The Impact of Trade Liberalization Policy on Tanzanian Agriculture Sector

By

VYAGUSA, Pascal Dismas

THESIS

Submitted to

KDI School of Public Policy and Management

In Partial Fulfillment of the Requirements

For the Degree of

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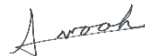
For the Degree of

MASTER OF DEVELOPMENT POLICY

Committee in charge:

Professor Chrysostomos TABAKIS, Supervisor _____

Professor Si Wook LEE _____

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ABSTRACT

This thesis examines the effects of trade liberalization policies on Tanzanian agriculture sector. The study used the annual time series data covering the period of 24 years from 1990 to 2014. The data were regressed by using Feasible Generalized Least Square Method (FGLS) to test the relationship between agricultural production growth and trade variables which were affected by liberalization policies. Those trade variables are Tariff rate of primary products, FDI to Agriculture, Credits to Agriculture and Percentage of annual change in agriculture.

The empirical findings of this study showed that, some trade liberalization measures adopted in the mid - 1980s have resulted to the positive impact on the production growth of the Tanzanian agriculture sector. The changes which were made to the tariff rates as the adoption of trade liberalization policies resulted to positive growth on agricultural production. Statistics shows that, the tariff rate has been constantly decreasing since the adoption of trade liberalization policies which resulted to increase in agricultural production. However, some trade indicators, the foreign direct investment and credits which go to agriculture were not statistically significant. This may be explained that the efforts which have been put to attract the foreign direct investment in the agriculture sector and the credit which have been channeled to the agriculture sector have no impacted significantly

On the other hand percentage of annual changes in agricultural area was a negatively related to the agricultural production growth. The statistics supports that there is high change in the agricultural land to other non agricultural sectors such as mines, housing and service which cause the decrease in the agricultural production.

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Dedication

All praise and honor belongs to Almighty God. I dedicate this work to my parents Dr. Dismas Vyagusa and Mrs. Vyagusa who's tirelessly support and encouragement made me to move forward on the education arena. To my lovely fiancée Anna Kimario and our child Faith for their patients and tolerance for the time I was away from them.

ACKNOWLEDGEMENTS

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CHAPTER ONE

1.0   Introduction

1.1   Background

"Trade liberalization implies any change which leads to a country's trade system towards neutrality in the sense of bringing its economy closer to the situation which would prevail if there were no government interference in the trade system. Put in other words, [trade liberalization] confers no discernible incentives to either the importable or the exportable activities of the economy." Papageorgiou, et al. (1991).

In several developing countries the growth of the agriculture sector has remained crucial for attaining economic growth and poverty reduction. The positive relationship between growth in agriculture sector and trade openness suggests that, trade liberalization contributes much in economic development (Silva et al, 2014). In recent years the removal of trade barriers has become a powerful economic policy in both developing and developed nations, although export and import tariffs, quotas and export subsidies were common trade strategies during the previous decades (Herath, 2008). Several developing countries including Tanzania have also established trade liberalization policies and apply various trade liberalization measures. Moreover, experience on trade policy reforms from many countries shows that growth in agricultural production and gains in domestic welfare rise along with implementation of trade liberalization policy reform (Mahadevan, 2003).

Tanzania as many other developing countries has gone through three economic eras since her independence in 1961. The first epoch was the period soon after

independence to 1967 in which government policies and strategies focused much on human capital development; the second era was from 1967 to the mid -1980s, it based on socialism and self-reliance; and the last epoch started from the mid-1980s reforms to date, which brought up trade liberalization (Ngowi, 2014). The Government of Tanzania throughout the years of 1970s it used trade embargos as the fundamental tools for attaining its development agenda whereby exported cash crops like sisal, coffee, tea and cashew nuts which were Tanzania's main sources of export were under tight government control (Kanaan, 2000). However, over the past two decades Tanzania has been implementing trade liberalization policies almost in all sectors of the economy including agriculture. The adoption of trade liberalization policies like in many other developing countries was highly influenced by academic theories which emphasized on the positive correlation between trade liberalization and economic growth. This argument was also supported by empirical evidence from East Asian countries like China, Korea, Malaysia and Vietnam. Moreover, the reforms which brought up trade liberalizations policy were also influenced by the economic crisis which hardest hit the country in the 1980s. The crisis caused a huge negative impact on economic growth, decline the Tanzania's stake on the world export market, hurting the manufacturing sector and left the country with poor balance of trade. So the Tanzanian government designed these policies primarily to revamp her equilibrium, especially in increasing productivity, strengthening her balance of payments and raise exports in both agriculture and manufacturing sectors. The series of adopted policies necessitated on the substantial reduction in government intervention on production and marketing; reduction of government intervention on controlling prices; reduction of foreign exchange controlling; elimination of export taxes; and increased

efforts in increasing the participation of private sector in the economy (Kazungu, 2009).
With the adoption of trade liberalization policies Tanzania expected fast economic
growth. However, the pace of growth of the Tanzanian agriculture sector has been very
low than what government expected.

In that regards, the objective of this study is to investigate whether or not the
adoption of trade liberalization policies has increased the growth of the agricultural
sector. It empirically provides a quantitative assessment of the impacts of trade
liberalization policy on the growth of agricultural production from late 1980 to 2014 in
Tanzania.

1.2   Problem statement

Since the establishment of trade liberalization policy, the average annual growth
rate of Tanzanian agricultural sector has remained approximately at 3.6 percent and the
relative contribution of the agricultural sector to the total GDP has decreased to less than
34 percent in 2014 from 46 percent in 1990 (World Bank, 2015). Although the relative
share of agriculture to the total GDP has decreased the sector still provides more than 70
percent of the employment in 2014 which is almost the same as compared to 1990s
(World Bank, 2014).

For more than thirty years the role of trade liberalization policies has continued to
be an important policy debate in the development literatures (Greenaway et al, 2001).
The argument on the effects of trade liberalization has been fuelled by various empirical
evidences which proved a positive relationship between the increase in export and that of
GDP to countries which have liberalized their trade regime as opposed to those countries

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which implemented inward looking policies by the use of tariffs and non-tariff barriers (Krueger, 1997, Edwards, 1998). The basis of that evidence has influenced a particular role of trade openness on economic growth and sectors productivity as part of Tanzanian development strategy. However, the study of Salinas and Aksoy in 2006 argued that, there has not been a conclusive proof and evidence on the economic impact of trade liberalization on the sector productivity (as cited in Mkubwa et al, 2014). Many studies which have been conducted on various parts of the world have produced mixed (Herath, 2010). In Tanzania the response of exports to the incentives which were brought by trade liberalization policies on the agricultural sector has not been satisfying. This is in terms of amount of earnings from agricultural export, low diversification on export and low agricultural production level (Kazungu, 2009). Therefore, the influence of trade policies reform in Tanzania for many years has not only remained a paradox but it also gives serious questions on country's development strategy.

1.3 Trade liberalization in Tanzania

In 1986 the Government of Tanzania adopted various new policies under the Structural Adjustment Programmes of the International Financial Institutions which were highly focused on liberalizing trade. These policies were mainly adopted with the objective of restoring economic stability and accelerating structural reforms in order to create a sustainable position for the country's balance of payment, cutting down inflation, correcting budget deficits, reforming microeconomic policy framework and increasing incentives to agricultural producers (URT, 2005).

During the year 1980 to 1985 the real exchange rate increased by approximately 16 percent and annual real exports decreased by about 10 percent (as shown in Figure 1). Moreover, during the same period the country experienced the large imbalances in her fiscal and external accounts with a huge fall of gross official reserves (Kanaan O, 2000). During the mid 1980's the Government of Tanzania recognized that, its barriers on external trade policies which latter caused the reduction in exports was extremely hurting her economic growth. Then, in order to rescue the economy the government established a special program called Economic Recovery Program which merely intended to revamp the export sector by eliminating the heavy cost –price control and establishing import liberalization actions. Among the major strategy established was to raise the revenue from cash crops through establishing various marketing channels and smallholder farmers to get good share of earnings from export sales. Furthermore, the government redesigned the structure of the marking boards in order to improve their efficiency in setting prices so that to redistribute power on the free buy and seller basis.

Figure 1: The Value of Exports and Imports of Goods (Million Dollars)
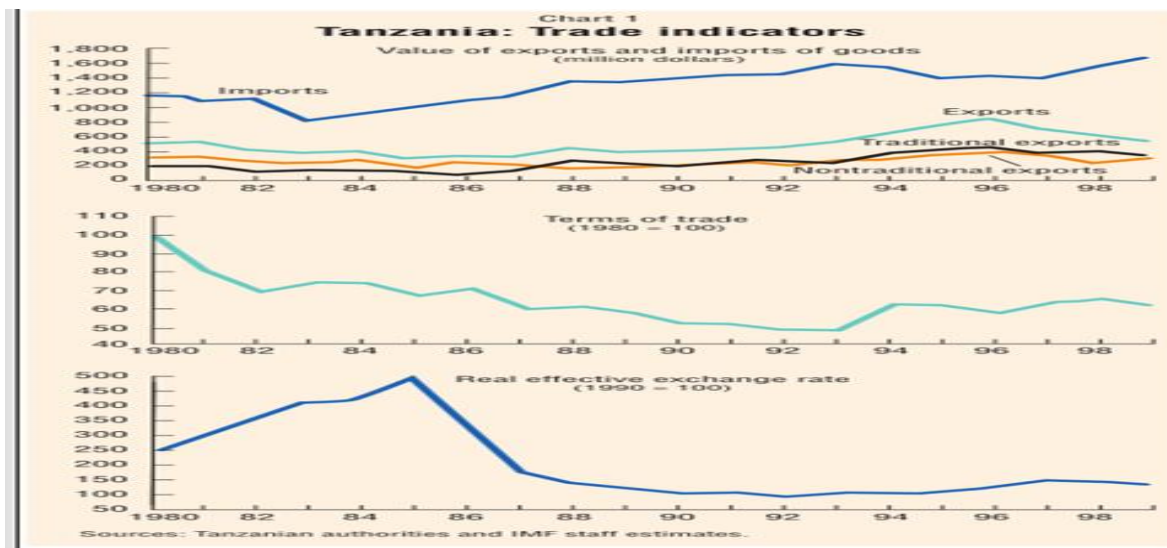
In the fiscal year 1988/1989 the Government of Tanzania started relaxing restrictions on exports of nontraditional crops and allowing exporters to retain an increasing share of their export proceeds to finance their import requirements. By the beginning of 1993/94, the system of export licensing for both traditional and non-traditional crops was eliminated, the requirement of registration of exporting companies abolished and foreign exchange submission requirements highly dropped. The gradual recovery in country's exports led to a steady relaxation of foreign exchange constraints and facilitated the liberalization of imports (Kanaan O, 2000). A more significant step was done in 1988 by rationalizing the rates of import tariff which caused the reduction of weighted trade average tariff to twenty three percent from thirty five percent in 1986 (Wangwe, 1995). This tariff weight reduction was followed by two complementing key liberalization measures which were established between 1988 and 1990. Those measures were the establishment of Open General License System whereby import licenses were provided automatically for qualified imports and second it was the creation of Own Funds Facility which allowed importers to get free import licenses. Nevertheless, the impact of the aforementioned measures did not bring the high intended results until the major changes which took place between 1991 and 1993 which ended all extremely control on foreign exchange and import licensing. In 1993/94 the emergency of fiscal imbalances caused the liberalization of imports to decline substantially, this triggered the authorities to raise the rate of customs duty in order to compensate the decrease in domestic tax revenues. The large import drop to a large extent reflected the steady erosion of the Tax-to-GDP ratio and the increase in Tanzanian government's dependence on trade taxes for revenue (Figure. 2 below)

Figure 2: Tax revenue (percent of GDP)

Tanzania: Tax shares

Tax revenue (percent of GDP)

Import taxes (percent of tax revenue)

Sources: Tanzanian authorities and IMF staff estimates.
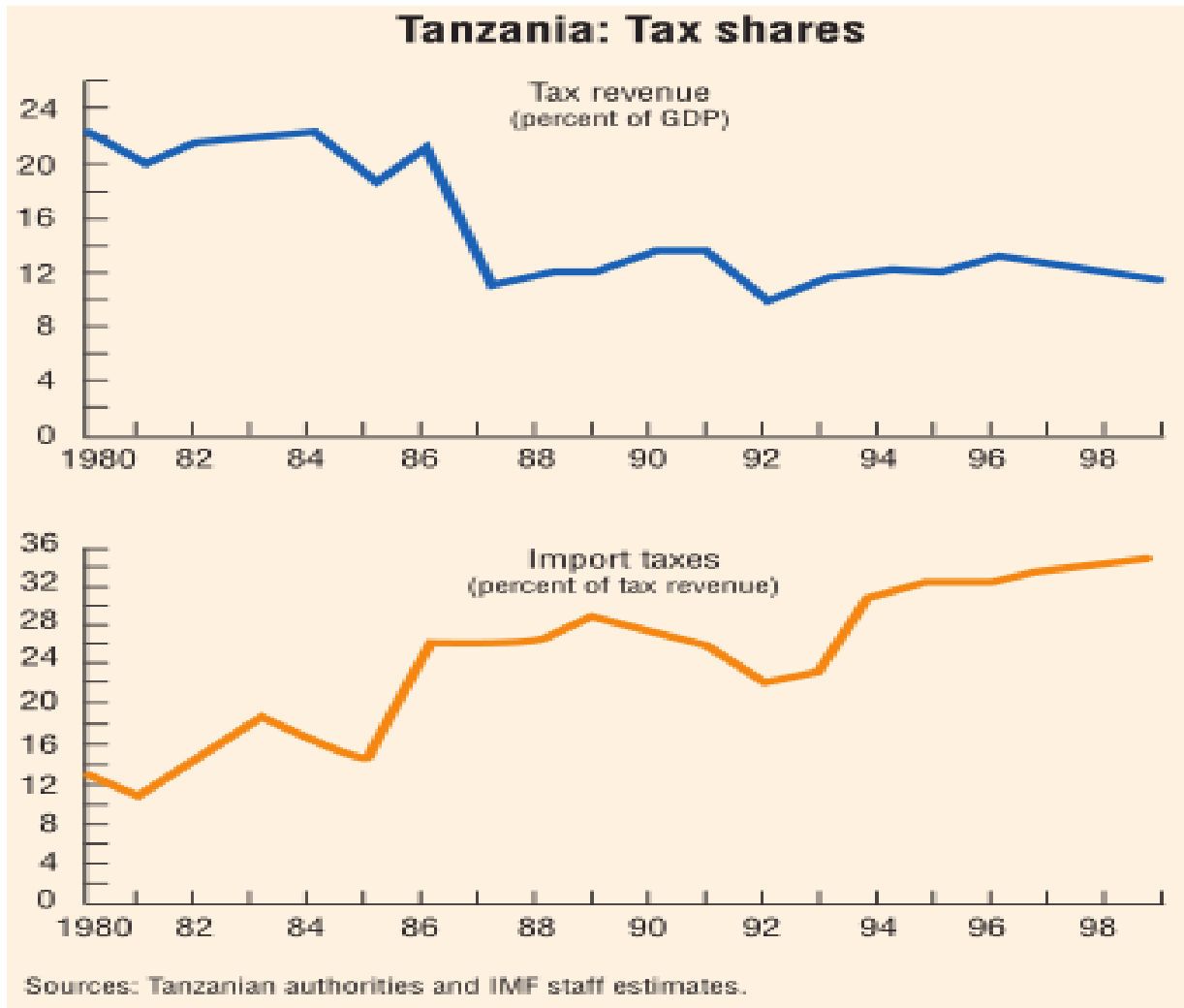
1.4   Literature review

The literature review is divided into two parts; the theoretical literature review

and the empirical literature review. Theoretical review will examine the theories

regarding trade and trade liberalization while the empirical literature review will review

various studies conducted on the impact of liberalization policies on agricultural

production and its structural change. This empirical part will mainly focus on the methodology and findings; it will also cover some cases in Tanzania.

1.4.1 Theoretical Literature Review

In the field of international trade and development, the relationship between trade liberalization and economic performance has been the oldest topic with two major viewpoints, those who prefer the free trade and those who prefer state controlled trade (Kazungu, 2009).

The evolution of what is today called the standard theory of international trade, it goes way back to the years between 1776 and 1826 during the Publication of Adam Smith's (1986 [1776]) the book called Wealth of Nations and years later by David Ricardo's Principles of Economics (1951) (Sen, 2005).

Smith's theory of international trade was based on absolute advantage, which highly focused on the importance of the division of labor among countries as the major means of improving labor productivity and reducing the cost of production (Schumacher, 2012). For him, with more advanced division of labor, the higher output can be produced by the same amount of labor and the lower the cost of production (Schumacher, 2012). Then the produced product should be exchanged among countries based on their cost of production.

On the other hand, Ricardan theory of international trade was based on the comparative advantage which focused on specialization in production. The theory advocates that two countries will mutually benefit from trade if they specialize and trade each other commodities that they produce at their lowest opportunity cost. "With free

trade and elimination of trade barriers, global trade will be promoted with effective utilization of resources at a given state of technology" (Mkubwa, 2014). Though, the theory does not assure equal benefits/gains from trade. The trade gains will highly depend on the country's terms of trade, the rate of exchange between trading countries and on whether there is a full utilization of available resources with regards to the countries' specialization (Helpman,E. 1981).

Another theory of trade liberalization was explained by Heckscher-Ohlin (H-O) which was based on factor endowments. In his theory, Heckscher advocates that trade between two or more countries depends on the relative factor abundance. The countries will mutually benefit more from trade if they trade with their partner countries which have larger technological differences and the factor endowments (Kazungu, 2009). The small volume of trade is expected among nations with similar factor endowments.

Melitz (2003) established a new trade theory which called the "New" New Trade Theory. His theory explains about the new source of trade gains. It's concept basically explain that, when the trade barriers are lowered it stimulates competition on a global scale which cause the firms with low productivity which are in most cases protected by the trade barriers be forced to withdraw from the market and be replaced by the increased production of high productivity firms. As a result the average productivity of a country on the whole rises.

In the late 1970s an economist Paul Krugman came out with a new theory called the New Trade Theory. His work explained about patterns of international trade and the geographic concentration of wealth, by examining the impact of economies of scale and

of consumer preferences for diverse goods and services. According to Krugman, the economies of scale can be so significant that they outweigh the more traditional theory of comparative advantage. In some industries, two countries may have no discernible differences in opportunity cost at a particular point in time. But, if one country specialises in a particular industry then it may gain economies of scale and other network benefits from its specialisation. Another element of new trade theory is that firms who have the advantage of being an early entrant can become a dominant firm in the market. This is because the first firms gain substantial economies of scale meaning that new firms can't compete against the incumbent firms. This means that in these global industries with very large economies of scale, there is likely to be limited competition, with the market dominated by early firms who entered, leading to a form of monopolistic competition. His logic explains how each country may specialize in producing a few brands of any given type of product, instead of specializing in different types of products.

All the theories of free trade address that with trade liberalization the countries will gain from trade and world's output will increase. They basically mean that with trade liberalization countries will specialize in producing products which utilize their abundant resources. Then assuming there are similar technologies and production all over the world the factor prices will be equal among the trading countries.

1.4.2   Empirical Literature Review

In the field of international trade specifically trade liberalization many research have been conducted and many literatures have been written. Hence, this research will

examine few studies which have brought great impact on academic arena and policy options.

Silva1 N, Malaga J and Johnson J, (2014) studied the effect of trade liberalization policy on the Sri Lanka Agriculture sector specifically on the agricultural production growth. Their work used series data of 51 years which covered the data from 1960 to 2010. The growth in agricultural production which was expressed in terms of Gross Domestic Product (GDP) of the agricultural sector of the country was treated as the dependent variable against three independent variables which were investment, trade openness and the real interest rate. The study found that, the introduction of open market policies in 1977 and the adoption of liberalized trade policies to the high extent increased the import and export of agricultural products which subsequently caused the substantial decrease in domestic price. The decreased in domestic price caused the increase in agricultural export as the market options for their product expanded. In general, the study showed that trade liberalization increased production and caused the significant increase of share of agriculture sector to Sri Lanka's GDP.

Hassine N, Robichaud V and Decaluwé B (2010), conducted a study which looked on the relationship between trade liberalization on the agriculture sector, productivity gains and the alleviation of poverty in Tunisia. Their study used a Computable General Equilibrium model (CGE) which encompassed the endogenous productivity effects of trade and technology transfer in agriculture sector to determine the impact of agricultural trade liberalization on inequality and poverty in Tunisia. The findings of the study showed that, trade liberalization promoted agricultural productivity growth and caused the poverty level to drop by 11 percent. Trade liberalization policies

and the technology transfer appeared to affect the labor demand and its skill structure. The trade liberalization reforms enhanced demand of skilled workers in the agricultural sector which caused the raise in production and labor wage. Moreover, the study found that, the effect of income distribution as the result of trade openness was negligible which was indicated by the little variation of inequality indicators across different simulation scenarios.

Ingco M (1997), did a study to evaluate the effect of agricultural trade liberalization in improving the welfare in the least developed countries following the agricultural price shock resulted from Uruguay Round Agreement. The study found that, changes in welfare were affected significantly by the economy's structure of trade distortions and it further concluded that countries gained much from Uruguay Round because it influenced many countries to adapt trade liberalization. It further emphasized that, restrictions on the liberalization policies initiatives implemented in some countries caused those countries to lose efficiency gains and hence they lost rising market opportunities.

In 2012 Kutsoati E, conducted a study to assess the impact of agricultural trade liberalization on food security in some selected 11 African countries. The study intended to assess on whether trade liberalization has improved food security at the national level through both domestic production and imports. It represented the national food security by per capita daily dietary energy supply and trade liberalization by a dummy variable of eras before and after the approach, the study found that trade liberalization has no significant effects on food availability.

Some studies have gone far to study the effect of Trade Liberalization on Economic Growth, Sachs and Warner (1995) studied the relationship between trade openness and economic growth through assessing some trade openness variables, the tariff and non-tariff variables, exchange rate for black market, monopolies in state export and export monopolization. Their results showed that there is a strong positive relationship between trade openness and economic growth. For example, one of their results showed that, with trade openness annual economic growth of 120 countries increased by an average of two percent over the year 1970 to1989.

Wacziarg and Welch (2003) repeated the same study conducted by Sachs and Warner by using the same methodology with updated data. As in Sach's and Warner, their study found that trade liberalization had a strong and robust positive effect on economic growth. However, with the similar results the study showed the severity of positive correlation was decreasing in the 1990s. This alteration was highly caused by the change in the protectionist measures which were arising.

1.4.3 Empirical Literature Review: Tanzania Case

Kazungu (2009) assessed the role of trade liberalization policies on the production structure of Tanzania economy with the main focus on the Agriculture sector. His research used two analysis methods; the first one was parametric tests method which was used to evaluate the impact of trade liberalization policies on export growth rate; and second the least square method and instrumental variables to test the impact of liberalization on land productivity. It specifically focused on three main cash crops which are cotton, tobacco and coffee. His study used two groups of indicators; the first group of

indicators was comprised of area under cultivation, output per hectare, export value and the ratio of export to GDP. These indicators captured the impact of trade on land productivity. The second group of indicators comprised of change in producer price, change in the ratio of producer price to export price and the openness indicator which was defined as a sum of exports plus imports divided by the real GDP. His study used the The study found that the trade liberalization policies have changed the structure of the economy by altering the composition of traditional exports from coffee to cashewnuts and tobacco. It also found that, the liberalization policy has increased the volume of the exported food crop during the post liberalization time as compared to the pre liberalization time. However, the study did not explain into detail about the impact of trade liberalization indicator such as tariff rate, foreign of investments on agriculture and free trade agreements on the change in structure of agricultural production and gain of trade.

In the same vein Kingu (2014) conducted a study on "Trade liberalization and export performance in Tanzania cashew nuts". The study used a cointegration test method to analyse the time series data of cashew nuts exports from 1970 to 2010. In his study Kingu found that the world price and real exchange rate were significant determinants of cashew nuts export in Tanzania. The cashew nuts world price had a big impact on Tanzania cashew nuts export because the research found it was contributing to about 87 percent of the cashew nuts incomes. As in Kazungu (2009), limitation with Kingu (2014) study is that it did not explain on the impact of some important trade liberalization indicators (tariff rate, foreign direct investments and trade agreements) on cashew -nuts performance.

In 2014, Chile L and Talukder D, conducted a study to assess the Paradox of Agricultural Trade Liberalization in two countries Tanzania and Bangladesh. Their study used productivity, consumption and price data for rice and maize before and after trade liberalization to measure economic benefits of trade liberalization on smallholder farmers in those two countries. It further examined the relationship between the domestic and international prices of rice and maize to estimate the effect of agricultural trade liberalization on price volatility, stability and food security. The study found that, there was a positive effect on the welfare of smallholder famers of rice and maize in both countries Tanzania and Bangladesh which was influenced by trade liberalization policies.

Mkubwa et al (2014) conducted a study to assess the impact of trade liberalization on the Tanzanian economic growth. The study used the least square method to run simple regression equations whereby GDP was dependent variable and trade openness independent variable. It utilized the time series data of 40 years from 1970 to 2010 whereby period was divided into two sub-eras, the time of closed economy (1970 to 1985) and the time of open economy (1989 to 2010). The results of the study showed that, in all estimates, trade openness had a positive significant impact on economic growth. It further found that economic growth was derived by expansion of trade through increasing trade openness. Nevertheless, the impact on economic growth was found to be relatively lower when the economy was opened as compared to when it was closed economy. The study concluded that, the cause of decreasing rate of growth was because in late 1980s the importation rate exceeded exportation

CHAPTER TWO

2.0   Research method

2.1   Research question

To what extent trade liberalization affects agricultural production growth?

2.1.1   Expected hypothesis

Trade labialization policy has increased the agricultural production in Tanzania.

2.1.2   Study design

The purpose of this study is to assess the impact of trade liberalization policies on the Tanzania agriculture sector. The study used the annual time series data covering the period of 1990 to 2014. The data used were fetched from World Bank, Food and Agricultural Organization (FAO), United State Agency for International Development (USAID) and Tanzanian National Bureau of Statistics. The simple regression method has been adopted to analyze the relationship between agricultural production growth and trade variables which were affected trade liberalization policies.

In this study the unity of analysis is the agricultural annual production growth which has been treated as the dependent variable while the trade variables have been used as independent variable. The study has used annual growth of agricultural value added products as the proxy of agricultural production growth. On the other hand, percentage tariff rate applied simple mean of primary products, foreign direct investment to agriculture and credit to agriculture have been used as independent variables. Tanzania

has many types of tariffs rates however, the study chose applied simple mean because these kinds of tariff have been varying much from one year to another.

2.1.3   The structure of the model

Agricultural production growth (Agricultural value added annual growth) = β_o + $\beta_2$tariff rate, applied simple mean of primary products + β_3FDI to agriculture sector + $\beta_4$credits to agriculture + $\beta_6$percentage of annual change in agricultural area.

2.1.4   Method of Analysis

Since the study used the time series data the analysis used the Feasible Generalized Least Square Method (FGLS) which is the most preferred analysis method for time series data. The Feasible Generalized Least Square Method is preferred method for the time series data because it is free from the problem of serial correlation of error from one year to another which frequently arises when using the time series data. Moreover, in order to avoid the trending problem of data in the variables, in this analysis all variables were first de-trended to remove the trending effect that comes along time with the time series data. So the variables were de-trended then regressed using FGLS.

3.0   Analysis Results and Discussion

Table 1: STATA Regression Results

Dependent variable: Agricultural growth	(1) FGLS	(2) FGLS	(3) FGLS	(4) FGLS
Tariff rate of primary products	-0.22***	-0.22***	-0.18**	-0.12*
	(0.06)	(0.06)	(0.07)	(0.06)
FDI to Agriculture		0.02	0.00	0.03
		(0.02)	(0.03)	(0.03)
Credits to Agriculture			-0.00	-0.00
			(0.00)	(0.00)
Percentage of annual change in agricultural area				-1.06***
				(0.19)
Constant	0.00	0.00	-0.00	-0.00
	(0.28)	(0.28)	(0.25)	(0.20)
Observations	25	25	25	25
Durbin-Watson statistic (transformed)	2.06	2.09	2.24	2.28

Standard errors in parentheses

$^{*}p< .1$, $^{**}p< .05$, $^{***}p< .01$

Significance levels * $p < .1$, ** $p < .05$, *** $p < .01$ represent 10%, 5% and 1% respectively. Moreover, the Durbin-Watson statistics are higher than 2 which mean there is no serial correlation which is the potential problem that arises in the time series data.

3.1   Discussion

The regression results have shown that there is a negative correlation between the

tariff rates of primary products with the growth in agricultural production. This

intuitively implies that, a higher tariff has a negative effect on the growth of agricultural

production. It further mean that a lower tariff (due to trade liberalization) has

a positive effect on the agricultural production growth. The statistics shows that since

Tanzania adopted trade liberalization policies her tariff rate for agricultural products

specifically for primary products have been constantly decreasing year after year.

Figure 3: The Graph Showing the Trend of Tariff Rate for Primary Products since
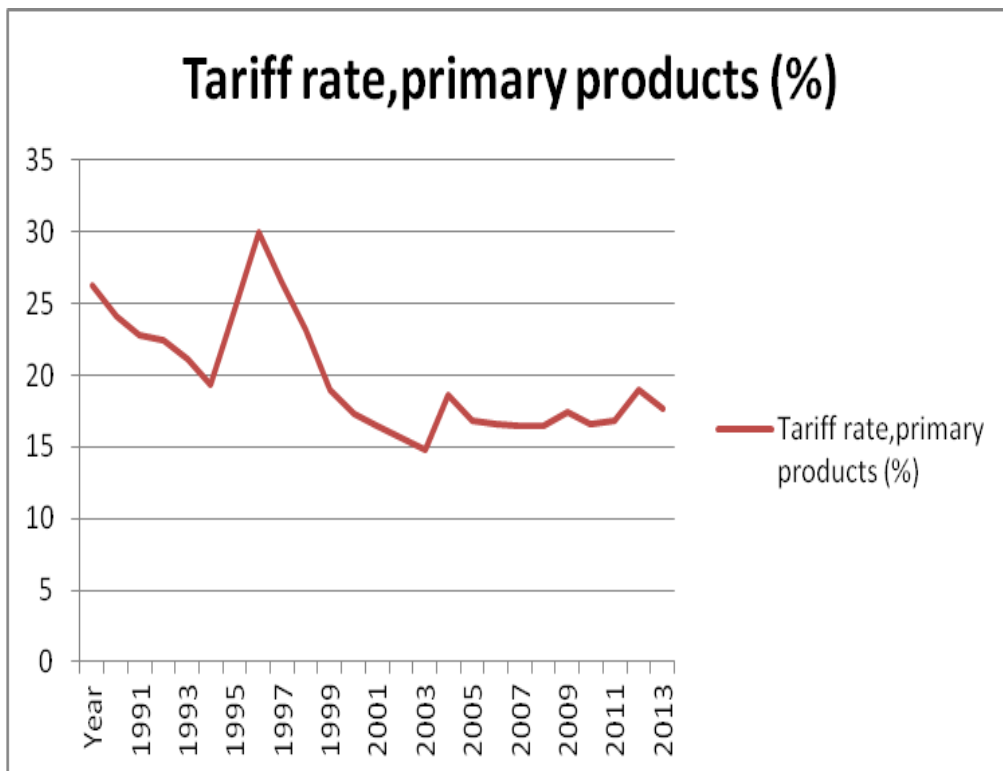
the Year 1991 to 2014

Table 2: The Descriptive Statistics for Tariff Rate

Tariff rate, applied, simple mean, primary products (%)	
Mean	19.8292
Standard Error	0.808444581
Median	18.65
Standard Deviation	4.042222903
Sample Variance	16.339566
Kurtosis	-0.005141146
Skewness	0.944678005
Range	15.12
Minimum	14.82
Maximum	29.94
Count	25
Confidence Level(95.0%)	1.668547596

The agricultural sector in Tanzania for many years it has been highly depending among others on the exportation of raw products for crops which are considered as cash crops such as coffee, cotton, tobacco, sesame and sugar. Then after the adaptation of trade labialization there has been an increased importation of primary products specially rice, maize and cooking oil from Thailand, Brazil and India respectively. For example the imports of raw rice accounted for 10.4 percent of domestic consumption between 1996 and 2004, but 16.45 percent between 2005 and 2011(Wilson, T. et al 2015). The increased imports of cheaply rice, maize and cooking oil which are all the food products influenced many people to consume the imported food and concentrate on production of cash crops (coffee, cotton, tobacco, sesame and sugar) which are highly favored by the weather conditions as compared to food crops. This has highly influenced many people to cultivate the cash crops which are highly paying hence caused the increase in agricultural production.

On the other hand both foreign direct investment and credits which go to the agriculture sector were not statistically significant. These results explain that, the efforts which are directed by the government in order to attract the foreign direct investment and the credits which are offered to the agriculture sector may have not resulted to the significant impact in changing the sector. On the side of the foreign direct investments in agriculture the level of impact may have been significant due to the structural policies of the foreign investment which have no direct link to the smallholder farmers. So since the FDI which flow to the agriculture sector is not high and does not help to improve the level of production of smallholder farmers their impacts level remains at marginal.

Table 3: The Descriptive Statistics for Foreign Direct Investment and Credit to Agriculture

Foreign direct investment to agriculture (in millions US$)		Credit to agriculture (in million US$)	
Mean	15.578	Mean	213.2776
Standard Error	1.764001512	Standard Error	47.4379674
Median	12.4	Median	94.18
Mode	11.9	Standard Deviation	237.189837
Standard Deviation	8.820007559	Sample Variance	56259.0187
Sample Variance	77.79253333	Kurtosis	-0.6387482
Kurtosis	7.146990011	Skewness	1.00357572
Skewness	2.467468406	Range	644.11
Range	41.6	Minimum	22.72
Minimum	6	Maximum	666.83
Maximum	47.6	Sum	5331.94
Sum	389.45	Count	25
Count	25	Confidence Level (95.0%)	97.9071519
Confidence Level (95.0%)	3.640720157		

Furthermore, the percentage of annual changes in agricultural area was a significant variable with negative correlation to the growth in agricultural production. The land use change in this paper has been defined as the exits from agricultural land use into other non agricultural use. The statistics show that there has been a continued change in land use in Tanzania from agriculture to other non agriculture sectors. The adoption of trade liberalization policies influenced the change in the Tanzania economic structure from being depended on agriculture to more diversified economy which depends not only on agriculture but also on other sectors like service, housing, industry and construction. This caused the decrease in the amount land which is used for agriculture hence resulted to decrease in agricultural production.

Figure 4: This Graph Showing the Trend in Percentage Change Agriculture, Value added against the Percentage of Annual Change in Agricultural Area since the Year 1991 to 2014
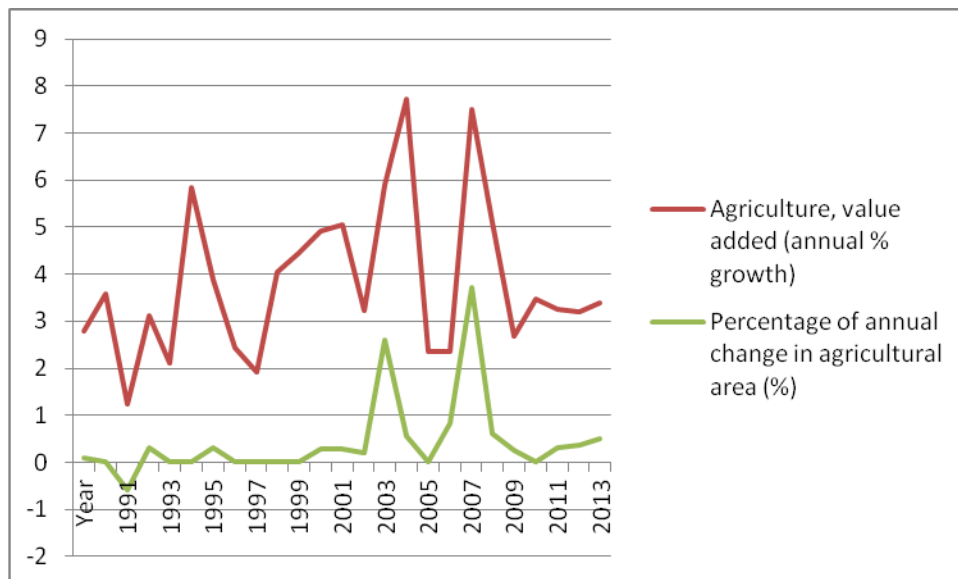
CHAPTER FOUR

4.0   Conclusion and Recommendations

4.1.   Conclusion

The empirical findings of this study showed that, some trade liberalization measures adopted in the mid - 1980s had resulted to the positive impact on the production growth of Tanzanian agriculture sector, some had no significant impact and others had negative impact.

The tariff rate especially for the agricultural primary products which has been constantly declining since the adoption of trade liberalization policies has resulted to positive growth on the agricultural production. However, foreign direct investment and credits which go to agriculture were not statistically significant. This may be explained that the efforts which have been put to attract the foreign direct investment in the agriculture sector and the credit which have been channeled to the agriculture sector have no impacted significantly. Furthermore, percentage of annual changes in agricultural area was a negatively related to the agricultural production growth. The statistics show that there has been a higher negative change in the agricultural land use since the adoption of liberalization policy. This shows that the adoption of trade liberalization policies caused the change of country structural production from being depending on agriculture to other economic sectors like industry, construction and service which compete on agricultural land.

4.2. Recommendation

On the basis of research the findings, trade liberalization has both significant positive and negative effect on the agricultural production in Tanzania depending on the specific liberalization measure. So in order Tanzanian agriculture sector to highly enjoy the benefits of trade liberalization, the study recommends the following:

- There is a need to continue rectifying the tariff rates specifically for agricultural primary goods by decreasing it up to the basic level at which the domestic producers are not hurt. The tariff rate should be redesigned to encourage more importation of cheap food crops so as to let more people consume the cheap imported food and concentrate into the production of cash crops specifically coffee, cashewnuts, sisal and cotton which are highly fevered by the weather condition and Tanzania environment.

- The government should adjust its Investment Policies specifically for the Foreign Direct Investments which are directed to the agriculture sector. In order for the Foreign Direct Investment which come to the agriculture sector to have huge impact on the agricultural production growth and to the agriculture sector as whole there is need for the establishment of the close link between the FDI and the smallholder farmers. The FDI always are high they come with huge financial investment and advanced technology, so our policies so be designed to make the smallholder farmers benefit not necessary financially but it may be in terms of technological supply and market linkages.

- The government should redesign the policies and regulations which are related to agriculture financing so that to ensure efficiency allocation and use of financial resources which are directed to the agriculture sector. The government of Tanzania has been using a lot money to offer cheap credits to farmers. So in order for those loans to have significant impact there is a need for financial policy review to ensure that those loans which are offered to agriculture sector are channeled to the most consequential area which will give a significant impact. There is a need for the government to establish the strong financial institution which will be dealing only with agriculture financing. Most of the countries such as Ghana, Nepal and Malaysia have established the strong Agricultural Development Banks which are supervised by the Ministry of Finance and Ministry of Agriculture. These Banks among other things make close supervision to ensure the loans which are directed to the agriculture sector perform the intended purpose.

- Lastly, there are other policies which contribute to the decrease in agricultural production growth which have not been discussed in this study, among which is Food Export Ban Policy. Despite the vast contribution of agricultural exports to the Tanzania economy, the Government of Tanzania in several occasions has been implementing the export bans policy for some type of food specifically maize and rice for the intention of ensuring food availability (food security). The ban usually lowers the prices farmers receive, hurts their income and created discouragement. These eventually lead to decrease in agriculture production growth as people shift from agriculture to other sectors.

4.3.   The Limitations and area for further research

The key limitation of the study was the accessibility of data. It was difficult to access data for the period before 1990s which was the actual period of pre-liberalization. So the analysis was limited to the data which began 1990s at which some of the trade liberalization measures were already adopted and started to be implemented. Not only that, due to lack of reliable data some of the key trade variables which were influenced by adoption of liberalization policies and which affected the agricultural production growth like the change in volume of agricultural trade due to Free Trade Agreements, change in tariff rate of the capital goods and production technology were not included in the analysis. Another major limitation is on the scarcity of the control variables. It is definitely that, the growth of the agriculture sector specifically the agricultural production is affected by various factors including pests, price of inputs, diseases and climatic change. There is real a need for more researches which should include more variables in order to determine the validity and accuracy of econometric results.

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