ANALYSIS OF THE REVENUE IMPLICATIONS OF TRADE LIBERALIZATION ON NAMIBIA IN THE CONTEXT OF SOUTHERN AFRICAN CUSTOMS UNION (SACU).

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Declarations

I, Oscar Sikanda Sikanda, hereby declare that this study is a true reflection of my own research, and that this work, or part thereof has not been submitted for a degree in any other institution of higher education.

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Oscar Sikanda Sikanda Date

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Abstract

Trade liberalization is gaining momentum in the world. For developing countries like Namibia it has serious revenue implications due to its substantial contribution to national budget. Namibia is a country characterized by small population of about 2 million coupled with small domestic market. Its membership to the Southern African Customs Union (SACU) benefits the country by sharing in the SACU Revenue Pool.

Therefore, this paper analyzes the implications of trade liberalization on customs revenue in Namibia. A quantitative approach is used in the study and an econometric model is employed to analyze the relationship between trade revenue and trade liberalization in Namibia. The variables used in the study are customs revenue, imports as percentage of GPD, exchange rate and dummy variables representing trade reform.

The major finding reveals that trade liberalization has had little impact on the customs revenue at least in the short run. The study concludes with a number of Recommendations and suggests other potential area of research. A very important Recommendation is that policy makers should pursue sound macro economic policy which promotes industrial development in order to mitigate the impact of loss of customs revenue on the national budget.

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Acronyms

ADF	Augmented Dickey – Fuller
BLNS	Botswana, Lesotho, Namibia and Swaziland
BON	Bank of Namibia
CET	Common External Tariff
ECM	Error Correction Model
EU-SA TDCA	European Union, South Africa Trade and Development Cooperation Agreement
EPAs	Economic Partnership Agreement
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
MERCOSUR	Mercado Comun del Sur (Common Market of the South) i.e Brazil, Argentina, Paraguay and Uruguay
RSF	Revenue Sharing Formula
SACU	Southern African Customs Union
SADC	Southern African Development Community
WTO	Word Trade Organization

CHAPTER 1. INTRODUCTION

1.1 Background Information

Namibia is a member to a number of regional and international trade organizations, such as the Southern African Customs Union (SACU), Southern African Development Community (SADC) and the World Trade Organization (WTO), which are all advocating for liberalization of trade through reduction of tariffs and non-tariff barriers across boarders.

The proposed reduction in tariffs will reduce customs revenue in SACU which affect Member States. SACU is one of the oldest and successful Customs Union in the world dating back to 1910. This Agreement was re-negotiated and signed in 1969 between South Africa and the then newly independent countries of Botswana, Lesotho and Swaziland. Namibia joined SACU immediately after her independence in 1990, having been a de facto member prior to independence. The 1969 SACU Agreement was re-negotiated by all Member States and was signed by all Heads of State of SACU Members in Gaborone on 21 October 2002. The Namibian Parliament ratified the Agreement on 5 March 2003.

SACU revenue contributes significantly to the revenue of the small economies of Botswana, Lesotho, Swaziland and Namibia (BLNS). This revenue comes through customs and excise duties collected at border points. SACU member states apply a common external tariff (CET) to imports from non-SACU members. The revenue collected is pooled in the Common Revenue Pool then divided among Member States,

that is Botswana, Lesotho, Swaziland, Namibia (BLNS) and South Africa through the revenue sharing formula.

Besides being SACU member, Namibia has also signed a Bilateral Preferential Trade Agreement with Zimbabwe in 1992. This provides for reciprocal duty-free entry of each other's goods, subject to rules of origin requiring at least 25 per cent local content for manufactured goods. Within the context of SACU, Namibia is also currently negotiating Trade Agreements with Mercado Comun del Sur (Common Market of the South)[1], EFTA (European Free Trade Association)[2] and United States of America (USA).

In addition, Namibia is a member of SADC and is already implementing the free trade agreement under the SADC Protocol on Trade. Under this Protocol, it is expected that by 2008, 85% of tariff lines would be zero. Within the SADC configuration, Namibia is negotiating an Economic Partnership Agreement (EPA) with the European Union, together with concluded EU-RSA Trade and Development Cooperation Agreement; all these agreement has a bearing on Namibia's customs revenue. Hereafter referred to as SACU revenue since all customs revenue Namibia collects go to SACU pool and then divided among Member States through the common revenue sharing formula.

1.2 Statement of problem

[1] The Member States are Brazil, Argentina, Paraguay and Uruguay.
[2] These are Iceland, Liechtenstein, Norway and Switzerland.

Namibia faces serious decline in revenue due to trade liberalization, hence the need to find alternative sources of revenue to replace the lost revenue. The fall in customs revenue will have serious implications on the Namibian economy. Namibia's SACU receipts contributed 14.71% to the GDP in 2006/7 (Budget speech). Therefore, a significant decline of such revenue will affect the developmental goals (projects) of the government. In particular, the following will be affected, the implementation of National Development Plans, which consists of a medium term development perspectives, requires enormous financial resources. Vision 2030 will remain a dream, if government revenue keeps on declining. The reduction in revenue is expected to negatively affect balance of payment, and the level of foreign reserves in Namibia. It will further lead to an increase in budget deficit and public debts. Therefore, there is need to broaden the economic base and diversify the economy. This study will highlight some of the problems associated with the decline of customs revenue which could compensate for potential revenue losses.

1.3 The objectives of the study.

In general, the study focuses on the implications of trade liberalization on customs revenue. The specific objectives of this study are two fold:

To determine the effect of trade liberalization on SACU revenue particularly on the Namibian economy.

To provide policy recommendations to government.

1.4 Significance of the study

Namibia stands to loose a substantial amount of revenue due to trade liberalization. Therefore, it is important to conduct this study to determine to what extent Namibia will lose revenue, hence the need to find alternative sources. The EU-RSA TDCA has a serious direct effect on SACU revenue Pool and subsequently on Namibian fiscal revenue. Under EU-RSA TDCA, South Africa has committed itself to eliminate duties on 86% of its current imports from the EU over 12 year period (2000 – 2012), according to the research carried out by European Research office in 2002. Many of the tariff reductions will occur towards the end of the implementing period. While the EU has committed itself to allowing duty free imports of 90% of what South Africa currently exports to the EU over 10 year period, with many of the tariff reductions occurring in the first few years.

In 1996 SACU exports to the European Union totaled approximately N$46 billion representing about 38 per cent of SACU's total exports (BON, 2002). The report further states that the EU supplies more than 40 per cent of SACU's total imports, which is comprised of machinery, mechanical appliances and electrical equipment.

All the above-mentioned factors puts tremendous pressure on the SACU revenue as it is generated through customs & excise duties. In view of the declining customs revenue, it is important to develop the country's industrial base in order to move away from exporting raw materials to add value to primary products before exporting, thus creating employment for local people.

1.5 Limitations of the study

The major limitation is the lack of adequate economic data. Namibia was a de facto member of SACU through South Africa prior to her independence in 1990; therefore it was considered a fifth province of South Africa and no trade data were captured for Namibia as a country. Most available economic data starts from 1990.

The other important limitation is the time factor, given the time to complete the research poses a challenge.

1.6 Organization of the study

The paper is organized as follows: Chapter 2 looks into Namibia's economic structure and its trade regime in terms of imports and exports as well as the country's trade policy. Chapter 3 analyzes the literature review both theoretical and empirical literature. Chapter 4 covers the methodology used in the study. Chapter 5 reveals the empirical results. Lastly, chapter 6 provides Conclusions and Recommendations.

CHAPTER 2. NAMIBIA'S ECONOMIC STRUCTURE AND ITS TRADE REGIME

2.1 Introduction

This chapter provides a general overview of Namibia's economic structure with respect to major import and export products and their destinations (major trading partners). It further analysis Namibia's trade policy in terms of its membership to the regional and multilateral organizations that is SACU, SADC, Cotonou and other trade agreements.

2.2 Economic Structure

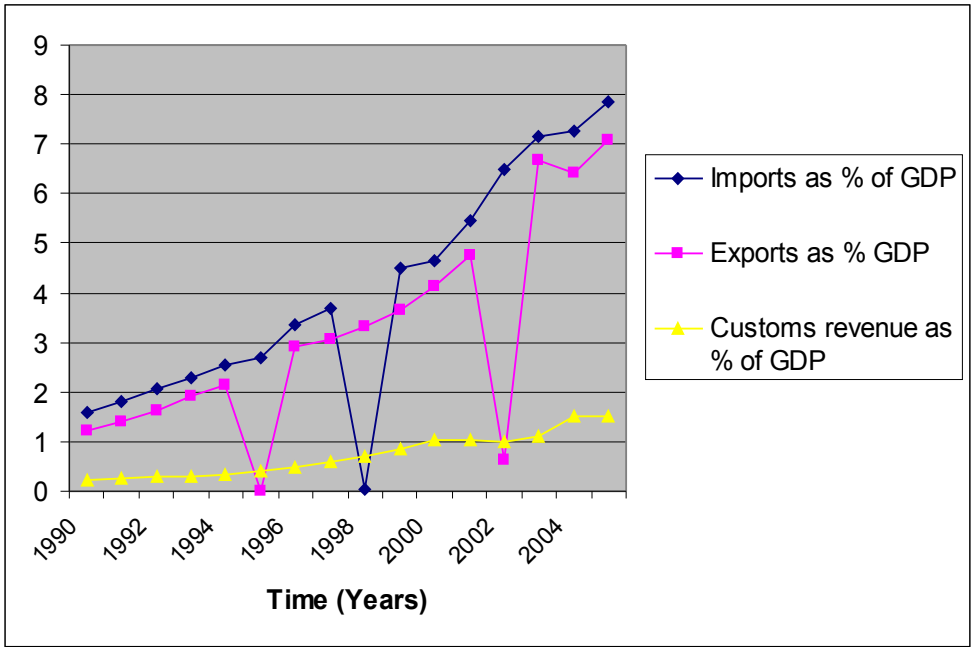
Namibia has an open economy and is dominated by the primary and tertiary sectors. The mining sector, mainly the offshore diamond mining accounts for about 50% of the primary sector's contribution to GDP, while government contributes the largest share to the tertiary sector. Manufacturing activities, which involve agricultural products accounts for 10% of GDP. Namibia imports mostly transport equipments, machinery and other equipments and chemicals while minerals and processed fish dominates the export sector. The import/export ratio over GDP stood at 52% and 44% respectively in 2003 indicating high openness to trade (NEPRU, 2005).

Namibia's major trading partners are South Africa, Angola and European Union. About 80% of Namibia's imports are sourced from South Africa and 8% from the European Union. Fifteen years after independence, South Africa remains Namibia's major trading partner because of historical ties and its proximity to Namibia. The other important factor is the advantages of customs union, which make imports cheaper as there are no customs

duties. The final advantage is convenience of exchange rate as both Namibia and South Africa are members of the Common Monetary union. The Namibian dollar is pegged one to one to the South African Rand. Therefore, Namibian importers enjoy stable exchange rate and benefit from the South African economies of scale in the region.

The graph below shows the performance of exports, imports and customs revenue from 1990 – 2005 periods.

Figure 2.1 Indicators of importance of customs revenue



Source: National Accounts 1990 - 2005

The above figure 2.1 shows the performance of imports, exports and customs revenue as percentage of GDP from 1990 to 2005. The figure reveals strong fluctuations in both imports and exports. A noticeable fact in this figure is that imports exceed exports and this trend has not changed since 1990, meaning a trade account deficit exists. The

explanation is that Namibia imports more than it exports especially from South Africa. The other reason is that Namibia's industrial base is underdeveloped. Imports declined in 1998/99. This decline comes as result of deprecation of exchange rate which doubled to reach the highest level of close to fourteen dollars per one US dollar. This scenario conforms to the theory of exchange rate which says that a deprecation of the exchange rate leads to an increase in exports because it stimulates exports.

Equally, there was a significant decline in exports during 1998 & 2002. The reason for the fall in total exports of goods and services in 1998 was mainly on account of weak foreign demand, global financial crisis which resulted in tighter economic policies that caused contraction in many economies, lower commodity prices such as those of diamonds, copper and lead and the closure of Ongopolo mine in Tsumeb, Namibia. The customs revenue as percentage of GDP shows a steady growth. In the period 2001 to 2002 there was a slight decrease of customs revenue.

2.3 Trade regime

As a member of SACU, Namibia's trade policy instruments are mostly set at the regional level. The Ministry of Trade Industry is primarily responsible for formulating and implementing trade and industry policies, especially in areas not covered by the SACU Agreement. However, Namibia's trade policy is also heavily influenced by the membership to other regional and multilateral organizations such as the SADC, the WTO and other bilateral agreements. The next section briefly explains the said organizations.

2.3.1 Southern African Customs Union (SACU)

A brief history of SACU was covered in the introductory section of Chapter 1. As pointed out earlier, SACU provides good source of revenue to the government. It contributes 14% to Namibia's total gross domestic product. SACU Member States apply a CET to imports from non-SACU members. The revenue collected is pooled in the Common Revenue Pool then divided among Member States, that is Botswana, Lesotho, Swaziland, Namibia (BLNS) and South Africa through the revenue sharing formula.

The major limitation of the 1969 SACU Agreement was the absence of the joint decision-making. South Africa alone set and determined the external tariff policy of the customs union: all changes to customs tariffs, rebates, anti-dumping and countervailing duties were effected by the Minister of Trade upon the recommendation of the South African Board of Tariffs and Trade. However, the institutional reform of the 2002 SACU Agreement provides for a council of Ministers, a Commission, a Secretariat, a tariff board, various technical committees and an ad hoc tribunal. Unlike the 1969 SACU Agreement, which supported South Africa's import substitution policy, Member States have also committed to developing common policies around trade facilitation, competition and industrial development in order to deepen integration and foster greater intra – and extra-regional trade.

SACU's trade policies were reviewed at WTO in 2003 and the world body raised concerns over SACU's then complex trade regime and the fact that the organization – contrary to the requirement of Article XXIV of the GATT 1994 Agreement, which requires harmonized policies in customs union did not have common trade policies

(Rosalind, 2004). During that review, areas targeted for criticism included lack of common competition policies, trade remedies and customs procedures. WTO was of the view that the harmonization in these areas would help to reduce transaction costs for traders and discourage smuggling and tax invasion. However, all these issues have now been addressed in the new Agreement. SACU has also established a common negotiating mechanism for dealing with third parties.

The 2002 SACU Agreement provides for the Common Revenue Pool to be split into three components namely the customs component, consisting of all customs duty collections, the excise component, consisting of 85% of all excise duty collections, and the development component, consisting of the remaining excise duties. The three respective components are shared pro rata according to all member countries' intra-SACU imports, GDP and GDP per capita, respectively. Intuitively, what this means is that a member states' revenue share will depend on the size and growth of the CRP and economic performance of all Member States (BON, 2003). The new revenue sharing is more dynamic because it takes into account the developmental status of each Member's State. The county's economy performance determines its share in the revenue pool that is if Namibia's GDP and imports grow slower than that of other Members States, its revenue share will decline. Many researchers warn the BLNS to guard against depending on the SACU revenue, as it will deteriorate gradually due to trade liberalization.

2.3.2 Southern African Development Community

Namibia was among the 14 founding Member State of the SADC in 1992; when it was transformed from a Southern African Development Coordination Conference (SADCC) to Southern African Development Community (SADC) that is from a front against apartheid to a trading and security pact. SADC is comprised of 14 member states Angola, Botswana, Democratic Republic of Congo, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Swaziland, South Africa, Tanzania, Zambia, Zimbabwe and Seychelles, which pulled out in 2003 and in 2005 reapplied for membership and was re-admitted.

The SADC Trade Protocol was signed in Maseru, Lesotho in August 1996, which establishes a Free Trade Area within eight years of commencement of the implementation process, which was in September 2000. During 2000, Member States reached agreement on the tariff phase down schedules, amended the rules of origin, as well as the dispute resolution provisions and made a substantial progress on treatment 'sensitive " products (Rosalind, 2004). These amending annexes were all approved at the Windhoek Summit held in August 2000. SADC expects that by 2008, 85% of all trade will be free of duties. Sensitive products, which cover 15 per cent of total trade, will be liberalized by 2012. This means that SADC has set a goal to achieve the following objectives: Regional Free Market Area by 2008, the SADC Customs Union by 2010, and a Monetary Union with one single regional currency by 2016 according to the SADC Summit Report, 2005.

The implementation schedules take into account the different levels of development in the region and existence of huge disparities in external tariff rates especially for sensitive sectors. Therefore, the Trade Negotiating Forum were established in order to refine and

simplify the rules of origin agreed upon in 1996 to include many rules that are specific to sectors and even sub-sectors.

Trade among SADC Member States is very limited due to the fact that non-SACU countries exports minerals and agricultural products and compete for the same industrialized markets. Intra-SADC imports accounts for only 1.2% of the total SADC exports and SACU accounts for 15.5% (NEPRU, 2005).

Within SADC there are different tariff rates and SACU countries offer the lowest rates than their counter parts. SADC tariff rates are on average between 12% and 14%. Since SACU has already lower tariff rates within SADC and imports less from the region, the SADC FTA is not likely to have a major impact on SACU customs revenue (NEPRU, 2005).

2.3.3 Cotonou Agreement

Namibia is signatory to Cotonou Agreement between the European Union (EU) and the African, Caribbean and Pacific (ACP) counties, which replaced the Fourth Lomé Convention in 2000. Under this convention Namibia enjoys unilateral trade preferences into the EU market since 1990. These unilateral trade preferences comes to an end in January 2008 and all ACP countries are required to negotiate an Economic Partnership Agreement (EPAs), which is more WTO compatible. The EPAs negotiation would be based on reciprocity nature where both EU and ACP countries offer equal reduction in tariffs. The issue of reciprocity posses a challenge for Namibia's revenue as reducing tariffs means a loss of revenue since EU is a significant source of SACU imports.

Negotiations were launched in Brussels in September 2002 and are expected to be concluded end of 2007. The EPA has to be negotiated in a regional configuration with other countries in the Southern Africa. Currently, Namibia belongs to the SADC regional grouping consisting of Angola, Botswana, Lesotho, Mozambique, Namibia, Swaziland and Tanzania. There are critical capacity and policy challenges facing Namibia in the negotiation of EPA and subsequent implementation of the outcome of the negotiations. The major problem is the already existence of the EU-SA TDCA and the fact that SACU members, including Namibia are already de facto parties to the TDCA.

However, (Thomas, 2004) view the EU's EPA negotiations as a means to split the SADC group and placing the regional arrangement at risk of dissolution. He argue that it is unrealistic of these countries to believe that they can trade with the EU under one trade regime, which is intending to both liberalize faster than SADC and engage in deeper form of integration than SADC intends in the short-term, while still remaining as part of the SADC group. This view is based on the fact that seven SADC members[3] have agreed to seek an EPA with the EU under the SADC regional arrangement, while the remaining five[4] have opted to negotiate with EU under COMESA's umbrella. This point is very important to this study because it shows the serious implications of reduction in revenue due to trade liberalization. The EU's main objective of EPAs is to advance their economic interest by taking advantage of the weakness of SADC countries. By splitting SADC it means EU can negotiate different rules of origin with each grouping in order to maximize its benefit when SADC countries open up their markets. It is a well-known fact that

[3] These are Angola, Botswana, Lesotho, Mozambique, Swaziland, and Tanzania. South Africa in an advisory capacity.

[4] These are Democratic Republic of the Congo, Malawi, Mauritius, Zambia and Zimbabwe.

developing countries products (agricultural) face stringent rules of origin in developed markets. Therefore, Namibia has to respond to the increased pressure on revenue loss by working cohesively with both private and public sector stakeholders to devise action plans together in order to enhance the competitiveness of businesses and the economy.

2.3.4 Other trade agreements

Namibia has also signed a Preferential Trade Agreement with Zimbabwe in 1992. This provides for reciprocal duty-free entry of each other's goods, subject to rules of origin requiring at least 25 per cent local content for manufactured goods, and Namibia or Zimbabwe (as exporter) should be the last place of significant manufacturing. Other eligible products are mineral products, vegetables products, live animals and their products, forest products, and sea food, provided they are wholly produced or obtained in either country. However, for Namibian exporter to benefit from this preferential arrangement he/she should be registered with the Ministry of Finance and be issued with a certificate of origin. However, the trade statistics shows that there is very minimal trade between Namibia and Zimbabwe.

Namibia maintains non-preferential or MFN agreements with China, Cuba, the People's Democratic Republic of Korea, Democratic Republic of the Congo, India, Ghana, Malaysia, Romania, and the Russian Federation. Many of these agreements pre-date WTO membership of trading partners (WTO, 2003). They generally contain provisions covering greater cooperation, such as on trade fairs and exhibitions as well as products in transit.

Namibia is eligible for GSP treatment from most industrialized countries. These provide preferential access at zero or reduced tariffs on eligible products, subject to rules of origin. Product coverage and rules of origin vary between countries, but generally require the goods to be wholly obtained or sufficiently processed in Namibia, as evidenced by certificates of origin from the Ministry of Finance. Namibia receives GSP treatment from Australia, Bulgaria, Canada, Czech Republic, the EU, Hungary, Japan, New Zealand, Norway, Poland, Russia, Slovak Republic, Switzerland, and the United States. However, these GSP schemes are of limited importance to Namibia and benefit only a few industries because most are either dormant and unused by the business community or have been replaced by other preferential schemes, such as the AGOA with the United States and the Cotonou Agreement with the EU.

Namibia also receives preferential access to the EU market under the Cotonou Agreement, subject to meeting certain rules of origin. Exports of canned and fresh fish as well as other goods such as hides, skins and leather products, are quota and duty free but subject to strict rules of origin due to high health regulations and product standards. On the other hand EU wants to protect its domestic market from foreign competition. Beef exports are subject to an annual quota of 13,000 tonnes, dutiable at a reduced tariff equal to 8% of the specific element of the EU's composite duty. But EU refuses to import canned meat from Namibia and Botswana due to disease control conditions although the countries offered to treat the beef according to the same sanitary standards applied by EU (Olympio et, 2005). Namibia also exports seedless grapes and utilizes the full annual preferential quota for ACP countries of 900 tonnes. Namibia does not qualify for the "Everything But Arms" (EBA) Initiative of the EU, which is available only to least

developed countries. Under this scheme everything can be exported duty free, except arms as the term implies.

While a beneficiary under the AGOA, Namibia was ineligible until recently for the enhanced access afforded to "lesser developed beneficiary sub-Saharan African countries", which extends duty free and quota-free preferential access to the U.S. market for apparel exports made of fabrics from any source until end September 2004, subject to a specific aggregate cap (WTO, 2003). This limited preferential access for Namibia's apparel exports of garments using U.S. made fabric, or some clothing items from sub-Saharan African. However, the United States extended "lesser developed country status" to Namibia from 6 August 2002, despite its relatively high GNP, thereby allowing producers to use third-country fabric to qualify clothing exports to US under AGOA II. AGOA has generated substantial investment in Namibian textiles and clothing industries (Ramatex), and exports to the United States have increased steadily even though recently there has been labour unrest at the factory due to bad conditions of employment. Other industries potentially benefiting from AGOA are ostrich meat, grapes, dates, fish, and handicrafts.

2.3 Summary

In a nutshell, the above chapter highlighted Namibia's dependence on imports especially from the former colonial apartheid South Africa. The import/export ratio stands at 52% and 44% respectively. The export data reveals that primary products are the country's major exports such as diamonds, uranium, meat, fish and live animals to mostly EU and South Africa.

The chapter further looked at Namibia's membership at regional and international organizations. Namibia's trade policy is influenced by its membership to SACU and other bilateral agreements. SACU plays significant role towards the development of the economy because of its fiscal contribution to the national budget. About 30% of the national budget comes from SACU revenue pool. Equally, SADC region provides a bigger market for Namibian products since Namibia's domestic market is very small and would be unattractive for foreign investors. The European market is vital for Namibia's meat and fish sector which enter the EU market duty free through Cotonou agreement subject to strict rules of origin. The Cotonou agreement specifically the Trade and development component is currently being renegotiated and is expected to be replaced by the EPA's at the beginning of 2008. It is also important to mention that EU market contributes significantly to the SACU revenue pool because most SACU imports originates from the EU imports.

The essence of the chapter to this study is that it underscores the importance of governments to realize that trade liberalization is slowly sweeping the world and thus developing countries should not depend on customs revenue because tariffs are gradually being reduced to 0% in line with WTO ultimate objective. Hence, it is important for Namibia to develop and diversify its economy. More resources should be spend on strengthening the manufacturing base and support small business to have access to finance. The world is becoming a global village and only competitive companies will survive stiffer competition from multinational companies.

CHAPTER 3. LITERATURE REVIEW

3.1 Introduction

Most literature has found that the effect of trade liberalization on revenue is very uncertain. Blejer and Cheasty (1990) concluded that the net impact of trade reform on revenue is an empirical matter. The country's initial condition and the component of the reform package seriously determine the extent of the effect of trade liberalization on revenue.

The first part of this chapter looks at the theoretical aspect while the second part reviews the empirical literature of trade liberalization.

3.2 Theoretical literature

There is a general agreement among authors that trade liberalization promotes economic efficiency, international competitiveness, and increase trade. In implementing trade liberalization the major focus should be on medium to long-term fiscal effect than short term. In the short run the effect of trade liberalization will directly be felt on the budgetary accounts of the government. For smaller economies like Namibia with a narrow tax base the immediate effect is felt on debt burden. While for economies with broad tax base can easily cover the loss with other tax sources even though, the revenue loss will still be felt on its budget in the short run. The economic theory states that economic agents takes time to adjust to policy changes, therefore the effect of the liberalization on the SACU customs component is expected to be small in the few years and then increase in latter years. The other reason why the impact of revenue reduction is

minimal in the short run is that the volume of trade may increase in the short run due to trade liberalization and thus offset the effect of the reduction in customs duties on the SACU common revenue pool (Branson, 1989).

On the other hand, trade liberalization promotes the country's competitiveness because companies are able to import cheap, capital-intensive inputs and export labor-intensive manufactures, thus, creating much needed employment. Trade liberalization further leads to poverty reduction as consumers benefit greatly from cheap imports. Larger regional markets brings with them economies of scale that should enable member countries to specialize and develop sufficient productive capacity to compete globally (Robert Kirk et., 2003).

3.2.1 Ricardo's theory of international trade

The Ricardo's theory of international trade emphasized the principle of comparative advantage. This basic theory of international trade states that free trade is superior to protection because it allows a country to fully exploit its comparative advantage. All countries gain from trade through specializing in the production and export of goods in which they are relatively most efficient and importing the rest of their requirements from other countries that can produce them at a relatively lower cost. The result is that a given level of output can be produced more cheaply for all countries participating in international trade.

3.2.2 Heckscher-Ohlin & Stolper–Samuelson model

Two other extensions of this standard proposition are Heckscher-Ohlin model and Stolper-Samuelson theorem. The two elaborated further on comparative advantage, the Heckscher-Ohlin model says that this is determined by a country's relative factor endowment. They argue that in a two-factor world comprising capital and labour as the only factors of production, capital-abundant countries will specialize in the production of capital-intensive goods while labour-abundant countries will specialize in labour-intensive goods. While the Stolper-Samuelson modification of this proposition gives the prediction that free trade along these lines will increase the demand for unskilled labour in the labour-abundant countries and also raise wages once any labour surplus is eliminated. On the other hand, the demand for skilled labour will rise in the capital-intensive countries. The demand for, and wages of unskilled labour will, at the same time, fall (ILO, 2001).

A critical analysis of this theoretical framework shows that trade liberalization is clearly good for developing countries since they are labour-abundant. Freer trade will not only increase efficiency and growth but also will simultaneously increase employment opportunities and wages for their most abundant resource, unskilled labour. This would also have the additional favourable effects of reducing wage and income inequality since the unskilled are among the lowest paid in the labour market.

However, in the developed countries, there will be a fall in the relative demand for, and wages of unskilled labour while the opposite would hold true for skilled labour. In principle, this will not be a big problem since the unskilled are a minority and the normal

course of adjustment would require that the skill level of the labour force be continually improved.

In practice, however, there are adjustment problems arising from market imperfections or social and educational difficulties among the unskilled that will hamper the necessary process of skills up-grading (ILO, 2001). These perceived problems raises fears in most developed countries over the harmful effects of increasing trade with low-wage economies. The other problem developed countries fears are the impact of outflows of foreign direct investment to lower-wage production sites. Recent years has seen massive growth in China's economy and other Asian countries due to increased in foreign direct investment.

Considering the above trade theory, there is no question that trade liberalization is beneficial in terms of its growth, employment and distributional implications. Translated into policy terms this would mean that unilateral trade liberalization would always be a preferable policy option to import substitution or protection (ILO, 2001).

However, this study is contrary to the new developments in growth and trade theory which argues that protection promotes growth. Internally growth theories suggest that trade restrictions promote higher output whenever the restrictions promote technologically more dynamic sectors (ILO, 2001). A notable example is Namibia's infant protection under dairy products (long life milk) which is currently in force and is provided for under the 2002 SACU agreement. Another example is the export levy on live animals; this is done for two reasons, firstly, for domestic value addition and

secondly to provide enough hides to local tanneries, thus increase domestic production capacity and employment. This brings us to consider another factor, which plays important role in trade liberalization, exchange rate.

3.2.3 Dornbush Theorem and Exchange Rate

Dornbush (1974) analysis of the effect of trade liberalization on exchange rate found that an increase in tariffs leads to a real appreciation of exchange rate. While a reduction in tariffs will lead to a decrease in the relative prices of importables and an increase in the relative price of exportables. For example if Namibia's car imports from Japan were subjected to a tariff of 48 per cent, this means that by reducing the tariff to say 15 per cent will equally reduce the selling price of that car in Namibia by the same margin. While the price of the cars Namibia export will not change and will became expensive because the domestic exchange rate has depreciated. This means that domestic price level decreases relative to world price level and the real exchange rate depreciates.

In a nutshell, if trade liberalization is accompanied by a devaluation of real exchange rates it raises the domestic value of imports, with a positive impact on revenues, but government programs suffers because of the devaluated exchange rates. Consumption will switch from tradable to non-tradable goods and revenue from trade taxes will fall but taxes from domestic indirect taxation will increase.

There are other factors which affect real exchange rate. The Harrod-Samuelson argues that exchange rate appreciates in countries with high growth rate. This is because of productivity improvement leads to higher growth rate than those with lower ones (IMF,

2003). Edwards (1989) also found that terms of trade affects real exchange rate through both income and substitution effects. A decline in terms of trade causes a reduction in real income, and therefore a fall in demand and the relative price for non-tradables. Changes in the level of government expenditure also affect real exchange rate movement. Government spending is mostly composed of nontradable goods, an increase in government expenditure will lead to a rise in demand for nontradables and exchange rate will appreciate through investment multiplier. This increase has to be financed through higher taxes leading to decline of disposable income and a fall in demand for nontradables. This is the income effect.

3.2.4 Bickerdike-Robinson Metzler Model & Marshal Lerner Condition model

The Bickerdike-Robinson Metzler Model (BRM) analyzed the effects of exchange rate changes in terms of separate markets for imports and exports. The effect of devaluation on the trade balance in this model is ambiguous. While the value of exports increases, the value of imports may rise or fall depending on the elasticity of demand (IMF, 2003).

Devaluation by the home country will change the relation between domestic and foreign prices. It follows that devaluation changes the relative price of traded goods in terms of home goods thereby generating a surplus in the devaluing country and a deficit abroad.

The Marshal Lerner Condition complements the BRM model in supporting the devaluation of exchange rate in improving the trade balance. This condition states that devaluation of an exchange rate will improve the trade balance only if the absolute values of the sum of the demand elasticities for exports and imports exceeds unity. Accordingly,

if the Marshal Lerner condition holds, there is excess supply of foreign exchange when exchange rate is above equilibrium level and excess demand when it is below.

However, results of studies which were done on data for developed and developing countries have shown that devaluation may cause a negative effect on the trade balance in the short run but an improvement in the long run.

3.2.5 Classical theory of Customs Union

While the Classical theory of Customs Unions formulated by Viner, Meade and others have its roots in the concepts of trade creation and trade diversion. The theory states that there are always economic gains as well as losses in joining a trading block. If a country eliminates tariffs on all its imports, the domestic production falls, domestic consumption increases and total imports increase. This means that the reduction in tariff leads to additional trade or trade creation. Therefore, the effect of tariff reduction on economic welfare can be summed up into three effects:

The gain to consumers from lower domestic prices,

The loss of profits to producers and

The loss of tariff revenue to the government.

In a formal way, trade creation takes place when preferential liberalization enables a partner country to export more to the home country at the expense of inefficient enterprises in that country. While trade diversion occurs when imports from a country which were previously subjected to tariffs are displaced by higher cost imports which now enter tariff free from partners.

3.3 Empirical literature

3.3.1 Regional Integration

The study by AERC (1996) on regional integration and trade liberalization in Sub-Sahara Africa found that one of the key problems trade policy had to address in most of the case study countries was government revenue because of heavy reliance on tariffs for revenue. Thus, fiscal concern was a major motive for imposing high import duties and in some cases, export tariffs.

High tariff rates were applied to so-called 'luxury goods'. These were import items thought to be consumed largely by the rich and were often goods for which no local facilities existed to be protected. Thus high tariffs did not always reflect the desire to protect local industry, in certain cases they were aimed at raising revenue based on the perceived ability of certain categories of consumers to pay. Therefore, there was a strong relationship between the use of import restrictions and the appearance of balance of payment problems. Balance of payment concerns, together with budget needs, had much stronger impact on the evolution and structure of pre-liberalization trade regimes in case study countries.

This study shows that trade liberalization occurrences in the case studies came as a result of various stimuli. These are unilateral and multilateral mechanisms. The unilateral liberalization came as a result of conditions imposed on the liberalizing countries for gaining access to external finance in exchange for policy reform in the context of structural adjustment programs. For example these took place in Zambia, Zimbabwe etc.

However, the multilateral mechanism for trade liberalization in case study countries were designed and implemented in the context of the specific regional integration schemes.
Ten countries identified where case studies were conducted include inter alia, Cote d'Ivoire, Ghana, Nigeria (ECOWAS), Mauritius, Kenya, Tanzania, Uganda, Zambia and Zimbabwe with PTA/COMESA. Lastly, that of South Africa within SACU.

The most prevalent in the case study was the liberalization process involving the structural adjustment programs. Five of the nine countries, that is Cote d'Ivoire, Kenya, Tanzania, Uganda, Zambia and Zimbabwe experienced partial reversal of their trade liberalization process. While Nigeria abandoned its process in 1994, only Ghana and Mauritius appear to have pursued their programs persistently.

These schemes failed because trade liberalization schemes remained unimplemented. The efforts were put on the unilateral trade liberalization process contained in their individual structural adjustment programs. These programs uniformly ignored the regional dimensions of unilateral liberalization and paid no attention to the regional integration obligations of particular countries.

In terms of scope, trade liberalization covered tariffs and non-tariff measures such as quantitative import restrictions and exchange control. Tariff structures in all case study countries were substantially compressed by reducing the number of tariff categories. Tariff rates were also substantially reduced e.g. In Mauritius, the maximum tariff rate was reduced from 250 per cent to 100 per cent; Tanzania's maximum rate fell from 200 per cent to 50 per cent; Kenya reduced from 170 per cent to 40 per cent. Tariff rates in Ghana

now range between 40 per cent and 100 per cent while in Zimbabwe are between 5 per cent and 30 per cent.

Overall, lower tariff rates have generally not reduced total tariff revenue, as had been feared. In most cases, revenues increased as a result of increased compliance by the taxpayers due to reduced rates.

Drastic changes also took place with respect to quantitative restrictions, which were eliminated in several cases and either partly or completely converted to tariffs in others. Ghana abolished its import licensing system in 1989. Mauritius eliminated its import permits in 1991. Zambia followed suit in 1992 with Kenya and Tanzania achieving the same results a year later.

The study further found that African trade liberalization attempts suffer from problems of credibility and sustainability, which were demonstrated by reversals of trade liberalization of various case study countries. Mauritius and Uganda are the only two countries in this sample that did not reverse policy.

The study highlights the following advantages of trade liberalization. Firstly, Trade liberalization provides expanded market opportunities, when coupled with reduced discrimination against exports, and these allow exploitation of comparative advantage, permit greater capacity utilization and enhance exploitation of economies of scale. Secondly, by reducing anti-export bias trade liberalization stimulate export performance, particularly non-traditional exports. Thirdly, increased exports from abroad and enhanced

access to better technology made possible by trade liberalization induce technological innovation and higher productivity. The proceeding section complements the above study.

3.3.2 Trade liberalization, Growth and Poverty Reduction

3.3.2.1 Growth and poverty reduction

Trade helps to reduce poverty by stimulating economic growth, the main engine of poverty reduction. Many studies show that for developing countries, there tend to be a relatively close relationship between poverty reduction and growth. For example, in Asian countries, where income is relatively equally distributed, an increase of 1 percent in per capita income tends to reduce the number of people living in poverty by 2-3 percent and 1-2 percent in Latin America and Africa (Cline, 2004).

Cline (2004) used a Global Trade Analysis Project (GTAP) a leading model of world trade and protection to quantify the impact a move to global free trade would have on global poverty. The model results provided estimates of the effects on production, trade, and unskilled wages, and of income gains from more efficient allocation of resources according to each country's comparative advantage. In addition, the estimates took account of two dynamic effects: greater investment in response to new export opportunities, and productivity gains from more open economies. The overall estimate was that some 500 million people could be lifted out of poverty defined at living on $2 per day over 15 years by global free trade. That would amount to a 20 percent reduction in poverty. The impact would be felt more in India, China, Pakistan, and sub-Saharan Africa. Income gains for developing countries would amount to $200 billion annually (in

1997 dollars). Out of this total, at least half would come from the removal of trade protection in industrial countries. This means that industrial countries could benefit about twice as large to developing countries through removing their protection as they currently provide in development assistance. Moreover, this will benefit consumers in the developing countries and will help consumers in industrial countries by lowering import prices, rather than imposing a burden on taxpayers as aid does (Cline, 2004).

3.3.2.2 Productivity and investment gains

Furthermore, trade data indicates a clear correlation across countries between export growth and GDP growth over the past two decades, notably each additional percentage point in export growth has been associated with an extra 0.15 percent growth in GDP (Cline, 2004). One reason for this correlation is that a bigger export base helps countries avoid external-debt problems because they receive good foreign exchange. Another is that there are productivity gains from integration with the world economy i.e. open trade helps encourages domestic technology to world-class levels and remove domestic monopolies that limit growth. While joint venture with foreign investors helps raise product quality to international standards. Studies have also confirmed a relationship between trade and productivity gains, a rise of 1 percent in the ratio of trade to GDP has been associated with a 0.5 percent increase in long-term output per worker (Cline, 2004).

However, a number of criticisms have been raised against Cline's estimates of poverty reduction resulting from trade liberalization. Weisbrot et al argued that the headcount measure of poverty used by Cline simply counts the number of people moved from anything under the poverty line to above line. While the phrase "poverty reduction" may

suggest a qualitative transformation in economic circumstances, the model results often imply a change in the pennies per day, moving people from below to just above U$2. For example, Weistbrot et al calculate that in India, people moved out of poverty from U$1.93 to U$2.08 per day, and in Bangladesh from only U$1.97 to U$2.03 per day. While moving millions of people just across the poverty line is preferable to leaving people just below the line, it is only a not possible to claim of lifting hundreds of millions of people out of poverty.

3.3.3 Trade liberalization, employment and wages.

A number of International Labour Organization (ILO) case studies on Chine, India, Malaysia, Mexico and Brazil analyzed the effects of growth of employment and wages in the manufacturing sector. The countries chosen in this study had all experienced rapid growth in trade in the last two decades and their economies were doing well in the world trade. These studies focused on manufacturing sector because it is the one which was spearheading trade expansion. In the three Asian emerging economies studied, trade growth had favourable effect on employment, wages and output in manufacturing. The study further found that low skilled workers benefited more than skilled workers because employment has been faster in export-oriented industries, which mainly employ low skilled workers, than in other industries. Real wages of low skilled had risen even when industry experienced surplus of unskilled workers. Thus, wage inequality has improved in some situations but has worsened in others. Contrary to what happened in Asian countries, Brazil and Mexico did not experience steady growth but employment in manufacturing sector has either risen or fallen. The real wages of low skilled workers has declined as opposed to what happened to the three Asian countries. The studies suggest

that the unfavourable initial conditions, for example extremely unequal distribution of assets, problems in macro-economic conditions and over-dependency on external resources could account for this slow growth in the manufacturing sector.

3.3.4 SA/EU Trade and Development Cooperation Agreement

BON (2003) studied the impact of the TDCA on Namibia's public revenue. The study used SACU imports data from international sources for the year 1997 at 8-digit level of the harmonized tariff system and covered all 99 chapters of the system. The total import value per product code was multiplied with the corresponding tariff rate to obtain the revenue collected for each product code. And thereafter they summed up the imports revenue obtained from the EU that was affected by liberalization. The total revenue obtained constituted the revenue loss as a result of the free trade agreement.

According to that exercise, Namibia's import share stood at about 26 per cent of the total intra-SACU imports, meaning that its proportion in the revenue loss would be of the same magnitude. It is important to state that the New SACU revenue sharing formula distributes customs revenue on the basis of the share in intra-SACU imports. The calculation of this study revealed that among SACU countries Botswana & Lesotho stand to lose more that is 24.57 and 15.45 respectively.

The study concludes that SACU Common Revenue Pool would loose approximately N$2.1 billion or 35 per cent of the international customs component if the 1997 figures were used due to trade agreement between the SA/TDCA. Namibia stand to loose 35 per cent of the 1997 SACU receipts, which is equivalent to 10 per cent of Namibia's total

revenue in 1997/98 budget. It concludes by suggesting that government should initiate tax reforms in order to broaden the tax base. This study is supported by the proceeding study.

3.3.5 Economic Partnership Agreement (EPAs)

Stevens et al (2005) studied the impact of Economic Partnership Agreement between SADC and EU in particular Namibia. The current Cotonou Agreement comes to an end in 2008 and will be replaced by Economic Partnership Agreement being negotiated which is a reciprocal in nature. The study looked at Namibia's export potential products and sensitive products as well as products that have been liberalized under EU/RSA Agreement. One important factor highlighted in this study is the fact that South Africa being a member of Southern Customs Union unilaterally negotiated and concluded the trade agreement with the EU; the Trade, Development and Cooperation Agreement (TDCA). By implication this means that SACU Members are to a certain degree part of this agreement. In this case South Africa does not need to negotiate an Economic Agreement with the EU and it will just serve in an observer and advisory capacity on the part of SACU Member States. However, Namibia and other SACU Member States will continue to negotiate an EPAs because it goes beyond a simple free trade agreement and may include provisions absent from the TDCA, and also include tariff liberalization provisions in order to be WTO compatible.

The study found that there is a relatively revenue loss if full liberalization between the EU and all SACU countries of which Namibia is a member. And it further cautions BLNS countries to avoid the extremely dependence on volatile sources of revenue.

3.3.6 International Monetary Fund (IMF) and Trade liberalization

The IMF study on trade liberalization and real exchange concludes that trade liberalization has an effect on real exchange rate. The study that was done on 45 countries found that these countries on average experienced 27 to 48 percent real depreciation after trade liberalization, in some countries real exchange rate appreciated. As trade liberalization proceeds the countries experienced less real exchange rate depreciation which was 4.8 to 13.6 percent annually. This means that trade liberalization has more effect on real exchange rate during the initial stages of the liberalization episode.

3.4 Summary

In the above chapter we find that the empirical research conducted by various researchers supports the theory on trade liberalization. For instance, the traditional theory of international trade states that countries will engage in trade in which they have comparative advantage. Developing countries have comparative advantage in agricultural products while developed countries are more competitive in industrial products. Other theories covered are Heckscher-Ohlin and Stolper Samuelson theory, Dornbush and exchange rate theorem and Classical theory of Customs Union.

Many studies carried out on Namibia in terms of trade liberalization shows government revenue loss due to reduction in tariff and non-tariff barriers. Bank of Namibia (BON) study reveals that 35 per cent of government revenue will be lost as result of SA/EU TDCA. The BON study is supported by Thomas (2004) who acknowledges revenue loss to government but recognizes the opportunities trade liberalization brings with, notably

increased domestic investment as well as FDI inflows and joint ventures with the EU partners which will improve quality and technological transfer.

Empirical studies, which were done on many developing countries reveals that trade liberalization, have both negative and positive effects on these economies. In China, India, and Malaysia the study found that trade liberalization increased employment in manufacturing sectors, real wages of unskilled workers increased, productive of works raised and reduced inequalities among the populations. Government revenue also increased due to rapid growth in trade. Similar study carried out in Brazil and Mexico had different results, low employment, low productivity, and loss of government revenue. The sharp contrasting view of the above studies reveals that there is no direct link between trade liberalization and employment, wages, revenue loss etc. This suggests that it is important to look at the country specific studies in search for answers. Many factors plays important role on how trade liberalization will affect the country. The initial macroeconomic condition of the country and government's policy in addressing the threats of trade liberalization. However, many developing countries including Namibia face supply capacity constraints. Other factors are:

Lack of access to finance;

Low productivity levels;

Outdated or inappropriate technologies;

Lack of diversity in the manufacturing sector;

Little domestic value addition;

Lack of economies of scale;

And overall business environment which is characterized by risk and high transaction costs.

In these conditions, trade liberalization increases import competition without addressing these supply-side constraints, leading to de-industrialization (Thomas, 2004). The significance of this chapter to the study is that it cautions the Namibian government not rely on customs revenue and also to take cognizance of the above factors in order to benefit from trade liberalization as well as taking appropriate trade reforms to minimize the impact of revenue loss due to the global reduction in tariffs and non tariff barriers.

This chapter highlighted very important elements related to Trade Liberalization. It is evident from the empirical studies conducted that they fully support theoretical literature and scenarios underlined in the various studies fits Namibia's situation in terms of the likeliness of the impact of trade liberalization.

Even though the results of this study are similar to other studies it is different in the sense that it employs an econometric analysis in its empirical results. To the author's knowledge this is the first study which used such a method to study the revenue implication of trade liberalization on Namibia. The timing of the study is also perfect because it takes place at the time when trade liberalization is occurring especially after the implementation of EU/RSA-TDCA. The later Agreement has been in force for 7 years from the date of implementation and surely there has been adjustment to the SACU Revenue after the said reform. The study also includes a dummy variable representing trade liberalization which would not have been in the equation 6 years ago.

CHAPTER 4. METHODOLOGY

Relevant literature has been reviewed. The study has been supplemented by the secondary sources from National Planning Commission: National accounts publications, Bank of Namibia Quarterly & Annual reports, National budget reports etc. After collecting the data, an econometric model was used to determine the effect of trade liberalization on customs revenue.

The specific hypothesis that was tested in this study is that trade liberalization in Namibia leads to a significant loss in customs revenue.

In order to test the main hypotheses, trade revenue was specified as a function of the import base, the exchange rate, trade reform dummy and error term.

The specific equation to be estimated is: $InTR = \beta_0 + In\beta_{1i}imports/gdp + \beta_2 Inforex + \beta_3 Libm + \beta_4 LTrdm + \mu i$ (1)

Where TR is the customs revenue as a percentage of GDP, M is imports as a percentage of GDP, Forex is the real exchange rate and Libdm and Trdm are dummy variables for trade liberalization. A dummy variable for liberalization is defined as one for the periods of liberalization and zero otherwise. The Libm dummy variable will catch the effect of tariff reform, when South Africa started to implement Trade and Development Cooperation Agreement (TDCA) tariff reduction that is from 1990 to 1998 takes the value of zero and from 1999 to 2005 takes value of one. The dummy variable Trdm represents the SACU reform which was introduced in 2002 when the new SACU sharing

Revenue formula was introduced. Similarly, this dummy variable takes value of zero from 1990 to 2001 and value of one from 2002 to 2005. And μi is the error term.

The import/GDP ratio is included in this equation to isolate the effects of trade liberalization on customs revenue, which can then be related to the effect on revenue, in other words by including import/GDP ratio we are able to determine the exact contribution of imports revenue relative to the GDP. These imports come from the rest of the world and measured in domestic currency (Namibian dollars). The import/GDP ratio is expected to have positive sign meaning that when imports increases by certain percentage, customs revenue will also increase.

Nominal exchange rate is used to measure the impact of exchange rate changes on customs revenue. The nominal exchange rate is expressed as US$/N$. This means that an increase in exchange rate indicates a depreciation of the N$. The appreciation/depreciation of exchange rate influences the level of trade for example when domestic currency is strong, exports becomes expensive while imports becomes cheaper thus increases customs revenue. Thus, it is one of the variables that determine the amount of customs revenue collected. Its expected sign is negative meaning that a negative relationship exists between the real exchange and customs revenue.

With regard to dummy variables Libm, it was necessary to include it because Europe is one of Namibia's largest trading partner. Hence, the implementation of TDCA between South Africa and EU will obviously reduce the import duties which go into the SACU Revenue Pool for distribution to Member States. It should be understood that larger

percentage of imports into SACU market comes through South Africa due to its developed infrastructure and harbors. Therefore, any attempts to reduce/increase tariffs/ import duties will have an influence on customs revenue. South Africa signed a TDCA with EU in 1999. This agreement will open up South Africa's market to 86 percent of EU goods over 12 years period while opening EU goods to 95 percent of South African goods over 10 years period. Furthermore, EU agreed to cut average duties on EU goods from 2.7 percent to 1.5 percent. For its part, South Africa agreed to cut average duties on EU goods from 10 percent to 4.3 percent. Given this agreement which will also affect SACU Revenue Pool, Libm variable will catch the effect this trade liberalization reform.

The second dummy variable, SACU reform (Trdm) represents the introduction of the new SACU Revenue Formula. The expected sign of this variable is positive since this reform will bring about an improvement in the revenue sharing formula. This reform took effect in 20002 as explained in section 2.2.1.

4.1 Estimation techniques[5]

The study employs Ordinary Least Square method (OLS) which is frequently used for the parameters estimation of different functional relationship. In testing the hypothesis, the Augmented Dickey Fuller test for unit roots is used to test for stationarity of the data series. Economic theory requires all variables to be stationary if regression results are to be meaningful that is integrated of order zero.

[5] Eviews software was used to run the regression

The following sequence was used in carrying out the cointegation tests: Firstly, the investigation of the time series characteristics - the order of integration of the variables in the model. Augmented Dickey Fuller test (ADF) was used in testing the order of integration of variables. This is a commonly used test for the presence of unit roots in the variable. Secondly, once variable are proved to be non-stationary, what follows involves testing for cointegration using Engle-Granger (1987). Thirdly, established stationarity in the error terms allows the next step, which is estimation of the error correction model.

4.2 Data type and their sources

The analysis uses annual time data series covering 1990 – 2005 periods. All data, with the exception of exchange rate, came from National accounts reports (1982 – 1998) and (1995 -2005) published by Namibia's Central Bureau of statistics. While the exchange rate data came from Bank of Namibia. After collection of data, an econometric model was used to determine the effect of trade liberalization on customs revenue. All data are in million Namibian dollars, unless otherwise specified. The dummy variable as explained earlier has been included to catch the effect of tariff reform when South Africa implemented TDCA Agreement in 1999 taking the value of zero from 1990-1998 and value of one from 1999-2005. The dummy variable, SACU reform takes the value of zero from 1990-2001 and value of one from 2002-2005 when the new SACU revenue formula was introduced.

CHAPTER 5. EMPIRICAL RESULTS AND INTERPRETATION

5.1 Introduction

This chapter presents and discusses the estimation results of equation 1 referred to in chapter 4.

5.2 Testing for stationarity

In testing the hypothesis Augmented Dickey Fuller Test (ADF) for unit roots was used to test for stationarity of data series. All variables were found to be non-stationary but after first differencing once all variables, that is customs revenue, imports and exchange rate became stationary. Therefore, we reject the null hypothesis of non stationarity and conclude that all the variables are stationary. After concluding that all variables are stationary, we then used OLS to estimate equation 1, the result appears in table 5.2. The log trade revenue as percentage of GDP is regressed on log of imports as percentage of GDP, real exchange rate, SACU dummy and trade reform dummy.

Table 5.1 Stationarity test of variables at 1st level differencing

Variable	ADF	Stationarity
Limports/gdp	-2.78157*	I (0)
Ltr	-3.66667*	I (0)
Lforex	-3.35378 ***	I (0)

Critical values used in ADF test : 5%*; 10% **

Table 5.2 OLS Regression of the equation 1:

$InTR = \beta_0 + In\beta_{1i}imports/gdp + \beta_2 InForex + \beta_3 Libm + \beta_4 Trdm + \mu i$

Variable	Coefficient	Standard error	t-statistics
Constant	-1.941108	0.414565	-4.68228
In forex	-0.04315	0.07088	-0.60877
In imports/gdp	0.779097	0.31117	2.50376
Libm	0.227467	0.197697	1.15058
Trdm	0.454066	0.311695	1.45677

Sample period: 1990 to 2005

Adjusted R^2 = 0.8435

F-statistic = 21.2056

DW = 0.9798

Standard error of regression = 0.2537

5.3 Exchange rate

The coefficient of the exchange rate is negative as expected. This means that the exchange rate does not affect customs revenue. Namibia's economy is integrated into that of South Africa. Namibian dollar is paged to South Africa Rand and 85 percent of its imports come from South Africa. In other words, South Africa is Namibia's major trading partner and the one to one exchange rate plays a role in maintaining trade between the two countries.

5.4 Imports/GDP ratio

The coefficient of Imports/GDP ratio is positive. When imports rise by 1 percent, customs revenue increases by 0.78 percent. This means that when import duties are

reduced it stimulates imports, which will increase the customs revenue collected since more goods are imported.

5.5 Dummy variables for trade liberalization

The coefficient of trade liberalization dummy (libdm) is positive contrary to the negative expected sign. The results show that after introducing trade liberalization dummy customs revenue continue to increase. An explanation to this scenario could be that most SACU countries imports goods such as machinery from developed countries and these are import inelastic.

However, the dummy variable for SACU reform has a correct positive sign. This means that the introduction of new SACU revenue formula increased the revenue share of Namibia. This is true in the sense that prior to the new sharing formula, Namibia was receiving smaller share from the revenue pool.

5.6 Error Correction Modeling

Dtr = β0+β1d(imports/gdp(-1) + β2d(forex(-2) + resid (-1)

Table 5.3 Error Correction Model

Variable	Coefficient	Std. Error	T-statistics	Prob
Constant	0.263276	0.035420	7.433075	0.0001
Dimports/gdp (-1)	-0.643494	0.162961	-2.764671	0.0070

dforex (-2)	0.024557	0.012528	1.860161	0.0908
RESID01 (-1)	-0.337032	0.111524	-3.022056	0.0193

Sample period: 1990-2005

Adjusted R^2 = 0.728339

F-statistic = 4.691847

DW = 1.663557

S.E. of regression = 0.066792

The short run regression results show that while imports and trade liberalization have a negative effect on custom revenue, foreign exchange shows opposite effect on customs revenue. During the period under study, foreign exchange significantly explained changes in the customs revenue. This result confirms the theory which predicts positive relationship between foreign exchange and customs revenue.

The error correction term has correct negative coefficient and is statistically significant at 5 percent level. The ECM implies a high instantaneous adjustment to equilibrium of around 34 per cent per annum. This means that there is a long-run relationship between variables.

Further more, the result shows that the regression does not suffer from autocorrelation. The error term is normally distributed and the coefficients are efficient and the equation is correctly specified. The F-Statistics shows that the overall short run regression is

statistically significant at 5 percent because the calculated F-statistics of 4.69 is greater than the critical value of 3.36.

CHAPTER 6. CONCLUSIONS, POLICY IMPLICATIONS RECOMMENDATIONS

6.1 Conclusions

This thesis analyzed the implication of trade liberalization on the Namibian customs revenue. The use of trade and non-trade barriers is proving difficult as most countries are pushing for free trade. The issue of revenue has been a major concern for developing countries which partly depend on trade tax as source of revenue. In Namibia, customs revenue contributes about 37% to the national budget. Therefore, the decline in trade taxes through reduction in tariffs poses a serious challenge to the Namibian authority. Government has a huge mandate notably to efficiently implement national projects, address issue of unemployment, fight diseases such as malaria and deadly HIV etc. With dwindling revenue from customs revenue, government has to find alternative sources of revenue to mitigate such losses on the national budget.

The main objective of this study was to investigate the effect of trade liberalization on the Namibia's customs revenue and its effect on the Namibian economy. In pursuant of this object, a major hypothesis was tested. The hypotheses stated that trade liberalization leads to reduction in customs revenue in Namibia. In the empirical analysis of this study, an econometric technique was employed. Customs revenue as percentage of GDP was regressed on import/GDP ratio, exchange rate and two dummy variables representing trade liberalization. Annual data series from 1990-2005 periods were used. Firstly, data were analyzed for unit root to determine the stationarity of the variables then an Error

Correction Modeling to determine the existence of long run relationship between variables. The Augmented Dickey Fuller test was used to test for the stationarity.

The regression results found that trade liberalization has had minimum impact on the customs revenue at least in the short run. The economic theory says that economic agents takes time to adjust to policy changes, therefore the effect of the liberalization on the SACU customs component is expected to be small in the few years and then increase in latter years. The other reason why impact of revenue reduction is minimal in the short run is that the volume of trade may increase in the short run due to trade liberalization and thus offset the effect of the reduction in customs duties on the SACU Common Revenue Pool (Branson, 1989).

However, the effect of import-GDP ratio on customs revenue should signal to the government to find alternative sources of fund in order to minimize the impact on the national budget. Government should further employ sound macroeconomic policy in order to facilitate successful implementation of trade liberalization process.

6.2 Recommendations

Trade liberalization has serious macro economic effect on the Namibian economy because of the decline in customs revenue. It is therefore, important for government to implement sound macroeconomic policies which addresses the effect emanating from trade liberalization.

Exchange rate policy is crucial in mitigating the effect of trade liberalization on the customs revenue. Therefore, government should take advantage of depreciating Namibian dollar and ensure that there is enough foreign exchange to importers thereby increasing import earning which could offset the loss in trade revenue due to lower taxes.

The Namibian government's policy of export diversification should be pursued vigorously in order to build manufacturing sector which is essential in export drive. Namibia's domestic market is significantly small but on regional level, SADC region provides a much bigger market. In view of the trade liberalization, there is also a need to review the Investment act and export processing zone act to align them with current development in the global world. This will ensure that Namibia remains competitive in attracting foreign direct investment.

Policy makers should also consider the option of tax reforms, which could mitigate the effect of loss of customs revenue. This reform should concentrate on broadening and strengthening domestic taxation. Ministry of finance should increase its human capacity especially in customs and revenue departments so that more personnel are available to

audit companies for compliance. Currently, company tax payment is more voluntarily because of little policing.

Government should take advantage of efficient VAT system in collection of revenue by strengthening the human resource capacity in the Ministry of Finance. VAT system has proved to be a good system because basic food is usually exempted and most small-scale self-employed entrepreneurs fall below the taxation threshold. In the same vein, Government should speed up tax refund for taxes paid on imported inputs because it reduces the competitiveness of exporters. The current indications from the export sector various from 2 to 6 months waiting period.

The majority of the poor Namibians lives in rural areas and depend on agriculture for survival, in that context government should stimulate agricultural exports to take advantage of preferential trade arrangements offered under EU (EPAs) and USA under AGOA. Farmers should have easy access to finance as such measures will have positive impact on poverty reduction and increase employment.

Small and medium businesses (SMEs) should be supported to make them more competitive especially in their initial stages of development so that they can grow and be able to export.

The Government manufacturer's incentives should also be extended to SMEs because currently only well established registered manufactures can make use of such a scheme.

Improving investment climate can have positive effect on the attraction of foreign direct investment. The World Bank Report (2005) shows Namibia has slipped down in terms of

attraction of FDI. Among other reasons given were cumbersome process in registering business and the land issue.

Therefore, through mix of tax and non-tax policy intervention government can minimize the negative fiscal effects of liberalization without the need to cut crucial spending on infrastructural development, poverty reduction and general welfare.

6.3 Limitations of the study

The major limitation of this study was inadequacy of data. The only available data starts from 1990-2005 when Namibia became independent from colonial regime of South Africa which is a short period and might not give a clear picture of the real situation. The other challenge was lack of similar research studies which has used econometric analysis in order to make a comparison of the results.

6.4 Recommendation for further research

The study recommends that further research be conducted in the current "Infant industry Protection" accorded to dairy industrial under article 6 of SACU agreement. Namibia made use of this clause in three different industries over the past couple of years, namely for long-life milk, poultry and pasta. Little is known whether such protection is making these industries more competitive and how much employment they generate in the country. The industries were granted 8 years infant protection status from the year 2000-2008.

Most agricultural products are charged VAT of 15%. The Ministry of Trade and Industry through SACU had approved a request from domestic farmers for extension of Infant

Protection for both pasta and UHT (Ultra-high temperature processing) milk to 2012 and 2014 respectively. With this in place, a 40 percent cent protection of pasta and 42 cent per litre has been increased to 40 percent of the import value.

This subject presents a potential area of research since the experience with infant industry protection is rather mixed. The stakeholders in the business have it that even with the protection measure in place; imports that are more competitive due to economies of scale in those countries are able to circumvent the Infant Industry Protection and can undermine competitiveness of the local industries.

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