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"The Impact of International Trade on Economic Growth in Developing Countries

(Exports for rapid economic growth)

A Case Study of Kenya"

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DECLARATION

This is my original work and has never been presented for any degree award in any other university.

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APPROVAL

This research paper has been submitted with my approval as University Supervisor

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Dedication
To my wife Fanice
And
Son Brian
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Abbreviations

AGOA - African Growth Opportunity Act
COMESA - Common Market for Eastern and Southern Africa
EAC - East African Community
ELG - Export Led Growth
EPAs - Economic Partnership Agreements
EPC - Export Promotion Council
EPPO - Export Promotions Programmes Office
EPZA - Export Processing Zone Authority
EPZs - Export Processing Zones
FDI - Foreign Direct Investment
GDP - Gross Domestic Product
GLE - Growth led Export
GOK - Government of Kenya
IT - International Trade
LDC'S - Least Developed Countries
MENA - Middle East and North Africa
MUB - Manufacturing Under Bond
OLS - Ordinary Least squares
R & D - Research and Development
UN - United Nations
WB - World Bank
WTO - World Trade Organization
Abstract

This study investigates the impact of international trade on Kenya's economic growth by specifically examining the role of exports vis-à-vis other components of the GDP over a span of about twenty two years. The impact of imports on economic growth has also been examined. The study adopts a linear model to examine the impact of both public and private investment, government expenditure, foreign aid, imports and exports to the GDP.

Overall, the results showed that growth in real exports does cause real GDP growth. Moreover, it was found out that: Government expenditure and Foreign aid were positively correlated with the GDP and statistically significant; Public investments though statistically significant, were found to be negatively correlated to the GDP; and Private investments were found to be negatively correlated to the GDP and statistically insignificant. In broad terms, the results of this study are supportive of the Export Led Growth Strategy which postulates that exports lead to economic growth.

The study also makes the following conclusions: The import basket could be mainly finished products with little impact on the GDP; an increase in government expenditure and more foreign aid is vital for economic growth; the government may be investing in non-productive sectors of the economy; and finally, private investments do not necessarily lead to economic growth.

The government should therefore ensure that export enhancing policies are strengthened with a view of promoting and sustaining Kenya's economic growth. Consequently, the basket of imports should be reviewed in order to realise the full benefits of international trade.
1.0: Introduction

International trade, the cross-border exchange of goods and services, is now widely acknowledged as an important engine of economic growth and development in most of the developing countries. It can play an important role in the fight against poverty by helping to drive economic growth and provide jobs in developing countries.

There can therefore be little doubt that, historically, trade has acted as an important engine of growth for countries at different stages of development, not only by contributing to a more efficient allocation of resources within countries, but also by transmitting growth from one part of the world to another.

For the transition countries particularly those of the East Asia commonly described as the Asian tigers, which have achieved tremendous economic growth, international trade has been identified as one of the main contributors to their fast rate of economic growth (Sohn and Lee, 2003).

What appears to be gaining currency in recent years from cross-country growth differences is that most of the countries pursuing growth successfully are also the ones that have taken most advantage of international trade (Martin, 2001; Masson, 2001). These countries have experienced high rates of economic growth in the context of rapidly expanding exports and imports.
The goal of analyzing the contribution of international trade in a country’s GDP stems from the economists’ tradition of using GDP as a measure of income and expenditure of an economy where net exports (both income from abroad due to sale of domestic goods to foreign consumers and expenditure on foreign products) is one of the four components of aggregate GDP. The estimation of the GDP or national income (Y) is arrived at by the aggregating total consumption (C), investment (I), government purchases (G) and net exports (NX). In the form of equation, it is expected that national income should be: \( Y = C + I + G + NX \). It is on the basis of this net export component of the GDP that this study expects Kenya’s participation in international trade to have a positive impact on its own GDP.

For instance, the role of exports in economic development has been widely acknowledged. Ideally, export activities stimulate growth in a number of ways including production and demand linkages, economies of scale due to larger international markets, increased efficiency, adoption of superior technologies embodied in foreign-produced capital goods, learning effects and improvement of human resources, increased productivity through specialization (Basu et al., 2000) and creation of employment.

Theoretically, the Export Led Growth (ELG) hypothesis postulates that exports lead to economic growth. This may hold because of several reasons. First, export growth may represent an increase in demand for the country’s output and thus serve to increase real Gross National Product (GDN). Second, an increase in exports may loosen a binding foreign exchange constraint and allow increases in productive intermediate imports and hence result in the growth of output. Third, export growth may result in enhanced efficiency and thus lead to greater output. This is because; contacts with foreign competitors that arise from exporting may lead to more technological change, the development of indigenous entrepreneurship, and the
exploitation of economies of scale. In addition, this competitive pressure may lead to X-efficiency and may lead to better product quality. Exchange control liberalization and the export growth it produces are likely to reduce the allocative inefficiencies prevalent under exchange controls (Jung and Peyton, 1985).

All these mechanisms through which export promotion contributes to growth share a common feature. They all argue that export growth leads to output growth. Thus the export-led growth hypothesis should be taken to be not only an assertion of correlation, but also an assertion of causation (Jung and Peyton, 1985).

Researching on the linkage between Kenya’s participation in international trade through her Export Led Growth (ELG) strategy policy and its economic development will go a long way to help Kenya’s policy formulators and implementers realize if there is a need for adjustments to make development goal a reality. Depending on the outcome of the study, it may for instance give some insight on what should be the correct focus for appropriate resource reallocation by the government for the benefit of Kenyan traders and all Kenyans. It would also be a good reference material for future policy makers not only in Kenya but even for neighbouring countries that are in need of pursuing appropriate economic, and in particular trade policies for prosperity.
1.1: Background Information

The Kenyan economy has had mixed experiences in terms of Gross Domestic Product (GDP) growth rate since independence. Growth in GDP averaged 6.5 percent over the period 1964-7. This was considered an exceptional case for many of the developing countries at that time. This growth momentum was dampened by the first oil crisis of 1972, and as a result, GDP growth rate decelerated to below 4 percent for much of the early 1970s until the 'unexpected coffee boom' of 1976 and 1977 when GDP growth rate averaged 8.2 percent (GOK, 1994). However, this boom was short-lived because of the second oil crisis of 1979 that pushed up inflation rate.

During most of the early 1980s, GDP growth rate was recorded; growth rate remained below 5 percent with growth rate falling to below 1 percent in 1984. This was largely attributed to severe drought of that year. Agriculture was the most affected; its contribution to GDP fell to -3.9 percent. However, there was a rebound of the economy in 1985-86; where growth rate of 4.8 percent and 5.5 percent respectively was realized. This was attributed to favourable weather conditions, government budgetary discipline and improved management principles (GOK, 1994).

GDP growth rate continued to slide in the 1990s falling to a mere 0.2 percent in 1993. Dismal performance of the economy during this period was attributed to decline in real output and value added in agriculture, due to below average amount of rainfall; sluggish growth in aggregate private domestic demand and foreign exchange shortfalls leading to reduced imports of intermediate goods and also due to suspension of donor aid (GOK, 1994).

It can be said that the positive effects of International Trade (IT) on Economic Growth (EG) were first pointed out by Smith (1776). This idea prevailed until World War II (WWII), although
with relative hibernation during the ‘marginalist revolution’. After WWII, the introverted and protectionist EG experiments had some significance, especially in Latin America. From the 60’s on, owing to the failure of those experiments and to the association of quick EG with the opening of IT and the consequent international specialization in several countries, as well as to the results of many studies based on the neoclassical theories of EG and IT, a new decisive role was given to IT as EG’s driving force. However, although the dominant theoretical position tended, from the beginning (with the Classics), to indicate a positive relation between IT and EG, many studies linked the gains of IT only with static effects. But (Baldwin, 1984), for example, concluded, in a survey of empirical studies, that the static effects were of little significance. The debate has widened in the last decades, precisely in the direction of pointing out and stressing the dynamic effects of IT.

The theoretical development afforded by the models of endogenous EG especially after the works of Romer (1986) and Lucas (1988), which stimulated the creation of empirical studies, moved toward an integrated analysis of the EG and IT theories. So, the classical tradition, apparently interrupted by the neoclassical separation of those two areas of the theory, seems to have been recovered, assigning, as a result, a decisive role to IT on the countries’ rate of EG. The recognition of this importance has even led to the ceaseless appearance of proposals from international organizations, such as the World Bank (WB) and the United Nations (UN). As a result, many countries Kenya included began to reduce commercial barriers and other controls of economic activity and obtained a significant (and lasting) increase in the rate of EG.

Since independence in 1963, there has been considerable progress in the trade reform in Kenya, advancing from import substitution to an export oriented economy (Ramesh and Boaz, 2007).
Export led growth (ELG) policies of the successful East Asian economies is partly the
motivation for Kenya to embark upon it

The EAC and the COMESA are the main markets for Kenya’s exports, highlighting the
importance of regional economic trading blocks, followed by the European Union (EU). EAC
and COMESA are the main markets for Kenyan goods owing to close proximity, preferential
treatment, reconstruction activities and a relatively well developed manufacturing industry in
Kenya compared to neighbouring countries. On individual countries, Uganda is the main market
for Kenya’s exports, followed by United Kingdom while Tanzania is third (Uganda and Tanzania
are both members of the East African Community).

With a series of external shocks in the 1970s, the inefficiency and inadequacy of the import-
substitution policy became evident. The first oil crisis of 1973 that led to severe problems in
balance of payments (BOP), and the collapse of the EAC in 1977, adversely affected the
performance of import-substitution enterprises.
1.1.1: Benefits of trade

The conventional view of the relationship between trade and growth suggest that trade contributes to economic growth through its beneficial impact on resource allocation resulting from specialization. Trade also helps increase such inputs to growth as natural resources, capital goods and technology by exchanging those goods and services that a country can produce efficiently (that is, at a relatively lower cost) for others which the country either cannot produce, or can do so only at a relatively high cost.

In addition to increasing specialization, expanding the efficiency-raising benefits of improved resource allocation and providing access to critical inputs, trade (and particularly exports) also induces growth, by offering greater opportunities for economies of scale owing to an enlargement of the effective market and greater capacity utilization due to the addition to external demand. Besides, the competition faced in transnational markets for exports and in home markets through imports provides incentive for fostering more rapid technological change and better management in both tradable and non-tradable sectors, thus raising overall productivity and growth.

Imports, contribute to growth by relieving domestic supply constraints regarding goods and services, as well as technology. Although many developing countries have successfully, built a capacity to produce non-durable consumer goods and some services, the domestic production of durable consumer, intermediate and capital goods and more complex services has not always proved feasible or efficient because of, among other things, limited opportunities for economies of scale due to the small size of domestic markets, inadequate resources and information, and a paucity of local expertise.
Participation in international trade generates various externalities, which contribute to growth. Access to the world’s commercial knowledge base is one of the most important benefits in this regard. Trade plays an important part in the international exchange of information, as trade in tangible commodities facilitates the exchange of intangible assets necessary for growth. A larger volume of international trade encourages contacts with foreigners leading to the exchange of information necessary to acquire novel perspectives on technical problems.

Imported intermediate and capital goods enables local firms to inspect and use those goods, as well as to undertake reverse engineering, which eventually results in learning to produce some of those goods efficiently. The export of local goods may induce learning to effect improvements in manufacturing processes to meet the higher standards of foreign markets.

Trade also enables developing countries to import capital and intermediate goods – critical to long-run economic growth – that would be quite expensive to produce locally.

In summary, trade allows countries, and the firms and individuals within them, to specialise in economic activities which best allow them to exploit their relative strengths, abilities, resources and expertise, and to buy from and sell to other countries doing likewise.
As can be seen from table 1 in the appendix, agriculture has remained a very important sector in Kenya, accounting for a high proportion of employment, economic output and exports earnings. Therefore, from the Kenyan perspective, agricultural sector is key to any successful outcome in international trade, no wonder in the recent international trade negotiations Kenya has conspicuously pushed its quest for fair treatment of agricultural products in developed countries markets.

The main foreign exchange earners are tea, coffee, horticultural and tourism. The industrial and manufacturing sub-sectors have been mainly agro-based highly dependent on domestic market and the neighboring countries. The sector has however suffered neglect in recent years, with peasants eking out a living amid falling output and prices.

On the contrary, farmers in rich countries continue to enjoy huge subsidies, which enable them to raise output and drive out competitors in the international markets. The issue of agricultural subsidies and market access have taken centre stage in the on going WTO Doha Development Agenda. A demoralized farmer due to low prices in the international market definitely reduces cultivation of the affected crop in search of more rewarding economic activity hence a depressed GDP.

As expected, most of Kenya’s export crops are rain fed and therefore heavily dependent on the vagaries of weather. When the rains fails or if the amount of rainfall is beyond optimum for the crops under cultivation, farmers are bound to incur huge losses due to low harvest and many forms of frustrations such as non repaid loans or escalating interest. Inadequate funding, lack of
physical capital commensurate with farmers’ needs, low levels of research and development (R&D) for crop improvements and modern farming technology are among the issues that the government should address to revamp the sector as source of exports for continued contribution to the economic growth.

With the prevailing forces of globalization in which technological transfers or technological advances are faster than they were two or three decades ago, farmers should be able to acquire modern farming techniques that can insulate them against vagaries of weather; for instance affordable irrigation equipment and improved crop varieties among others. Full benefits of trade liberalization in the form of price stabilization (cheap imports) and enhanced capital inflows for investment to spur higher production in the agricultural sector is yet to be realized. Therefore the need for the government to revamp this sector as the mainstay of the economy through appropriate facilitation is indispensable.

1.2: Problem Statement and Research Questions

Kenya has suffered a long-term deterioration in terms of trade and subsequent persistent balance of payment deficit despite concerted efforts in export promotion strategies. In fact, contrary to the expectation, the growth rates have instead declined from as high as 3.6% annual growth rate of 1984-1994, just before the policy change to unimaginable negative growth. In fact according to the World Development Indicators data base by the World Bank Group of August, 2008, partially tabulated here below, Kenya’s economic growth rate has dwindled over the years to the extent of experiencing a negative GDP annual growth of negative 0.2% in 2000 despite the fact that exports of goods and services accounted for 26.2% of the total GDP in the same period.
The assertion that Kenya has not realized high economic growth rate is evident from the above figure as the highest in a period of fifteen years is 4.41% in 1995 during which exports grew by 12.21% with a remarkable import growth of 31.14%.

While a direct positive or negative contribution of exports and imports to the GDP is not easily discernible from the above tables and graphical presentation, it is plausible to state or observe further that Kenya’s GDP has persistently dragged behind exports and imports. In fact, it is evident that the fate of GDP has somehow ‘depended’ upon exports and imports trends such that when both variables are declining, the GDP tends to decline and vice versa. For instance when
there was a sharp decline in both exports and imports in 1997, GDP growth plummeted from the previous year (1996) of 4.14% to a mere 2.09%.

The research problem of the study is that; Despite the Export Led Growth (ELG) strategy in which the government has deliberately pushed for exports and opened its domestic market for foreign competition, Kenya has continued to have trouble in realizing an economic growth rate of at least 10 percent. The study therefore seeks to examine the reason why that is so; as a development problem

The hypothesis of this research is; that Kenya's participation in International trade through her Export Led Growth strategy has increased the probability of achieving rapid economic growth.

The general research question to be answered at the end of the study is; does trade really lead to economic growth in a country?

Few studies have been done on Kenya’s performance in International trade but an important link on its actual impact on the economic growth has not been explicitly focused. It appears however that a general assumption has been taken that those countries that participate in international trade especially through export promotion have automatically recorded higher economic growth
1.3: Objectives of the Study

This study investigates the impact of international trade on economic growth in Kenya. The specific objectives include:

(i) To examine the role of exports on Kenya’s economic growth vis-à-vis other components of the GDP over a span of about twenty two years with a view to illustrating the role of trade sub-sector in the general economic development.

(ii) To examine the impact of imports on economic growth.

(iii) To make appropriate policy recommendations based on the study findings.

1.4: Justification and Motivation of the study

The importance of international trade as a means of achieving international cooperation and economic development may not be overemphasized. It is not new but a widely shared phenomenon, which has taken centre stage where most governments have realized the need to formulate and implement appropriate international trade policies to conform to the prevailing globalization trends.

Despite a vast theoretical and empirical literature on the impact of international trade on economic growth, there is still no general consensus concerning the benefits from trade and the mechanisms through which these benefits are realized.

Researching on the linkage between Kenya’s participation in international trade through her export led growth on its economic development will go a long way to help Kenya’s policy
formulators and implementers realize if there is a need for adjustments to make development goal a reality.

Depending on the outcome of the study, it may for instance give some insight on what should be the correct focus for appropriate resource reallocation by the government for the benefit of Kenyan traders and all Kenyans. It would also be a good reference material for future policy makers not only in Kenya but other developing countries which depend mostly on international trade to sustain their economies.
2.0: Review of Related Literature

This chapter, which is divided into three sections; theoretical, empirical and an overview of the literature, reviews the contribution of international trade to a country's economic growth and other related literature with a view to highlighting what other researchers have found out.

Studies on the successful East Asian tigers like the Republic of Korea on export-led growth policy have also been reviewed for comparison purposes during which the shared economists' views on international trade and its impact on economic growth have been taken on board for appropriate analysis of the Kenya's participation in international trade.

In essence, this chapter's objective is to review what others have said for the necessary linkage and focus on the aspect that may have been omitted in the case of Kenya.
2.1: Theoretical Literature Review

The theoretical underpinning of this study is that; an increase in the volume of exports or a country's continuous participation in international trade stimulates her economic growth.

The traditional case for the gains of trade is based on comparative advantage, in which a country that opens up can be assured the benefits. The Ricardian model (Ricardo, 1817) explains the welfare gains if any country specializes in producing goods in which it has a comparative advantage. The Hecksher – Ohlin-Samuelson (H-O-S) model, (Heckscher, 1919) and (Ohlin, 1933) on the other hand, shows the welfare gains in the two-country model that each country specializes based on their factor endowments.

The Heckscher-Ohlin theory states that international and interregional differences in production costs occur because of differences in the supply of production factors: Commodities requiring for their production much of (abundant factors of production) and little of (scarce factors) are exported in exchange for goods that call for factors in the opposite proportions. Thus indirectly, factors in abundant supply are exported and factors in scanty supply are imported (Ohlin, 1933). The Heckscher-Ohlin theory explains some trade patterns quite well, but recent trends hint that the industrial countries are becoming more similar in their endowments, suggesting that this theory, which emphasizes international contrasts in endowments, may slowly become less relevant.

The keystone of these theories is that international trade is the way to achieve static productivity efficiency and international competitiveness. Although productivity efficiency and international competitiveness can be achieved, it is not clear, under the Ricardian or the H-O-S model whether and how international trade determines economic growth in the long run.

From the Heckscher-Ohlin Model of a standard 2x2x2 where the only distortion is a tariff on the imported good and international goods prices are constant, when the country reduces the tariff on the imported good, imports and exports rise and the GDP grows. In such an economy, one
observes a positive correlation of output with exports and the cause of growth is more openness.

Other sources of output growth include better exploitation of economies of scale Krugman (1980), which implies that exporting firms have higher productivity compared to non-exporting firms.

Assuming a dynamic economy, another growth theory by Romer (1986, 1990) and others links exports and growth, that is, effects of integration (defined as knowledge spill over or trade in goods or both) by comparing integrated and non-integrated countries.

Theoretical agreement on export-led growth emerged among neoclassical economists after the successful story of newly industrialized countries. They argue that, for instance, Hong Kong (China), Taiwan, Singapore and the Republic of Korea, the so called Four Tigers, have been successful in achieving high and sustained rates of economic growth since early 1960s because of their free-market, outward-oriented economies (World Bank, 1993)

Export-led growth (ELG) hypothesis was first suggested by Kindleberger (1962). ELG is considered one of the main pillars of the free trade school of thought that emerged in the 1980’s. The other major school of thought is known as the protectionism school and is based on the Prebisch (1950), calls for the adoption of policies of import substitution rather than promoting exports to stimulate economic growth. Economists have had little consensus on nature of relationship between exports and economic growth. Debates have been on whether strong economic performance is export-led or growth-driven.

Traditionally, it has been assumed that exports are exogenous to domestic output. This could be an inappropriate assumption because output can also affect exports. A justification of causality from output to exports may be found in Kaldor’s (1967) contributions to the theory of growth. Kaldor (1967) shows that output growth has a positive impact on productivity growth, and
improved productivity, or reduced unit costs, is expected to act as a stimulus to exports. Theoretically, the augmented production function has been used to show that export growth promotes economic growth (Krueger, 1978; Balassa, 1978; Greenaway and Sapsford, 1994). In the augmented production function, real output depends on capital, labour and other macroeconomic variables such as exports and industrial production. A positive correlation between export growth and real output growth is termed in literature as the export-led hypothesis, reflecting the view that export-oriented policies contribute to economic growth.

2.2: Empirical investigations on the area of trade and economic growth

The interaction of international trade and economic growth takes place via many different channels. It is the task of empirical work to identify which are the relevant ones. Existing literature has repeatedly documented a strong correlation between trade and growth. It has also shown a causal effect of imports (though not necessarily exports) on growth in simultaneous equation models but to a lesser extent in Granger-causality tests.

Controversy still rages over the links between trade and economic growth. Favourable arguments with respect to trade can be traced to the classical school of economic thought that started with Adam Smith and subsequently enriched by Ricardo, Torrens, Mill and Stuart in the nineteenth century. Since then, the justification for free trade and various undisputed benefits that international specialisation brings to the productivity of nations have been widely discussed in economic literature for example by Bhagwati, 1978, Krueger, 1978.
Empirical estimations have tended to focus attention on the direction of causality between exports and economic growth using Granger causality tests. Jung and Marshall (1985) used Granger causality tests and found support for export-led hypothesis only for four out of thirty seven developing countries considered. In the case of three countries, there was found a statistically significant relationship from output growth to export growth.

Jung and Marshall (1985) further reported that in the 1960s and 70s, a large number of studies were conducted to test the ELG hypothesis. A vast majority of these studies revealed that exports was driving growth in the countries studied and hence, recommendations were made that trade policies in these countries should be oriented towards export promotion. These early studies mainly performed Ordinary Least Squares (OLS) regression and simple correlation coefficient tests, using a growth variable (as the dependent variable) and an export variable (as the independent variable).

Voivodas (1973) conducted a cross-country study of 22 Least Developed Countries, using time series data from 1956 to 1967, to test the export promotion hypothesis. This study regressed real GDP growth against real exports (as a share of real GDP), as well as some country specific dummy variables, and found that exports were causing growth in all the countries studied.

Michaely (1977) did a cross-country study of 41 countries to examine the ELG proposition. The author used time series data from 1950 to 1973 and performed simple rank correlation tests, using growth in Gross National Product (GNP) per capita and growth in exports (as a share of output). The results showed that exports growth was driving GNP growth in all the countries studied.
Balassa (1978) also undertook a cross-country study of 10 developing countries to test for the ELG hypothesis. He used two different time periods (1960-66 and 1967-73) and regressed GNP growth against real exports growth, labour force growth, domestic investment (as a share of output) and foreign investment (as a share of output). Like the preceding studies, the results of his study also found that real exports growth was causing real GNP growth.

In another study, Fajana (1979) used time series data (from 1954 to 1974) for Nigeria and regressed real GDP growth against real exports (as a share of real GDP), and growth in the trade and current account balances. The results showed significant support for the export promotion hypothesis in Nigeria for the review period.

Ram (1987) also undertook a cross-country study of 88 developing countries to test the ELG hypothesis. Fiji was one of the 88 developing countries studied by Ram. Undertaking a simple OLS regression of real GDP growth against real exports growth, population growth, real investment (as a share of output), and a dummy variable to take into account the effects of the 1973 oil price hikes, he showed that out of the 88 developing countries studied, 39 (including Fiji) had experienced ELG from 1960 to 1982.

Silaghi and Loana (2006) investigated the relationship between trade and economic growth for the case of Romania, during 1998-2004. She used cointegration and Granger Causality tests on stochastic systems composed of exports, imports and GDP. Exports were found not to Granger cause GDP, but the relationship was inverse. The presence of imports in the stochastic models did not have significant effects.
Ramesh and Boaz (2007) tested export led growth hypothesis in Kenya using autoregressive distributed lag (ADRL) bounds test approach for Kenya. The results indicated that there existed a long-term relationship between GDP and exports.

Axfentiou and Serletis (1991) found out that ELG hypothesis was verified in countries like Asian tigers as South Korea, Singapore, Taiwan, and Malaysia but also for less developed countries as Latin America or some countries from Africa. In many countries, there was evidence of economic growth led export (GLE), which means that in these countries, the economic growth is determined by exports (e.g. Norway, Japan, and Canada on the period 1950-1985).

Ahmad and Kwan (1991) investigated causal link between exports and economic growth in 47 African countries. They made use of pooled time series and cross sectional data from 1981-1987 using Granger causality test and an error correction model. The results supported the notion that no causation existed between exports and economic growth or vice-versa in the African countries. However, the authors found that in some low-income African countries, weak causation runs from economic growth to exports.

Using data for 87 countries, Hakura and Jaumotte (1999) found that trade indeed serves as an important way for the international technology transfer to developing countries. The two authors show that intra-industry trade plays a more important role in technology transfer than inter-industry trade. The literature reveals that many studies have been done on the economies of developed countries and very little on the developing economies, much less on African economies. Studies (World Bank, 1991, Elias, 1990) that have examined the growth experience
of developing countries show that the growth of labour and capital inputs and productivity changes of these inputs have amounted for the output growth.

Ghura's (1997) study of Cameroon's growth performance used an endogenous growth model, which comprised investment, human capital and policy variables, which he found to substantially influence economic growth. He categorized investment into public and private, with both type influencing growth.

Coe and et al (1995) described two broad ways in which foreign trade boosts domestic productivity: by making available products that embody foreign knowledge and by making available useful information that would otherwise be costly to acquire. Both are particularly important for less developed countries that lag far behind the technology frontier.

Quah and Rauch (1990) developed a model in which importation of intermediate and capital goods removes bottlenecks in the economy. Therefore international trade help in removing these bottlenecks and enables higher growth rates.

Keong, Yusop and Sen (2005) used bounds test approach to test the validity of export led growth hypothesis in Malaysia. Both exports and labour force were found to have stimulated positive adjustment to economic growth, whereas imports, exchange rate and the East Asian financial crisis were found to influence growth negatively. Moreover, a cointegrated relationship between exports and economic growth was determined in both the long run and short-runs. Further, the analysis showed that exports Granger-caused economic growth in the period of study.
 Moyi and Kimuyu (1999), in their study titled Revealed Comparative Advantage and Export Propensity in Kenya also analyzed and confirmed domination of resource based products in the composition of exports and pointed to the fact that Kenya was losing its exports position in the international market arena. It also concluded that exports promotion incentives would have greater impact if they targeted food processing and metal working enterprises- an assumption or impression of achieving higher economic growth there after. These two studies, (Wagacha and Kimuyu, 1999) concur that export performance was deteriorating and called upon the stakeholders to be on the watch out if exports was to bring meaningful development.

Sharma and Dhakal (1994) used six variable Granger causality on natural logarithm of real GDP and exports, with testing for unit root and choosing lag lengths based on Akaike’s Final Prediction Error (FPE) criterion. They found support for the Growth Led Export (GLE) hypothesis in the case of Tunisia, Egypt, and Morocco, but no casualty for Turkey. Reizman et al. (1996) found support for ELG when using bivariate Granger casualty test in the cases of Algeria, Egypt, and Tunisia but no evidence of casualty in the case of Israel, Jordan, Morocco, Sudan or Turkey. However, with the inclusion of imports as an additional variable in the trivariate system they obtained different results. ELG was supported only in the cases of Jordan and Sudan while no casualty was detected for the test of the Middle East and North Africa (MENA) countries in the sample.

When Campa and Goldberg (1997) collected facts on external orientation of particular industries in four counties (United States, Canada, United Kingdom and Japan) they presented, beside exports and imports figures, shares of imported inputs relative to total inputs used in domestic production. Their work points to a growing dependence on imported input in the
production of nearly all manufacturing industries in Canada, the United Kingdom and the United States.

Hummels et al (1899) argue that the increase in the use of imported inputs is the link between rising international trade volumes and increasing international production. They found in case studies and an input – output – table analysis a large and increasing share of trade that can be attributed to vertical specialization based trade. This share differs among countries. Larger countries show lower levels of vertical specialization than small countries, since large countries can more easily support every stage of production in many differentiated goods. Hummels et al also reported sectoral differences with machinery and chemicals having the largest contribution to the increase of vertical specialization based trade relative to total trade.

Kim and Hwan (1999) examined among others, the consequences and causes of export led growth policy comparing Korea and Chilean economy in his study entitled: Export-Led Growth: Consequences and Cases, A Comparative Study of Korea and Chile. The study found out that Chile like other Latin American countries started on an ambitious industrialization program based on import substitution and the economy of Chile grew quite well in the early stages (1937-1950) as the manufacturing sector was able to register an average annual growth rate of about 7%. The Chilean government used trade restrictions and exchange controls as devices to stimulate growth of domestic import-competing industry and to reduce pressure upon the balance of payment.

Smith (1999) analysed the case of Costa Rica using annual data for the period 1950-1997 to ascertain the export-led growth hypothesis (ELGH) that postulates that export growth is one of
the key determinants of economic growth. The study went beyond the traditional neoclassical theory of production by estimating an augmented Cobb-Douglas production function and included exports as a third input to provide alternative procedure with a view to capturing total factor productivity (TFP) growth. The study equally went beyond the traditional time series and examined empirically the short-term as well as the long-run relationship between trade and growth.

In testing the hypothesis using several procedures (mainly econometric techniques and time series data), the study found that ELGH was valid for Costa Rica; however, the empirical results showed that physical investment and population mainly drove Costa Rica’s overall economic performance from 1950 onwards. From other related literature the study concluded that the relationship between trade and growth was not that robust but observed that exports have positive effect on the overall rate of economic growth and could be considered an “engine of growth” as advocated by the ELGH proponents.

In general however the study challenged the empirical literature regarding the ELGH and expressed serious doubts with regard to promoting exports as a comprehensive development strategy. From this study therefore it is evident that export led growth is probably of benefit but only for a limited number of developing countries and only to a certain extent. This is another justification to the problem statement and hypothesis of this study and the next task is to find out whether export-led growth policy is appropriate to Kenya as a developing country and if so; to what extent should be gauged.

Xu (1996) used a co integration and ECM approach but could not establish evidence for long term relationship between exports and economic growth for Israel, Morocco, Tunisia and...
Turkey. However, he confirmed GLE in the cases of Israel and Tunisia, a feedback relation in
the case of turkey but no causality for Morocco. Dutt and Ghosh (1996) using tests based on
Engle Granger (EG) cointegration and causality based on ECM for the period 1953-1991 point to
the existence of cointegration and causality from exports to growth in the cases of Israel and
turkey, evidence that supports the ELG hypothesis. They found bidirectional causality between
exports and growth in the case of Morocco.

2.3: Overview of Literature

Overall, therefore, it is well established that for many developing countries, trade is an important
element in their integration into the international economy, which, in turn, helps stimulate their
economic growth process.

To ascertain if an increase in trade volume positively affect economic growth, a study by Sohn
and Lee (1990) has shown how use of different definitions of trade and failure to isolate the
impact of trade on economic growth are responsible for the ambiguity on the relationship
between trade and growth. They therefore introduced five (5) trade variable structures to address
the problem and also identified appropriate theories that relate trade structure and economic
growth or productivity.

From literature, ELG hypothesis reflects the view that export-oriented policies help to stimulate
economic growth. Export expansion can be a catalyst for output growth both directly, as a
component of aggregate output, as indirectly through efficient resource allocation, greater
capacity utilisation, exploitation of economies of scale, and stimulation of technological
improvements due to foreign market competition.
The review of empirical literature shows that there is no consensus regarding the relationship between exports and GDP growth. At the centre of this debate is the question of whether strong economic performance is export-led or growth led (Awokuse, 2003). Previous empirical studies have produced mixed and conflicting results on the nature and direction of the causal relationship between export growth and output growth. Most of the studies on the causal link between export growth and output growth have been carried among the developing countries than in developed countries. Export led growth hypothesis has been tested for Kenya in studies that also involved other countries such as those of Jung and Marshall (1985) and specific to Kenya by Ramesh and Boaz (2007).
CHAPTER 3

3.1 Theoretical foundation of the study

The general theory behind trade and growth provides a broad set of predictions. The origins of the theoretical literature about trade and growth are absolute and comparative advantage. The static gains from trade stem from the basic fact that countries are differently endowed with resources (natural and acquired) and because of this the opportunity cost of producing products varies from country to country.

3.1.1: Theory behind the empirical model to be used in the analysis

The theory behind the model to be used in the analysis emanates from the basic principle that gross domestic product (GDP) is a measure of a country's economic performance. It is measured in three ways that is; the national income, output/valued added method and finally the expenditure method.

The most common approach to measuring and quantifying GDP is the expenditure method where GDP = private consumption + gross investment + government spending + (exports-imports), or, GDP = C + I + G + (X - M).

Since GDP or national income (Y) is a function of aggregate total consumption (C), investment (I), government purchases (G) and net exports (NX) \( Y = f(C+I+G+NX) \), this study adopts a linear model to examine the impact of both public and private investment, government expenditure, foreign aid, imports and exports to the GDP. The study, however, focuses on the contribution of international trade (imports and exports) to the GDP.
3.2: Empirical model specification

The empirical model that will be estimated in this study is specified as follows:

\[ \ln GDP_t = \alpha_0 + \beta_1 \ln IMP_t + \beta_2 \ln EXP_t + \beta_3 \ln PIV_t + \beta_4 \ln ODA_t + \beta_5 \ln PIN_t + \beta_6 \ln GEX_t + \epsilon_t \]

Where:

- \( \alpha_0 \) and \( \beta_0 \) = Constant term
- \( \beta \) = Shift parameters
- \( \ln IMP_t \) = The natural logarithm of yearly imports in Million Ksh. at period \( t \).
  The basket of imports in this case comprises of finished, intermediate and capital goods. Depending on the category of imports, they may impact on the GDP positively or negatively.
- \( \ln EXP_t \) = The natural logarithm of yearly Exports in Million Ksh. at period \( t \).
  The basket of Kenya’s Exports comprises of mainly agricultural products. It is expected that exports will impact on the GDP positively.
- \( \ln GDP_t \) = The natural logarithm of Growth of Real GDP in Million Ksh. at period \( t \).
  The GDP being a function of aggregate total consumption (C), investment (I), government purchases (G) and net exports (NX), it is expected that it will have a positive correlation with all the independent variables in the model.
- \( \ln ODA_t \) = The natural logarithm of Growth of Foreign Aid in Million Ksh. at period \( t \).
Since foreign aid is used to fund various development projects such as infrastructural development it is expected to have a positive impact on the GDP.

\[ \text{LNPIV}_t = \text{The natural logarithm of Growth of Private Investment in Million Ksh. period } t. \]

With the current government policy that calls for private sector to be the engine of economic growth, it is expected that total private investment should play a pivotal role in the economic growth of Kenya.

\[ \text{LNPIN}_t = \text{The natural logarithm of Growth in Public Investment in Million Ksh. at period } t. \]

Public investment is included as a measure of the growth in the capital stock, and is therefore expected to be positively related to growth.

\[ \text{LNGEX}_t = \text{The natural logarithm of Growth in Government expenditure in Million Ksh. at period } t. \]

Government spending may comprise of for instance the purchase of goods and services intended to create future benefits such as infrastructure investment or research spending and it is thus expected to positively impact on the GDP.

\[ \xi_t = \text{random variable} \]
From the above model, this study will employ the Ordinary Least Squares Regression method to find out and measure the linear association between the dependent variables and independent variable. However, it should be born in mind that even though regression and correlation are mathematically related, regression assumes that the dependent (or criterion) variable, Y, is predicatively linked to the independent (or predictor) variable. Regression analysis attempts to predict the values of a continuous, interval-scaled dependent variable from specific values of independent variable. For the case of the study, the dependent variable is GDP which is determined by the independent variables such as values of exports, imports, private investment, Government expenditure, Foreign aid and public investment.

This method is chosen because of its simplicity, convenience and the fact that other scholars in various past studies have successfully used it.
3.3: Data Type and Source

This study used time series data on real Gross Domestic Product, Government expenditure, Public investment, Private investment, Foreign aid, Exports, Imports and. The sample period chosen for this study was from 1975 to 2007. All variables in this study were analysed in natural log form.

The data was obtained from several sources primarily from the UN COMTRADE, August 2008 Data base and various issues of economic survey, Statistical Abstracts as well as the export promotion agencies.

3.4: Limitations of the Study

Since the data used in the study are secondary, they may bear some weaknesses for instance; questionable sample size that the study could not determine and elements of accuracy that could have been compromised.
CHAPTER 4: RESULTS AND DISCUSSION

This chapter presents the results and findings of the study. The study was carried out to investigate the impact of international trade on economic growth in Kenya. The data used in the regression analysis is shown in appendix 1.

4.0: Result of Regression Analysis

The study has examined the role of exports on Kenya’s economic growth vis-à-vis other components of the GDP over a span of about twenty two years. The study has also examined the impact of imports on economic growth.

The Pearson correlations as shown in appendix 2 shows that all the independent variables have a positive correlation with the dependent variable (GDP) and therefore they are fit for the model.

The results support the hypothesis that Kenya's participation in International trade through her Export Led Growth strategy has increased the probability of achieving rapid economic growth as shown in figure 4.1 and 4.2 below.

Figure 4.1: Model Summary (b)

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of Estimate</th>
<th>Change Statistics</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R</td>
<td>R Square</td>
<td>Adjusted R Square</td>
<td>Std. Error of the Estimate</td>
<td>R Square Change</td>
<td>F Change</td>
</tr>
<tr>
<td>1</td>
<td>0.998a</td>
<td>0.995</td>
<td>0.994</td>
<td>0.092773177</td>
<td>995</td>
<td>926.601</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), LN(GOVT EXPENDITURE), LN(PUBLIC INVESTMENT), LN(PRIVATE INVESTMENT), LN(FOF), LN(IMPORTS)

b. Dependent Variable: LN(GDP)

Figure 4.2:
### Coefficients (a)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig</th>
<th>95% Confidence Interval for B</th>
<th>Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std Error</td>
<td>Beta</td>
<td></td>
<td>Lower Bound</td>
<td>Upper Bound</td>
</tr>
<tr>
<td>(Constant)</td>
<td>5.492</td>
<td>.773</td>
<td></td>
<td>7.107</td>
<td>.000</td>
<td>3.904</td>
</tr>
<tr>
<td>LN(IMPORTS)</td>
<td>-.127</td>
<td>.138</td>
<td>-.138</td>
<td>-.916</td>
<td>.368</td>
<td>-.411</td>
</tr>
<tr>
<td>LN(EXPORTS)</td>
<td>.540</td>
<td>.118</td>
<td>.564</td>
<td>4.591</td>
<td>.000</td>
<td>.298</td>
</tr>
<tr>
<td>LN(PRIVATE INVESTMENT)</td>
<td>-.007</td>
<td>.159</td>
<td>-.002</td>
<td>-.046</td>
<td>.964</td>
<td>-.334</td>
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<tr>
<td>LN(FOREIGN AID)</td>
<td>.256</td>
<td>.056</td>
<td>.274</td>
<td>4.778</td>
<td>.000</td>
<td>.152</td>
</tr>
<tr>
<td>LN(PUBLIC INVESTMENT)</td>
<td>-.461</td>
<td>.170</td>
<td>-.104</td>
<td>-2.710</td>
<td>.012</td>
<td>-.810</td>
</tr>
<tr>
<td>LN(GOVT EXPENDITURE)</td>
<td>.387</td>
<td>.095</td>
<td>.398</td>
<td>4.066</td>
<td>.000</td>
<td>.192</td>
</tr>
</tbody>
</table>

**Dependent Variable: LN(GDP)**

Based on the analysis and Tables 4.1 and 4.2 above, the regression equation is:

\[
\ln GDP_i = 5.492 - 0.138 \ln IMP_i + 0.564 \ln EXP_i - 0.002 \ln PIV_i + 0.274 \ln ODA_i - 0.104 \ln PIN_i + 0.398 \ln GEX_i
\]

### Interpretation/Findings of the Study

(i) The adjusted R² is 0.994; this shows that 99.4% of variations in the depended variable (GDP) are explained by the independent (explanatory) variables included in the model.

(ii) A unit increase in the volume of imports results to a decrease in GDP by 0.138 holding other explanatory variables constant. The t-value for imports is -0.916 which is neither greater than +2 nor less than -2 and the significance value is 0.368 which is greater than 0.05; this implies that imports are statistically insignificant to the GDP.
The negative correlation between imports and GDP could be probably due to the composition of the basket of imports which may be finished products which may have little effect on the GDP.

This finding is in line with what other researchers have found out especially a study by Silaghi and Loana (2006) which investigated the relationship between trade and economic growth for the case of Romania, during 1998-2004 where the presence of imports in the stochastic models did not have significant effects.

(iii) A unit increase in the volume of exports leads to a 0.564 increase in GDP holding other explanatory variables constant. The t-value for exports is 4.591 which is more than 2 and the significance value is 0.000 which is less than 0.05; this implies that exports are statistically significant to the GDP.

The implication of these results is that exports have a greater positive impact on the GDP. This result is consistent with the findings of other researchers as earlier presented in the literature review, for instance a study by Ramesh and Boaz (2007) which tested export led growth hypothesis in Kenya using autoregressive distributed lag (ADRL) bounds test approach for Kenya where the results indicated that there existed a long-term relationship between GDP and exports. In the study by Axfentiou and Serletis (1991), the economic growth was found to be determined by exports in Norway, Japan, and Canada on the period 1950-1985).

(iv) A unit increase in private investments leads to a 0.002 decrease in GDP holding other explanatory variables constant. The t-value is -0.046 which is neither greater than +2 nor less than -2 and the Significance value is 0.964 which is greater than 0.05; this implies that Private investments are statistically insignificant to the GDP.
This negative relationship between the private investments and GDP could be explained by the fact that most private investors in the country could be foreigners who are repatriating the proceeds of their investments back to their home countries.

(v) A unit increase in Foreign Aid is associated with a 0.274 increase in GDP holding other explanatory variables constant. The t-statistics for the growth of foreign aid is 4.778 which is more than 2 the significance value is 0.000 which is less than 0.05; this implies that foreign aid statistically significant to the GDP.

The positive relationship between Foreign aid and GDP could be due to the fact that foreign aid is directed to; the productive sectors of the economy such as agriculture, infrastructural development which support the productive sectors and it may also be directed to Research and Development which produces the quality that contributes to the GDP. This therefore explains the positive impact of foreign aid to the GDP.

(vi) A unit increase in public investments is associated with a 0.104 decrease in GDP holding other explanatory variables constant. The t-value for public investments is -2.710 which is less than -2 and the significance value is 0.012 which is less than 0.05; implying that public investments are statistically significant to the GDP.

The negative relationship between private investments and GDP could be as a result of the government investing more in non-productive sectors of the economy.
A unit increase in the volume of Government expenditure is associated with a 0.398 increase in GDP holding other explanatory variables constant. The t-statistics for Government expenditure is 4.066 which is more than 2 and the significance value is 0.000 which is less than 0.05; this implies that Government expenditure is statistically significant to the GDP.

The positive relationship could be explained by the fact that when the government increases its expenditure for instance on infrastructural development, employment opportunities are promoted thus stimulating the economic growth.
5.1. Conclusions

The study has investigated the impact of international trade on Kenya’s economic growth by specifically examining the role of exports on Kenya’s economic growth vis-à-vis other components of the GDP over a span of about twenty two years and also the impact of imports on economic growth.

The study has found out that exports have a greater positive impact to the GDP than the other components. This is further exemplified by the statistical significance of exports to the GDP. It has also been found out that imports have a negative correlation with the GDP and are statistically insignificant.

For the other components of the GDP, the study found out that Government expenditure and Foreign aid were positively correlated with the GDP and statistically significant. Public investments though statistically significant, were found to be negatively correlated to the GDP. Finally, Private investments were found to be negatively correlated to the GDP and statistically insignificant.
Based on the above findings, the study concludes that: Kenya’s economic growth is strongly influenced by international trade, particularly exports and therefore, if the country wishes to pursue a high rate of economic growth, then it has to increase her exports. On the other hand, the import basket could be mainly finished products with little impact on the GDP.

Further, an increase in government expenditure and more foreign aid is vital for economic growth. The findings on public investment could be due to the fact that the government may be investing more in non-productive sectors of the economy. Finally, private investments does not necessarily lead to economic growth.
5.2: Recommendations

Based on the above study findings and conclusions, the study recommends that the government should enhance export promotion activities by developing sectors with high export potential to realise the economic growth of 10% as envisaged in the Kenya Vision 2030. Further, it is important for the government to ensure that export enhancing policies are strengthened with a view of promoting and sustaining Kenya’s economic growth and trade policies should therefore be oriented towards export promotion.

It is of the essence for the government to review its basket of imports so that it can focus on imports of intermediate and capital goods which help in spurring economic growth. Further, sourcing of more foreign aid should be enhanced.

The government may also consider increasing its expenditure especially on infrastructural development. In the same light, resources should be diverted from non-productive sectors to the productive sectors of the economy; and finally, a conducive business environment should be put in place to attract more of the local investors.

5.3: Areas for Further Studies

A study should be undertaken to find out the role of imports /why they are negatively skewed that is, to investigate the negative correlation between imports and GDP.

Another useful continuation of the study could be undertaken to examine the impact of imports of capital and intermediate input goods on the economic growth.
REFERENCES


## APPENDIX 1: DATA USED IN THE REGRESSION

KENYA’S IMPORTS, EXPORTS, PUBLIC INVESTMENT,

### PRIVATE INVESTMENT, GROWTH IN FOREIGN AID, AND GDP (KSH. MILLION) 1975-2007

<table>
<thead>
<tr>
<th>YEAR</th>
<th>GROWTH IN FOREIGN AID</th>
<th>GROWTH IN REAL GDP</th>
<th>GROWTH IN PUBLIC INVESTMENT</th>
<th>GROWTH IN TOTAL INVESTMENT</th>
<th>GROWTH IN GOVT EXPEND.</th>
<th>EXPORTS</th>
<th>IMPORTS</th>
<th>TOTAL TRADE</th>
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<tbody>
<tr>
<td>1975</td>
<td>944.66</td>
<td>38292.78</td>
<td>1890.83</td>
<td>2961.23</td>
<td>4852.06</td>
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<td>1976</td>
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<td>3914.74</td>
<td>6031.23</td>
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<td>6595</td>
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Source: UN COMTRADE, August 2008 Data base

### APPENDIX 2: Correlations
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SOURCES: Central Bureau of Statistics (various), Treasury, and Central Bank of Kenya