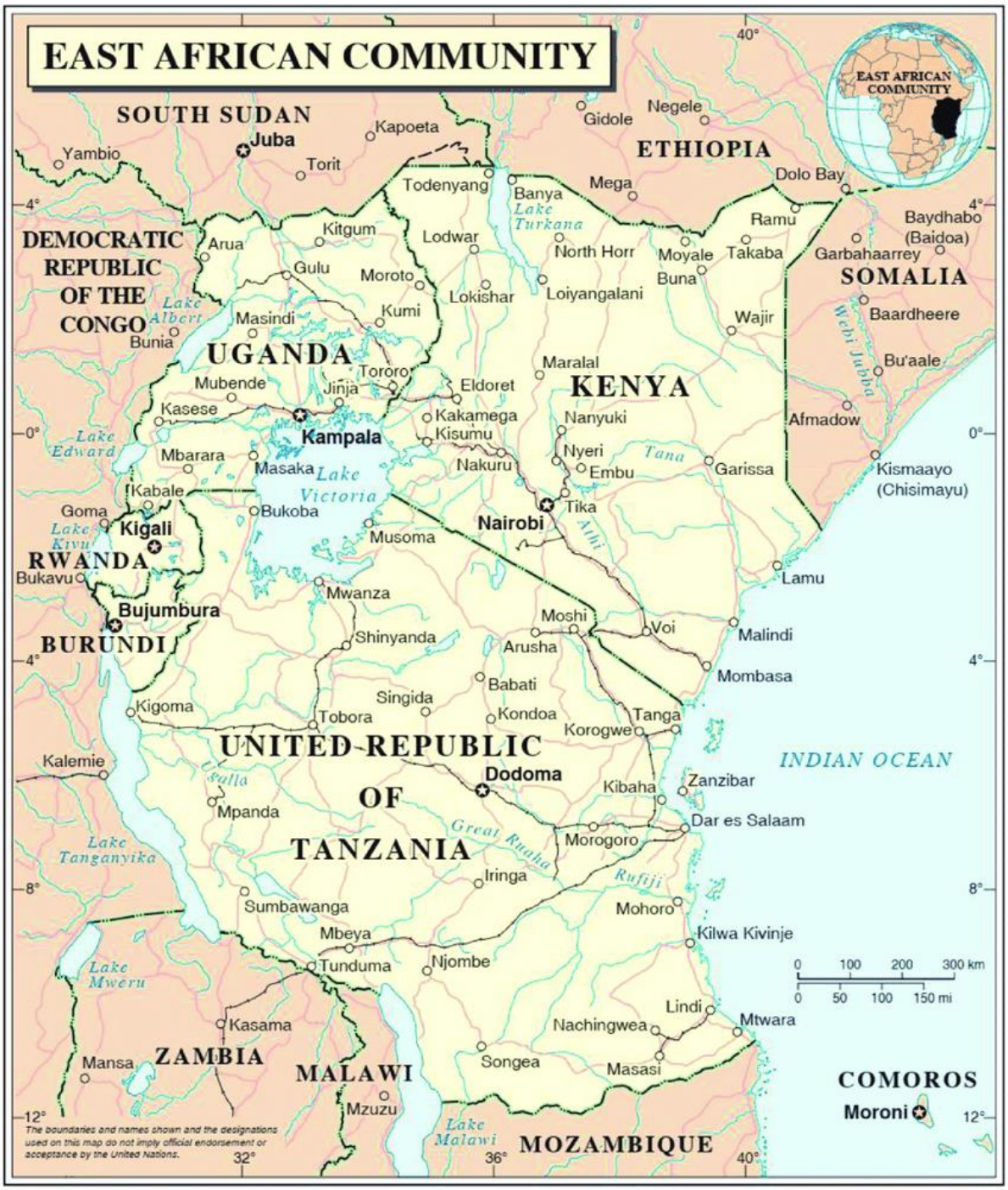
7 APPENDICES

7.1 APPENDIX A: Data Used in the Study in Millions of USD

YEAR	GDP	TRADE WEIGHTED AVERAGE TARIFF	DUTY FREE TARIFF SHARE	TRADE RESTRICTIVE INDEX	EMP	VALUE

1995	5756	6.25	26.17	0.12	1.69	432,651,034	
1996	6045	6.25	26.17	0.37	1.62	388,916,157	
1997	6269	6.25	26.17	0.42	1.6	355,126,641	
1998	6585	6.25	26.17	0.12	1.63	276,476,134	
1999	5999	6.25	26.17	0.11	1.62	282,995,511	
2000	6193	6.01	21.07	0.13	1.61	164,763,789	
2001	5841	6.09	21.93	0.12	1.6	104,776,424	
2002	6179	5.98	22.43	0.02	1.59	83,936,951	
2003	6607	5.53	25.95	0.11	1.62	104,787,094	
2004	7939	5.32	30.24	0.08	1.63	115,705,844	
2005	9239	8.98	36.99	0.21	1.71	162,078,550	
2006	9978	12.12	38.38	0.02	1.64	170,343,587	
2007	11903	8.44	38.29	0.19	1.68	256,580,844	
2008	14440	8.75	38.21	0.02	1.7	388,398,200	
2009	25020	12.39	38.23	0.14	1.74	291,743,882	
2010	26559	9.18	37.87	0.04	1.83	266,673,061	
2011	27752	8.44	39.91	0.05	1.84	448,890,669	
2012	27189	8.90	39.26	0.04	1.88	392,698,138	
2013	28792	8.50	39.55	0.04	1.93	432,694,059	
2014	32472	8.64	39.25	0.02	1.89	393,922,335	
2015	32248	7.88	42	0.06	2.1	410,564,121	

7.2 APPENDIX B: UGANDA AND NEIGHBOURING COUNTRIES



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