

UNIVERSITY OF
NAIROBI

DEPARTMENT OF
ECONOMICS

u AN ANALYSIS OF EXPORTS
CONTRIBUTION TO
ECONOMIC GROWTH IN
KENYA: SOME EMPIRICAL
EVIDENCE (1970 - 2000) /

MA RESEARCH PAPER

by

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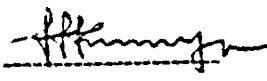
Declaration

This research paper is my original work and has never presented to any University for award of a degree.

Approval

This research paper has been submitted for examination for award of a degree in Masters of Arts in Economic Policy Management with our approval as university supervisors.

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Dedication

I wish to dedicate this paper to my immediate family for the endless support they accorded me, and to my parents who are a great source of inspiration.

Acknowledgement

I wish to thank my supervisors for guidance and advice without which it would have been difficult to complete this paper.

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Chapter 1

INTRODUCTION

1.1 Kenya economy, growth and exports performance

Kenya's economy is primarily agricultural, the single largest sector accounting for about one quarter of GDP and 70 percent of employment. Agriculture also makes an indirect contribution of another 30 percent of GDP through the manufacturing and service sectors while two-thirds of the industrial output are agro-based. Historically, the performance of the agricultural sector in Kenya has been robust, with growth rates of 6.2 per cent in 1965 - 1973, 4.6 per cent in 1974-80 and declining to 2.5 per cent in the period between 1981 and 1987. The situation has worsened since 1988. The agricultural growth rate was 1.6 per cent in the period 1988-1992, and negative in 1992 and 1993 largely due to poor climatic regimes and instability in the coffee, tea, sugar, and dairy and other sub-sectors. Kenya embarked on trade liberalization and export promotion programmes in 1987 in response to a deterioration of export performance over the preceding decade. Merchandise export earnings as a percentage of GDP declined from 19.6 % the 1970s, to 16.97 % over 1980-84 and a then 13.6 %¹ over 1985-89 (reaching an all time low of 11.5% in 1987). Exports surged dramatically in the early nineties, particularly after 1992. Three export promotion schemes, or platforms, were introduced to promote labour-intensive manufactures, namely a bonded warehouse or manufacturing under bond scheme (MUB), Export Processing Zones (EPZs), both targeting new investments, a duty and VAT exemption scheme (known by the acronym EPPO for Export Promotion Programmes Office), targeting existing manufacturers.

Following these initiatives, export earnings jumped from 13 % of GDP in 1992 to over 20 % between 1993 and 1996, indications are that exports earning are on upward trend with \$ 2.1 billions reported in year 2002 and \$ 2.514 billions in year 2003.

The Kenyan economy has thus experienced turns and twists resonating with events in agricultural and other sectors. The country experienced a crunch in power supply, which occasioned a biting cycle of power rationing during the better part of the year 2000, this critically impacted on the manufacturing sector, which had to halve its capacity, forcing most players to effect job cuts while others unsuccessfully attempted to switch to petroleum-based power supplies.

In essence, Kenya's economy is no longer capable of absorbing the more than half a million people who enter the labour market every year, as most sectors are cutting jobs. Unemployment is soaring while incomes accruing to the agriculture-dependent population who comprise majority of Kenya's population, have gone down. Over half of the national population is reported to subsist below the poverty line (Government of Kenya 2000).

Essentially, Kenya's economy has undergone a deep recession in recent years, culminating in an all time low growth rate of minus 0.3 per cent in the year 2000 (Government of Kenya, 2001). The economy is thus in dire need of resuscitation through injection of capital and new investments to reverse declining growth.

In deed Kenya enbacked on Export platforms which are often cited as critical elements of successful entry into developed country markets for labour-intensive manufactures. However, research has thus far not established whether export platforms have been an essential leverage for this success.

The physical challenges to increasing economic growth in an agricultural dependent country are formidable so that the country needs to promote rapid economic growth through public investment, encouragement of advanced technology in farm production, and incentives for private industrial investment, creating enabling environment for multinational corporations and triggering exports.

The emphasis of industrial based strategy is based on the fact that arid and semi-arid land areas constitute about 85 per cent of the country's total land and this makes economic growth through agricultural primary product risky.

Macroeconomic reforms, trade liberalization measures and regional integration have been the key factors behind the recovery of Kenya's manufactured exports. The export surge recorded in the 1992-1994 period coincides with a sharp depreciation of the Kenya shilling (a 25 percent real depreciation of the Ksh/US\$ exchange rate from 1990 to 1993), an even more significant fall in the real average wage (by 39 percent over the same period), and a major shift in the trade regime following the abolition of trade licensing requirements and foreign exchange allocations and restrictions.

These favourable export conditions have not been sustained as both the real Ksh/US\$ exchange rate and the average wage rate in US\$ terms by 1997 had reverted to pre-1990

levels and then, in the case of the exchange rate, exceeded them, which in turn explain the deteriorating, export performance after 1996.

The preferential regional market, Uganda and Tanzania who are partners in the East African Cooperation trading bloc, followed by the wider Common Market for Eastern and Southern Africa (COMESA) accounts for the dominant share of the increase in Kenya's exports.

In fact, the preferential regional market has absorbed over 100 percent of the cumulative increase in processed exports over the 1993-1998, reflecting diversion of trade from the rest of the world to the preferential regional market. Non-COMESA markets accounted for 95 percent of the increase in primary goods exports over the same period. Overall, recorded exports to COMESA increased from a 1990-92 average of 15 percent of the total, to 34 percent in 1996-98.

Besides the regional economic integration initiative, this trend is also a reflection of economic recovery and trade liberalization in the region, hence an overall increase in import demand, alongside a down turn in the Kenyan economy, adding the impetus for Kenyan firms to seek external markets.

Not surprisingly then, the impact of MUB and EPZ platforms, designed to target dedicated export processors for overseas markets, has been, by and large, inconspicuous among exports. The combined cumulative share of exports originating from MUB/EPZ enterprises over 1993-1998 amounts to just over one percent of total exports. By contrast, exporters using the more flexible EPPO duty/VAT exemption programmed have averaged 35 percent of total exports (and this seeming indicate the strategy which is taken is important).

Kenya's hard currency earnings come mainly from coffee and tea exports, and tourism. With major exporters as Uganda 18.3%, United Kingdom 12.9%, USA 8% Netherlands 7.5%, Pakistan 4.95% Tanzania 4.4% Egypt 4%. Additionally, an industrial sector that employs about one-fifth of the formal-economy work force is quite well developed by African standards. From 1960's to 1970's, Kenya achieved average annual GDP growth of 6.6 percent, but more recently its economic performance has faltered. For much of the 1990s, Kenya posted its worst economic performance since independence. Kenya, like

many other developing nations, pursued (total self-sufficiency) through import substitution and this may be the cause of poor performance.

This misconstrued policy, along with rising prices for imported oil, made the manufacturing sector uncompetitive. Misguided agricultural policies, inadequate credit, and unfavorable terms of trade had combined to impede the economic growth. Lack of export incentives, tight import controls and foreign exchange controls made the domestic investment environment still less attractive. GDP essentially stagnated with an outright decline in 1992.

In 1993, the Government acknowledged that its interventionist approach had been counterproductive. It has subsequently taken halting steps toward deregulation, privatization and market-opening reforms.

A mild recovery in 1995-96 moved annual GDP growth into the four percent range, however since 1997, Kenya's economy has mustered such weak absolute growth that GDP per capita has declined.

Kenya Government in 2003/2004 budgets emphasized the need of Economic Recovery Strategy and some of main objectives of this strategy include:

- (i) Reversing declines in per capita income growth.
- (ii) Increasing investments, both private and public while rising
Productivity of capital.
- (iii) Developing a foreign aid policy that targets poverty reduction, avoids
Crowding out the private sector; enhances transfer of technology while
Strengthening and promoting domestic institutions.
- (iv) Channeling more budgetary resources to growth and poverty reducing
areas, while prioritizing and rationalizing resource allocation.
- (v) Promoting exports.

The Economic Recovery Strategy aim to achieve various macro-economic targets, which include:

- (i) An annual average real GDP growth rate of 4.7%.
- (ii) Raising annual investment rate to an average of 17.7% to achieve an
average of investment/GDP ratio of 23.3%.

- (iii) Raising annual savings ratio from 10.7% in 2002 to about 15.8% in 2007 and export growth on annual basis to an average of 5.8%.
- (iv) Maintaining real private consumption growth at about 4.4% and ensuring a decline in consumption/GDP ratio.
- (v) Reducing Government consumption to GDP to a target level of 14% while raising external resources inflows to at least US\$2,221 million a year to cover the savings and investment gap over the next five years.

In fiscal year 2004/5 budget speech, agriculture was said to dominate the economy and contributes substantially to GDP it also account for 80% of rural employment, 60% of export earnings and about 45% of government revenues.

This sector is key to improved export earnings among other things, and for this reason the sector ministry has prepared a Blue Print “ Strategy for Revitalization of Agriculture” (SRA) which will be funded by Government with support of World Bank at US\$ 40 million, of which US\$ 13 million is a grant.

1.2.0 Overview of economic indicators

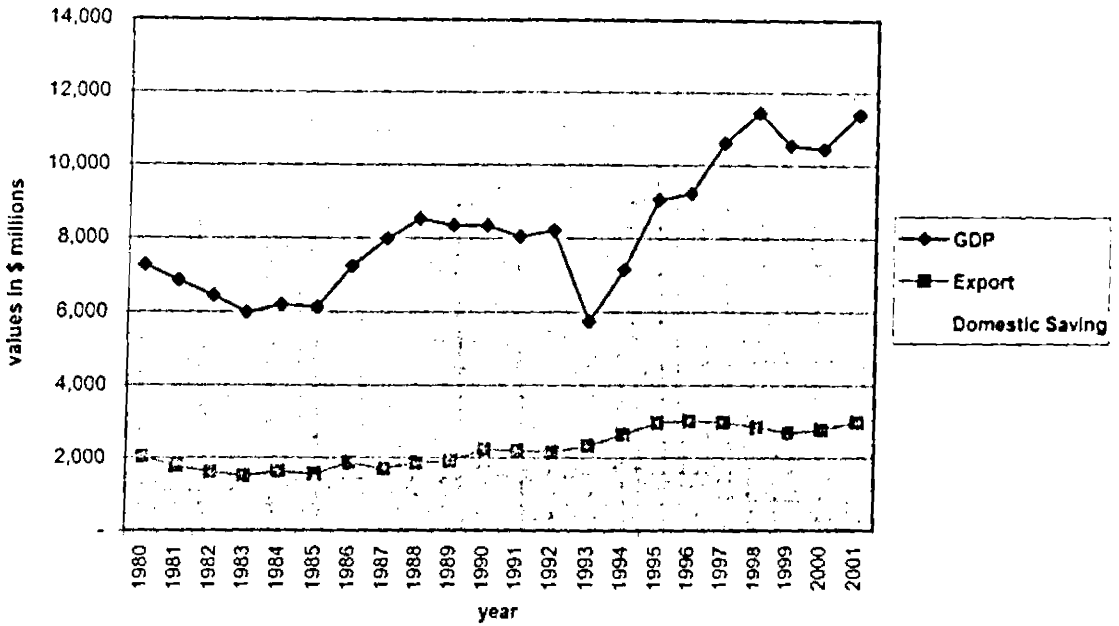
1.2.1 GDP, Export and domestic saving

First, at glance the available statistics show some positive relation between exports GDP and domestic savings (*graph 1*).

However this relation need to be established empirically to get the economic sense, such as exports have a direct effect on the growth of GNP by releasing the foreign inflows and providing the necessary resources to increase savings and production.

Graph 1

Exports ,GDP,Domestic saving and Capital formation



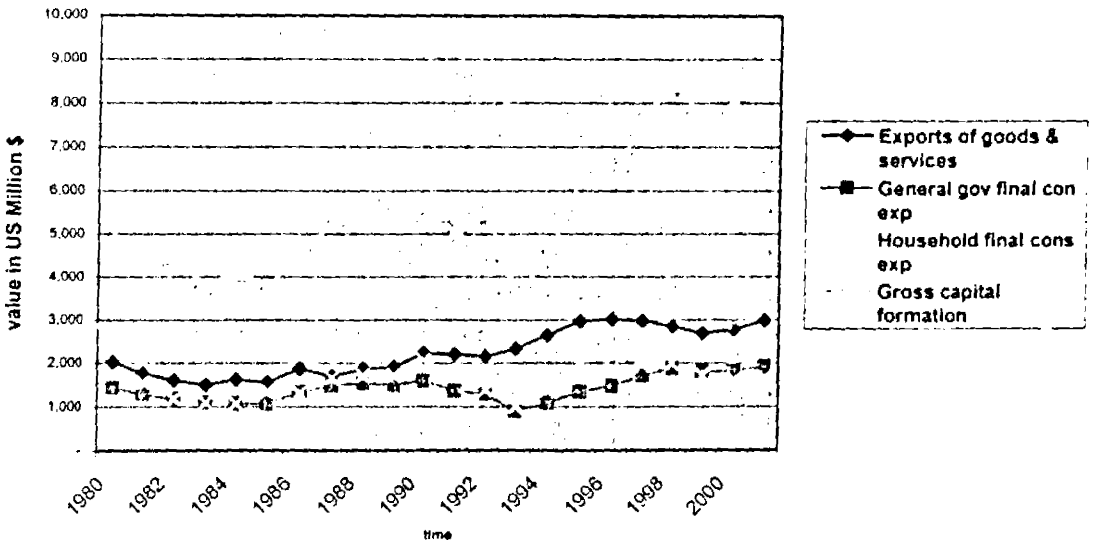
1.2.2: Export , capital formation and expenditures

Secondly, at glance the available statistics show some positive relation between exports, capital formation and expenditures (*graph 2*) such that, exports growth improve the productivity of labor and increase capital formation, by reallocating resources to the country's comparative advantage and by generating economies of scale.

This is based on the basis that if in fact increase in export cause GDP and domestic saving to increase hence increased capital formation which increase investment (production) then its generally expected levels of both government and private expenditure to go high.

Graph 2

Export ,capital formation & expenditure

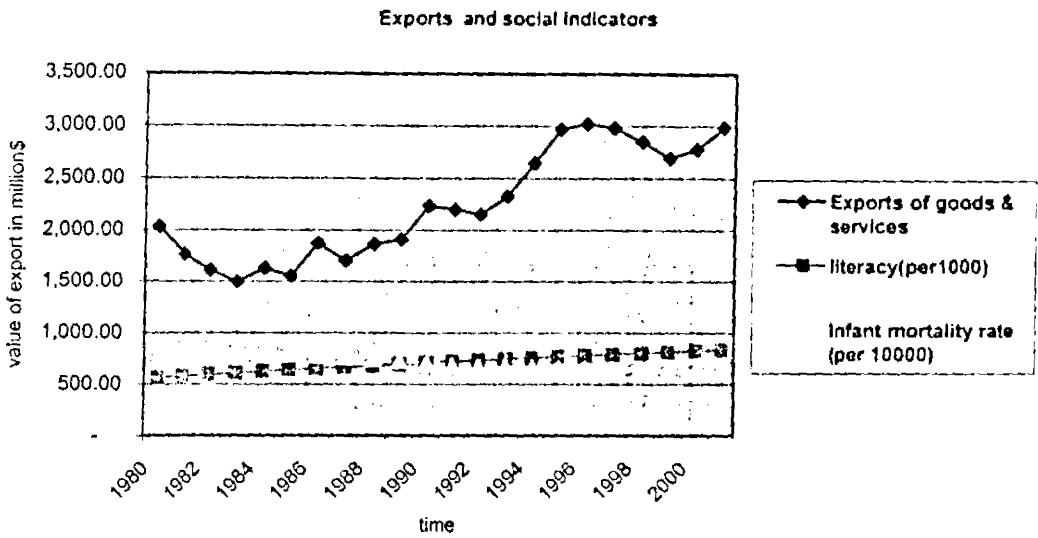


1.2.3: Exports and social indicators

Thirdly, evaluation of whether exports growth improve social indicators such as illiteracy rate, infant mortality rate and life expectant at birth (*graph 3*) which can be termed as indicators of economic development.

This is based on the fact that an increase in exports causes domestic saving to increase and so does capital formation, it is expected that then its generally expected living standard to go high as a result.

Graph 3



1.3 Kenya export incentives at glance

It is of great importance to point out some issues which have direct implications on exports trade.

1.3.1 Kenya trade agreements

Kenya is a member of the Common Market for Eastern and Southern Africa (COMESA). Under COMESA, Kenyan exports are accorded preferential treatment; nominal tariffs are levied in the country of final destination. COMESA member countries are working towards a harmonized taxation system.

Kenya is also a signatory to major international trade agreements such as the United Nations Conference on Trade and Development (UNCTAD), World Trade Organization

(WTO), and the Lome Convention (which provides lowest tariff treatment of Kenyan exports to the European signatories of this accord).

The three east African countries of Kenya, Uganda, and Tanzania have established a protocol, known as the East African Cooperation Treaty, intended to revive the operations of the long-defunct East African Community, the new East African Cooperation (EAC) intends to enhance and promote economic, trade, and development programs within the east African region.

1.3.2 Free trade zones.

Export processing zones are exempted from import duty and VAT on imported plant, equipment, and raw materials. They are accorded a 10-year tax holiday followed by a 25 percent tax levy (as compared to a regular 35 percent corporate tax levy) for the subsequent 10 years. For the first 10 years the zones are exempted from withholding taxes on dividends and non-resident payments. Withholding tax is imposed on royalties, interest, dividends, and management fees.

The manufacturing under bond (MUB) scheme is accorded most of the incentives of EPZs without the requirement of location at predetermined sites. The only requirement for the manufacturer is to reimburse the government all costs of the customs officers and guards at site. In 1996, the Minister for Finance liberalized manufacturing under bond rules to allow tax deductions for purchase of used equipment on leased sites

Exporters are now authorized to retain all their export proceeds in foreign currency accounts with local banks or sell such proceeds to obtain local currency. All restrictions on current account transactions have been removed, including restrictions with regard to the annual maximum amount of foreign exchange remittable.

1.3.3 Exports Compensation scheme

Kenya's Customs and Excise legislation has always had provision for drawing back the import duty content of manufactured exports. These provisions were never effectively utilized, in part because of the demanding administrative requirements of setting up a duty drawback program. Instead, an alternative program providing flat rate compensation

for selected manufactured exports was introduced under the Local Manufactures (Export Compensation) Act in 1974.

The main attraction of this program was its administrative simplicity. Any exporter of eligible goods could claim export compensation payment based on the customs value of the export at the applicable compensation rate, which was typically set in the 10% to 20% range. For a period, a higher compensation rate was paid for incremental exports to further encourage export growth.

Payments for eligible types of manufactured exports were made against customs, shipping and banking documents showing that eligible goods had been exported and the foreign exchange earnings repatriated into Kenya.

Eligible goods are generally manufactured goods expected to have a reasonably high domestic value added, but excluding all natural resources and agricultural produce. Another attractive feature of an export compensation scheme was that it offset the import duty costs of both directly imported raw material and indirectly imported inputs including capital equipment and productive assets.

To keep the program simple, it offers one compensation rate for all eligible export products, this simplicity formed a major critique of the program and a decision to replace it with a duty exemption scheme was adopted as part of the trade reform program in the late 1980s, and it was finally phased out in September 1993, on several grounds.

First, some types of exports were over compensated while others were significantly under compensated and the lowering of import duty rates particularly in the 1990s was resulting in a higher probability of over compensation for a higher share of exports. Second, the scheme benefitted a few large firms, which typically accounted for less than 5% of total exports in 1991 for instance, two firms accounted for over 50 percent of the compensation paid, five firms for over 60 percent, and ten firms for over 70 percent. (Graham Glenday and David Ndii 2002).

1.3.4: Manufacturing Under Bond.

Manufacturing-under-bond (MUB) was established in 1988 under the structural adjustment policy regime. It provided for bonded factories that were allowed duty free import of plant, equipment, spares and raw materials to manufacture goods for export, an

additional investment incentive in the form of favorable income tax treatment of capital expenditures, and following introduction of a (VAT) value added tax which started in 1990, imports by MUBs and their domestic input purchases were zero rated. MUB plant and equipment qualify for 100% write-off against taxable profit in the year they are put into use. Other enterprises in Kenya are offered tax breaks on investment where a proportion of investment for most plant and equipment is expensed immediately and the remainder receives the regular depreciation allowance applicable for the particular type of asset. Initially, the special incentive was limited to new factories, but this was later relaxed to allow bonded manufacturers the flexibility to locate in rented facilities and still get the 100% expensing on machinery and equipment purchases.

The tax break is not transferable that is, an enterprise leaving the scheme or selling the machinery and equipment is liable for income tax to the value of the difference between the standard investment allowance and the preferential rate.

Domestic sales of outputs or raw material require approval of the Commissioner of Customs and are subject to payment of all duties and taxes applicable to similar imports. Control of MUBs requires Customs to physically verify inventories of the imported raw materials the manufactured products, waste and scrap material which in turn requires the factories to meet physical specifications.

There are no restrictions on location as Customs were generally able to provide officers to inspect the factory at desired locations, even though sales into the domestic market are subject to the duties and taxes applicable to imports they are discouraged given that the duty exempt importation of plant, machinery, equipment and spares and preferential capital investment allowance confer advantage over regular domestic factories (Graham G, John .Kennedy and David Ndjii Discussion Paper Number 43, 2000).

1.3.5: Export Processing Zones.

The EPZ scheme was established through the Export Processing Zones Act passed in 1990. It provided a generous incentive package, tailored to attract manufacturers, a corporate tax holiday for the first ten years of operation and a guarantee of concessional rate for the next ten years duty and VAT waiver on imports of plant equipment and raw materials.

Exemption from foreign exchange controls, and expedited licensing at reduced business license fees, they are exempt from rent and tenancy controls but no waivers from labor legislation.

The exemption from foreign exchange controls would have been a significant attraction to set up EPZ enterprises especially to attract foreign direct investment, but this changed with the liberalization of the foreign exchange markets in 1993-94.

EPZ sales are treated as exports, but sales from the EPZ to Kenyan businesses are treated as imports for duty and VAT purposes duty exemption on capital equipment and the income incentives however, give the EPZ Company an advantage over other domestic producers supplying the local market.

(Graham Glenday David Ndiu CAER II Discussion Paper No. 75(2000)) .

1.3.6: Export Promotion Programmes Office.

This program was introduced in 1990 to provide export incentives to manufacturers primarily serving the domestic market. The program became fully operational by 1993 it offers duty and VAT exemptions to imported inputs physically incorporated in the exported product or consumed in the production of the export, It excludes exemptions for plant, equipment and machinery.

Initially, any business with confirmed export orders or with a documented track record of exports could apply for duty free imports to meet these actual or expected export orders.

Firms are required to provide input-output ratios to support their applications.

They are required to reconcile the duty exempt imports with goods produced and exported (including sales to EPZ enterprises or MUB export businesses) after exportation or within nine months of exemption approval, or otherwise re-export, apply for a rollover of the exemption or pay the applicable taxes.

Over time, the program has been enhanced to improve its effectiveness in reducing negative protection of domestic manufacturers. (Graham Glenday and David Ndiu 2002).

1.4.0: THE RESEARCH PROBLEM.

The Kenya economy has been experiencing slow economic growth and economic growth averaged 2% between 1990 and 2001.

During this period, savings and investment declined steadily (for example savings and investments stood at 17.1% and 21.8% respectively in 1995 and they declined to 7.6% and 16.8% respectively by end of 2000).

At this time poverty stood at 56% of the population and foreign inflows was declining making Kenya a net exporter of capital, this means Kenya has been paying more to the rest of the world than she has been receiving by way of inflows.

It is unfortunate that this situation has continued for so long, thus draining the country of financial resources she desperately need and this trend need to be reversed. (Kenya Govt budget Fiscal, Year 2003/2004).

The economic performance appears to be deteriorating and urgent measures need to be taken. Inadequate export earnings have to be considered as one of the main obstacles to sustainable economic growth because it causes disruptions in the investment planning process and has negative effects on the productivity of capital and allocation of resources. On this basis an evaluation of export contribution to economic growth need to be done and this is the motivation for the research.

1.4.1: Objective of study

The study analyses the contributions of export to economic growth in Kenya, bearing in mind that the economic success of the Asian NICs (newly industrializing countries) has prompted other countries in the region to pursue aggressive export promotion strategies.

Some of these countries have achieved rapid economic growth eg South Korea's export expansion in the 1960s to 1970s was spectacular and this can serve as a model for the export oriented strategy to achieve economic growth.

The major question addressed in this paper is whether exports have helped economic growth in Kenya for the last 20 yrs from 1970-2000

1.4.2: Hypothesis

- i) Exports and GDP are not co integrated.
- ii) Export growth does not cause GDP growth.

2.0: Literature review

The nature of the relationship between exports and national output growth has been most debated in the recent past, (Love 1992, Marin 1992, McCombie 1998). There is a large literature on the empirical investigation of the export lead growth hypothesis, as well as investigations using Granger (1969) causality and the Sims' (1972) methods.

The theoretical rationale for this can be summarized as follows (Abdulnasser and Manucehr 2000):

- a) Keynesian argument that an increase in exports leads via the foreign trade multiplier to output expansion.
- b) Exports relax the binding foreign exchange constraint to allow increases in imports of capital and intermediate goods, leading in turn to economic growth.
- c) Exports enhance efficiency through competition.
- d) Competition gives rise to economies of scale and diffusion of technical knowledge in production, which are potentially important sources of growth.

Thus, international trade and development theory suggests that export growth contributes positively to economic growth.

There is the well known argument about the greater effectiveness of export-oriented industrialization (EOI) Bhagwati (1982), as compared to import substituting industrialization (ISI) [Prebisch (1986); Myrdal (1957)]. ✓

There have been several studies that have found some association between exports and output (GDP) levels. Studies focusing on aggregate production functions that included exports as an explanatory variable have been conducted [Feder (1982)], there have been studies on the existence of a threshold effect as well [Kavoussi (1984), Moschos (1989),

Kohli (1989)].These have been supplemented by causality tests [Jung and Marshall (1985), Chow (1987)].

The idea that export growth is one of the major determinants of output growth (viz. the Export lead growth (ELG) hypothesis) is a recurrent one. Export growth may affect output growth through positive externalities on non- exports, through improved production techniques, increased scale economies, improved allocative efficiency and dynamic competitiveness.

Incentives to increase investment and improve technology this would imply a productivity differential in favour of the export sector, it is thus argued that an expansion of exports even at the cost of other sectors will have a net positive effect on the rest of the economy.

The fact that strong correlation exists between exports and real GDP growth has been well documented in the literature. But previous empirical studies have produced mixed and conflicting results on the nature and direction of the causal relationship between export growth and output growth.

Studies such as Jung and Marshall (1985), Chow (1987) Greenaway and Sapsford (1994) and Love (1992) have cast some doubt on the validity of the ELG hypothesis. Others such as Henrique and Sadorsky (1996) Ghatak et al (1997) and Nidugala (2001) provide fairly robust evidence in favour of the ELG hypothesis.

Export-lead growth (ELG) is an economic development strategy in which export and foreign trade in general play a central role in a country's economic growth and development.

Export growth hypothesis reflects the view that export-oriented policies help stimulate economic growth in that export expansion can be a catalyst for output growth both directly, as a component of aggregate output as well as indirectly through efficient resource allocation, greater capacity utilization and stimulation of technological improvement due to foreign market competition.

Exports provide foreign exchange that allows for increasing levels of imports of capital goods and intermediate goods that in turn raise the growth of capital formation and thus stimulate output growth (Balassa 1978).

Export growth through expanded market base allows the exploitation of economies of scale for open economies and promotes the transfer and diffusion of technical knowledge in the long run (Helpman and Krugman 1985).

Export growth is said to result in increased output, employment and consumption, all of which lead to an increase in the demand for a country's output (Jung and Marshall, 1985).

Export markets remain important because small domestic markets do not sustain the rates of growth required for improvement of welfare but a buoyant export sector enlarges the domestic market so that firms achieve economies of scale and thus lower unit costs. This may be expected because an export sector allows a country to trade along its lines of comparative advantage specializing not only in commodities that use its abundant factors intensively, but also where its per unit costs are lower (Tyler, 1981).

This generally leads to efficient resource allocation and efficiency is further enhanced by exposure to international competition, which forces firms to adopt modern technology.

Export also benefit a country with positive export externalities which lead to increased productivity and economic growth (Bradford, 1994; Feder, 1982; Sengupta and Espana, 1994) Outward orientation makes countries grow faster and permits use of external capital for development without the problem of servicing external debt. Exports also concentrate investment in activities in which a country enjoys definite advantages and exposure to international competition encourages operational discipline that reduces costs and promotes efficiency.

2.1.1 Export-driven growth hypothesis

The export-driven growth hypothesis is based on applied growth theory this hypothesis sees exports as a key factor in promoting productivity. According to Marin (1992), the growth of exports has a stimulating influence across the economy as a whole in forms of technological spillovers and other externalities. "Exports might exert these externalities because export industries are seen to be prime candidates to lead for various reasons, exposure to international markets calls for increased efficiency and provides incentives for product and process innovation, the increase in specialization allows the exploitation of economies of scale (Marin, 1992, pp 78-88)".

This hypothesis suggests that export growth will cause economy-wide productivity gains. Marin (1992's) empirical results also support the export-lead growth hypothesis for U.S.A, Japan, U.K. and Germany.

2.1.2: Growth-driven export hypothesis

The growth-driven export hypothesis is based on neoclassical trade theory.

Neoclassical trade theory suggests a causal link that runs from home-factor endowment and productivity to the supply of exports. This hypothesis suggests that market power achieved through innovation determines performance in export markets. In other words research and development races between firms determine the rate of product innovation.

According to Bhagwati (1988), economic growth leads to a corresponding trade growth, unless the pattern of growth-induced supply and corresponding demand creates an antitrade bias.

Henriques and Sadorsky (1996) examine the export-lead hypothesis for Canada by using a vector auto-regression (VAR), they found that there is no evidence supporting the export-lead hypothesis but on the other hand, their results suggested that economic growth influences export growth.

Ahmad and Hamhirum (1996) investigated the causal relationship between exports and economic growth for countries of the Association of South East Asian Nations (ASEAN), they found that it is domestic economic growth that causes export growth in all member countries of the ASEAN, rather than growth being export-lead.

2.1.3 Two-way causality hypothesis

The two-way causality hypothesis is based on theories of intra-industry trade, the theory of intra-industry trade proposes the causality between productivity and exports in both directions. According to Marin (1989) theories of intra-industry consider productivity increases through the realization of static economies of scale as the cause of trade between countries with similar factor endowments. Besides the positive causal influence of scale economies on exports, trade will tend to increase average productivity of a country, if in response to a disturbance the market structure changes towards more

concentrated declining cost industries and a larger proportion of resources in declining cost industries.

Ekanayake (1999) examines the causal relationship between exports and economic growth for eight Asian developing countries using annual data from 1960 to 1997 and found that there is a two-way causality between exports and economic growth in seven of eight countries considered.

Shan and Sun (1999) test the export-lead growth hypothesis using quarterly time series data for the US economy and found two-way causality between output and exports.

2.2.1 Feder's Export lead Growth Models

Feder used 31 countries data (for 1964-1973 average), and found that coefficients (externalities and marginal productivity) are positive and significant.

Feder's two sector Model

Where

-N is non export sector.

-X is export sector.

-K is capital

-L is labour

$$N = F(K^N, L^N)$$

$$X = G(K^X, L^X)$$

$F > 0$ (Non-Export sector)

$G > 0$ (Export sector)

Sector X Marginal Productivity

$$G_k / F_k = G_L / F_L = (1 + \delta) \quad (\delta > 0)$$

The Feder's Model

$$y = N + X \Rightarrow \Delta y = \Delta N + \Delta X$$

$$\Delta N = F_k \Delta K^N + F_L \Delta L^N + F_c \Delta Y$$

$$\Delta Y = G_K \Delta K^x + G_L \Delta L^x$$

$$\text{As } G_K = (1 + \delta)F_K \quad \text{and} \quad G_L = (1 + \delta)F_L$$

Then

$$\Delta Y = (1 + \delta)F_K \Delta K^x + (1 + \delta)F_L \Delta L^x$$

Therefore

$$\begin{aligned} \Delta y &= F_K \Delta K^y + F_L \Delta L^y + F_X \Delta Y + (1 + \delta)F_K \Delta K^x + (1 + \delta)F_L \Delta L^x \\ &= F_K (\Delta K^y + \Delta K^x) + F_L (\Delta L^y + \Delta L^x) + \delta (F_K \Delta K^x + F_L \Delta L^x) + F_X \Delta Y \\ &= F_K \Delta K + F_L \Delta L + (\delta / (1 + \delta)) (G_K \Delta K^x + G_L \Delta L^x) + F_X \Delta Y \\ &= F_K \Delta K + F_L \Delta L + (\delta / (1 + \delta)) \Delta Y + F_X \Delta Y \\ &= F_K \Delta K + F_L \Delta L + (F_X + \delta / (1 + \delta)) \Delta Y \end{aligned}$$

The growth rate of the economy is

$$\Delta y / y = F_K \Delta K / y + F_L \Delta L / y + [F_X + (\delta / (1 + \delta))] \Delta Y / y$$

(where $\Delta X / y \Rightarrow (X/y)(\Delta X / X)$.)

where F_K, F_L and $[F_X + (\delta / (1 + \delta))]$ can be estimated.

-The term F_X explains the externality (positive externality if $F_X > 0$) of the export sector.

-The parameter δ accounts for the productivity differential between the sector X and N (the sector X is more productive if $\delta > 0$).

-If there is neither externality nor productivity differentials ($F_X = 0, \delta = 0$), then the model is the same as the neoclassical growth model.

Then, Feder disentangle F_X from $(\delta / (1 + \delta))$

Feder include a new term $(\Delta Y / X)$ to find the effect of externality from X to Y, by assuming that

$$N = F(K^N, L^N, X) = X^\theta \psi(K^N, L^N).$$

$$\Delta Y = G_K \Delta K^Y + G_L \Delta L^Y$$

$$\text{As } G_K = (1 + \delta)F_K \quad \text{and} \quad G_L = (1 + \delta)F_L$$

Then

$$\Delta X = (1 + \delta)F_K \Delta K^X + (1 + \delta)F_L \Delta L^X$$

Therefore

$$\begin{aligned} \Delta y &= F_K \Delta K^Y + F_L \Delta L^Y + F_X \Delta Y + (1 + \delta)F_K \Delta K^X + (1 + \delta)F_L \Delta L^X \\ &= F_K (\Delta K^Y + \Delta K^X) + F_L (\Delta L^Y + \Delta L^X) + \delta(F_K \Delta K^X + F_L \Delta L^X) + F_X \Delta Y \\ &= F_K \Delta K + F_L \Delta L + (\delta / (1 + \delta))(G_K \Delta K^X + G_L \Delta L^X) + F_X \Delta Y \\ &= F_K \Delta K + F_L \Delta L + (\delta / (1 + \delta))\Delta Y + F_X \Delta Y \\ &= F_K \Delta K + F_L \Delta L + (F_X + \delta / (1 + \delta))\Delta Y \end{aligned}$$

The growth rate of the economy is

$$\Delta y / y = F_K \Delta K / y + F_L \Delta L / y + [F_X + (\delta / (1 + \delta))] \Delta X / y$$

(where $\Delta X / y \Rightarrow (X/y)(\Delta X / X)$.)

where F_K, F_L and $[F_X + (\delta / (1 + \delta))]$ can be estimated.

-The term F_X explains the externality (positive externality if $F_X > 0$) of the export sector.

-The parameter δ accounts for the productivity differential between the sector X and N (the sector X is more productive if $\delta > 0$).

-If there is neither externality nor productivity differentials ($F_X = 0, \delta = 0$), then the model is the same as the neoclassical growth model.

Then, Feder disentangle F_X from $(\delta / (1 + \delta))$

Feder include a new term $(\Delta X / X)$ to find the effect of externality from X to Y, by assuming that

$$N = F(K^N, L^N, X) = X^\theta \psi(K^N, L^N).$$

Then $F_X = (\delta F / \delta X) = \theta X^{\theta-1} \psi(K^N, L^N) = \theta(N/X)$.

Therefore, the last term can be rewritten as

$$\begin{aligned} [F_X + (\delta/(1+\delta))](X/y)(\Delta Y/X) &= [\theta(N/X) + (\theta(N/X) + (\delta/(1+\delta)))] \\ &(X/y)(\Delta Y/X) \\ &= [(\delta/(1+\delta)) + \theta(y/X)](X/y)(\Delta Y/X) + \theta(\Delta Y/X) \\ &= [(\delta/(1+\delta)) - \theta](X/y)(\Delta Y/X) + \theta(\Delta Y/X) \end{aligned}$$

He again found that θ is positive and significant.

θ = productivity differential

2.2.2 Thirlwall's Export-Lead Growth Model

In his balance of payments constrained growth model (Thirlwall, 1979), Thirlwall argues that countries grow at different rates because demand grows at different rates, the principal reason why constraints on demand exist in open economies is the balance of payments. If demand grows at a rate which makes the country run into balance of payments difficulties before the short-term capacity growth rate is reached, then demand has to be curtailed and supply will not be fully utilized.

This leads to a fall in investment and a slow down of technological progress. By adversely affecting productivity the country loses its competitive edge leading to a worsening of its balance of payments, it enters a vicious cycle.

Conversely, if demand in a country can rise up to the level of existing capacity, without encountering balance of payments difficulties, the pressure of demand upon capacity can actually produce a rise in the capacity growth rate. This could happen through investment in capital stock and increasing technical progress.

Thirlwall argues that this is in essence the rationale for export-lead growth since the expansion of exports stimulates growth without at the same time leading to a deterioration of the balance of payments.

Thirlwall derives his formal model by assuming balance of payments equilibrium in the current account.

Equation 1

$$pX = p^* M \epsilon_n$$

where X and M are the quantities of exports and imports respectively, p is the price of exports in domestic currency, p^* is the price of imports in foreign currency and ϵ_n is the nominal exchange rate. In growth form,

Equation 2

$$\frac{P'}{P} * \frac{X'}{X} = \frac{P^*'}{P^*} * \frac{M'}{M} * \frac{\epsilon'_n}{\epsilon_n}$$

Equation 2 defines the condition which is necessary for Thirlwall's balance of payments equilibrium growth rate g_{YB} , i.e., that growth rate at which the growth of the value of exports equals the growth of the value of imports.

Equation 3

$$g_{YB} = g_X / \pi = \psi g_Y / \pi$$

This equation describes the long-run balance of payments equilibrium growth rate g_{YB} which is determined by the growth rate of exports g_X divided by the income elasticity of demand for imports π and ψ = income elasticity of demand for exports ($\psi > 0$); and g_Y = growth rate of world income. In other words, the balance of payments equilibrium growth rate of a country is determined by the ratio of world income elasticity of demand for its exports to its income elasticity of demand for imports multiplied by the growth of world income.

By assuming that the real terms of trade are fixed and that over the long run trade is in balance, equation 4 can be shown to be the dynamic equivalent of the Harrod foreign trade multiplier or the Hicks super-multiplier (Thirlwall and McCombie, 1997; McCombie, 1998). McCombie (1998) shows that equation 4 is equivalent to the working of the Hicks supermultiplier.

Equation 4

$$g_{yB} = \left(\frac{1}{k}\right)(xg_x + ag_a) = g_x/\pi$$

where x = export share, a = autonomous expenditures share, g_x = growth rate of autonomous expenditures, and $k = 1/(1 - c + t_d + t_i - h + i)$ where c = marginal propensity to consume, t_d and t_i are the marginal propensities to tax (direct and indirect), h = marginal propensity to invest and i = marginal propensity to import. This equation shows all the sources of demand. However, primacy is given to exports as they constitute the only demand source that simultaneously relaxes the balance of payments constraint while stimulating income growth. All the domestic sources of demand would worsen the balance of payments because the higher income growth would raise imports.

Finally, Thirlwall's model raises the following two issues. First, if a country is able to expand demand without running into balance of payments difficulties then the pressure of demand upon capacity will raise the growth rate of capacity.

Second, there is an empirical issue. According to the model, an improvement in a country's trade performance, shown by an improvement in its balance of trade, will raise its long-run growth rate.

2.2.3 Harrod's Export Growth perspective

Harrod carried out his analysis of expansionist policies in general and net exports in particular. growth in Harrod is endogenously determined via the normal investment and savings decisions of firms. Thus the basic characteristic of Harrod's growth model,

begins with the balance,

Equation 1

$$I = \Delta K = S = sY$$

Harrod derives the following equation for some general growth path,

Equation 2

$$g_Y = \frac{\Delta Y}{Y} = \frac{s}{k}$$

where g_Y is the incremental capita-output ratio and s is the private savings rate.

Extended to an open economy with the government sector, the balance between injections and leakages implies that:

Equation 3

$$g_Y = \frac{\Delta Y}{Y} = \frac{s - (g - t) - (x - m)}{\kappa}$$

Harrod next discusses the characteristics of the warranted growth path g_Y^W which is the dynamic equilibrium growth path with normal capacity utilization along which all producers are satisfied with their production decisions. In the open economy case with the government sector, we get

Equation 4

$$g_Y^W = \frac{s^d - (g - t) - (x - m)}{\kappa^d}$$

where s^d = desired private savings rate and κ^d = desired capital-output ratio.

An important implication of this equation is that, if the capital/output ratio is given the warranted growth path is determined by the social savings rate $s^d - (g - t) - (x - m)$.

Harrod also introduces the actual growth rate g_Y which is determined by the actual savings rate and capital-output ratio.

Equation 5

$$g_Y = \frac{s - (g - t) - (x - m)}{\kappa}$$

Thus actual and warranted growths are equal when $s = s^d$ and $\kappa = \kappa^d$.

Harrod's perspective produces a policy which is different from Thirlwall. All else equal, long-run normal capacity growth in an open economy is not determined by net exports but by the open economy social savings rate.

Put differently, if net exports rise the closed economy social savings rate, $s - (g - t)$, will have to rise faster so as to increase the warranted growth rate. Otherwise, the increase in net exports will lower the open economy social savings, $s - (g - t) - (x - m)$, and thus the warranted growth rate.

Equation 6

$$g_{yB} = \left(\frac{1}{k}\right)(xg_x + ag_v) = g_x/\pi$$

Ceteris paribus, an increase in the export share, x , will lower the open economy social savings rate and raise the growth rate. (Foley and Michl, 1999).

Chapter three

3. Methodology

3.1.0 Model specification

The econometric evidence for the contribution of exports to Kenya's economic growth is based on the aggregate production function models (APFM). The analyses in this paper is for relationship between GDP and exports with the data for the period 1970-2000 annually.

The empirical methodology makes use of Granger-causality tests in a cointegration framework, where order of the tests has been performed in a bivariate setting in two cases.

The APFM assumes that, along with "conventional inputs" of capital and labor used in the neoclassical production function, "unconventional inputs" like exports and other variables may be added into the model to capture their contribution to economic growth.

The model is used by, among others, Feder (1983) and Ukpolo (1994).

Following the APFM, the general models are to be estimated as follows:

The data employed in this study are actual figures with (logarithmic transformation of time series data) and (the first differences of the logarithmic transformations).

Model (equation 1)

$$Y=f(L,K,X,M,G,P,t)$$

Where Y is output, L is cost of labour, K is capital stock, X is exports, M is imports, G is government sector consumption, P is private sector consumption, t =time trend capturing technological changes.

Then taking logs and difference over time equation 2 is obtained
(equation 2)

$$Y_t = \alpha_0 + \alpha_1 k_t + \alpha_2 l_t + \alpha_3 x_t + \alpha_4 m_t + \alpha_5 g_t + \alpha_6 p_t + \varepsilon_t$$

Where y_t is real GDP, (k_t) and (l_t) are the normal neoclassical conventional inputs of capital and cost of labor.

- capital is proxied by combination of private investment and public investment.

- cost of labour is proxied by combination of consumption and private saving.

The other variables are the “unconventional inputs” and include aggregate exports (x_t), imports (m_t), private sector (p_t), which is proxied by private sector consumption in real GDP; government sector (g_t) which is proxied by government sector consumption in real GDP.

These variables are assumed to play an important role in the economic growth of developing countries, from the model the elasticity of output with respect to exports is of particular interest.

It is expected that $\alpha_3 > 0$ due to the externalities associated with exports.

3.1.1 Data Sources

The data used in this research is secondary yearly data for the years 1970 through 2000 (time series) taken from various sources as explained below.

- (i) Central bureau of statistics- Economic survey
- (ii) Central bank of Kenya- Statistical bulletin
- (iii) World Trade Organization- Reports.
- (iv) Global Development Finance & World Development Indicators

3.2.0 Estimation methods

The specified model will be estimated by OLS method to determine parameter estimates and their significance.

Table 1

MODELLING LGDP BY OLS

THE ESTIMATION SAMPLE IS: 1970 TO 2000

	COEFFICIENT	STD.ERROR	T-VALUE	T-PROB
CONSTANT	1.69246	0.2430	6.97	0.000
LCAPITAL	0.160016	0.04540	3.52	0.002
LLABOUR	-0.933318	0.3279	-2.85	0.009
LEXPORTS	0.459368	0.1039	4.42	0.001
LIMPORTS	-0.394337	0.09259	-4.26	0.000
LGOVTCON	0.389330	0.1250	3.11	0.005
LPRICON	1.28557	0.2799	4.59	0.001
R-squared	0.995773	Mean dependent var	8.728667	
Adjusted R-squared	0.994716	S.D. dependent var	0.496542	
S.E. of regression	0.036093	Akaike info criterion	-3.609730	
Sum squared resid	0.031266	Schwarz criterion	-3.285926	
Log likelihood	62.95081	F-statistic	942.2913	

This is part of your analysis

From OLS parameter estimates export have a significant impact on GDP growth, further, the data analyses in this study reveals that all variables used in the equation have significant relationship with GDP growth.

However labour and imports have negative relationship with GDP growth, the implication of labour having negative influence on GDP is of concern.

Labour intensive production appear to be costly for the country and capital intensive production appear more effective and by implication (manufactured exports which are capital intensive are likely to have significant positive on GDP while primary exports which are labour intensive may not have such influence).

The significant positive effect of government consumption and private consumption on GDP growth can be explained through their positive effects on capital inflows, which positively contribute to economic growth (Celasun, Duncun & Denizer 1999).

Chapter 4

4.0 Data Analysis

4.1.0 Unit Root Test

Using the ADF t-tests and Phillips-Perron tests for examination of whether or not data series are stationary. This test is to check for the presence of unit roots in variables this is important because non-stationary variables can produce a spurious regression.

Table 2

	Levels		First Differences	
	ADF-test statistic	PP-test statistic	ADF-test statistic	PP-test statistic
Lgdp	-2.495647	-2.492062	-5.2133	-5.21294
lgdp(net expo)	-2.732783	-2.732783	-6.0463	-6.08231
lcapital	-1.938574	-1.436846	-5.2791	-9.81999
llabour	-2.376913	-2.376913	-5.301	-5.30098
lexport	-2.116145	-2.116145	-5.7199	-5.71352
limports	-3.099028	-2.551418	-5.1232	-5.12771
lgovtcon	-2.953706	-2.299586	-3.8968	-3.78951
lpricon	-2.431747	-2.431747	-4.9531	-4.95309
Critical values				
1% level	-4.296729	-4.296729	-4.3098	-4.30982
5% level	-3.568379	-3.568379	-3.5742	-3.57424
10% level	-3.218382	-3.218382	-3.2217	-3.22173

Note: ADF is the Augmented Dickey-Fuller Test for unit roots, PP is the Phillips-Perron Unit Root Test. The lag length is based on the Schwarz Information Criterion.

Table two, summarizes the results for unit root tests on levels and in first differences of the data strong evidence emerges that all the time series are $I(1)$ at 1% critical value expect government consumption which is at 5%.

Since a unit root has been confirmed for the series, the question is whether there exists some long-run equilibrium relationship between $\ln(\text{GDP})$ and $\ln(\text{GDP net of exports})$ on the one hand and exports on the other this is done through cointegration test.

4.2.1 Cointegration Test

In investigating the export led growth (ELG) hypothesis, the traditional approach of first differencing disregards potentially important equilibrium relationships among the levels of the series to which the hypotheses of economic theory usually apply (Engle and Granger 1987).

This corresponds to the next step of testing for cointegration, two cases are considered.

In **case one** we test whether there is a cointegrating relationship between exports and GDP.

Case two consider the case of exports and GDP *net* of exports in order to avoid the "accounting effect" since in empirical analysis of trade data a major problem arises from the **fact** that exports are themselves a component of output, via the national income accounting identity, the results of such a model are likely to suffer from a simultaneity bias since export growth may itself be a function of the increase in output. To remedy this we separate the 'economic influence' of exports on GDP from that incorporated in the growth accounting relationship by using a measure of GDP (Y) that nets out exports while performing cointegration test.

Case 1

$$\ln(\text{GDPnet expo}) = 1.907554 + .880196 \ln(\text{Exports})$$

t-statistics (11.97615) (3.501366)

F-statistics = 143.4281

R-squared = 0.8318

Adjusted R-squared = 0.8260

Unit Root Test in the Residuals

ADF test statistics PP- test statistics

-3.48091 -3.50996

-3.67017 -3.67017

-2.96397 -2.096397

-2.62101 -2.62101

case 2

$$\ln(\text{GDP}) = 1.96954 + .914 \ln(\text{Exports})$$

t-statistics (17.6013) (5.116648)

R-squared = 0.914406

Adjusted R-squared = 0.911454

Unit Root Test in the Residuals

ADF test statistics PP- test statistics

-3.54007 -3.5646

.367017 *	-3.67017*
-2.96397 **	-2096397**
-2.62101 * * *	-2.62101***

where (*, **, ***) are critical values at 1% 5% and 10% respectively

In both cases the residuals appear to be stationary at 5% this provides evidence that cointegration relationship between exports and GDP exist.

Since co-integration between GDP and exports was found, the results confirm some equilibrium (short run or long run) between exports and GDP.

4.3.1 Granger Causality

Granger causality is tested to know whether a change in exports affects GDP or GDP affects exports, a test of causality is whether the lags of one variable enter into the equation for another variable significantly.

To determine Granger causality, standard F-test will be used, equation below shows the model to test the Granger Causality between exports (*EXP*) and (*GDP*). The variables *p* and *q* indicate the number of lag for each variable.

$$EXP_t = a_0 + a_1GDP_{t-1} + a_2GDP_{t-2} + \dots + a_pGDP_{t-p} + b_1EXP_{t-1} + b_2EXP_{t-2} + \dots + b_qEXP_{t-q} + e_t$$

In the above equation, if $b_1 = b_2 \dots = b_q = 0$ then exports (*EXP*) does not Granger cause GDP.

$$GDP_t = a_0 + a_1EXP_{t-1} + a_2EXP_{t-2} + \dots + a_pEXP_{t-p} + b_1GDP_{t-1} + b_2GDP_{t-2} + \dots + b_qGDP_{t-q} + e_t$$

In the above equation, if $b_1 = b_2 \dots = b_q = 0$ then exports (*GDP*) does not Granger cause EXP.

The standard F test is as follow; For *m* linear restrictions in a linear regression model with normal disturbance, *T* observations and *k* estimated parameters in the general (unrestricted) model, the F test for the validity of these restrictions is:

$$F = \frac{(SSE_r - SSE_{ur}) / m}{SSE_{ur} / (T - k)}$$

where SSE_r stands for the residual sum of squares of the restricted model
 SSE_{ur} for the residual sum of squares of the unrestricted model.

Under the null hypothesis that the linear restrictions imposed are true, the statistic has an F distribution with $(m, T-k)$ degrees of freedom.

To investigate the causality between GDP (and GDP less exports) on the one hand and exports on the other, we perform a simple Granger causality test by estimating the bivariate autoregressive processes for GDP (and GDP less exports) and exports.

The reported F -statistics are for the joint hypothesis

The null hypothesis is therefore that $lexports$ does not Granger-cause $IGDP$ (net export) in the first regression and that GDP (net export) does not Granger-cause $exports$ in the second regression.

Table 3

Pairwise Granger Causality Tests

Sample: 1970 2000

Lags: 1

Null Hypothesis:	F-Statistic	Probability
LEXPORTS does not Granger Cause GDPNET	5.30252	0.02923
LGDPNET does not Granger Cause LEXPORTS	1.16768	0.28944

The reported F -statistics are for the joint hypothesis

The null hypothesis is therefore that $lexports$ does not Granger-cause $IGDP$ in the first regression should be rejected at 5% significant level.

The null hypothesis in the second regression, that $IGDP$ does not Granger-cause $lexports$ should be accepted.

Table 4

Pairwise Granger Causality Tests

Date: 11/06/04 Time: 10:19

Sample: 1970 2000

Lags: 1

Null Hypothesis:	Obs	F-Statistic	Probability
LEXPORTS does not Granger Cause LGDP	30	3.77298	0.06258
LGDP does not Granger Cause LEXPORTS		1.44559	0.23968

The null hypothesis is therefore that lexports does not Granger-cause IGDP (net exports) in the first regression should be rejected at 10 % significant level.

The null hypothesis in the second regression, that IGDP (net exports) does not Granger-cause lexports should be accepted.

In two cases above, the reported probabilities are less than 0.10 for export causality to GDP thus strong evidence is found to suggest that exports Granger cause GDP (net export) at 0.029 and marginally at 0.062 for exports Granger cause GDP.

The assumptions that exports Granger causes GDP can be accepted at the 5% significance level and for exports Granger cause GDP(net export) we could marginally reject the null hypothesis level that exports does not Granger cause GDP (at 10% significance level).

The evidence in this section does provide support for the causality relationship between exports and GDP, which confirm the case for the ELG hypothesis for the case of Kenya.

Chapter Five

5.0 Research Findings and Policy implication

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In this study the export led growth (ELG) hypothesis for the case for Kenya was found and this implies that exports have played important role as far as economic growth in Kenya is concerned.

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In this study the export led growth (ELG) hypothesis for the case for Kenya was confirmed and this implies that exports have played important role as far as economic growth in Kenya is concerned.

The research findings of this study are further supported by some of the literature review findings.

Feder's Export lead Growth models in the study of export and non-export sector confirmed existence of export externalities and increased marginal productivity in export sector and this boost economic growth.

Thirlwall's Export-Lead Growth Model, the focus is on the influences of exports on balance of payment Thirlwall's argued that , if demand in a country can rise up to the level of existing capacity, without encountering balance of payments difficulties, the pressure of demand upon capacity can actually produce a rise in the capacity growth rate. This could happen through investment in capital stock and increasing technical progress. Thirlwall concluded that this is in essence the rationale for export-lead growth since the expansion of exports stimulates growth without at the same time leading to a deterioration of the balance of payments.

Harrod's Export Growth perspective was long-run normal capacity growth in an open economy is not determined by net exports but by the open economy social savings rate, and if net exports rise the closed economy social savings rate will have to rise faster so as

to increase the warranted growth rate otherwise, the increase in net exports will lower the open economy social savings, and thus the warranted growth rate.

The above literature review findings confirm and explain the parameter estimates used in the research model this are: capital, exports, private and government consumption which positive and significant, the other parameter estimates are labour and imports, which are negative and significant.

The particular concern is the contribution of exports to economic growth and on this basis the policy implication and recommendation follows.

5.1.1 Policy implications.

Kenya should adopt development strategies, which emphasize export expansion; the research findings and experience of South-east Asian countries underscore the importance on export-led industrialization.

Although late starters like Kenya struggling to broach industrialization through the export route will encounter a less accommodating global environment, since the range of Kenya's export markets and products is very narrow primary products continue to dominate, exposing the export sector to the vagaries of external shocks and denying the country the benefits of high values and stable prices that result from exports of manufactures, (Eliud Moyo and Peter Kimuyu, IPAR Discussion Paper No. 15).

Research has confirmed that export stimulate economic growth in that export expansion can be a catalyst for output growth both directly as a component of aggregate output, as well as indirectly through efficient resource allocation, greater capacity utilization and stimulation of technological improvement due to foreign market competition.

Exports also provide foreign exchange that allows for increasing levels of imports of capital goods and intermediate goods that in turn raise the growth of capital formation and thus stimulate output growth.

Export growth through expanded market base allows the exploitation of economies of scale for open economies and promotes the transfer and diffusion of technical knowledge in the long run and this is said to result in increased output, employment and consumption, all of which lead to an increase in the demand for a country's output.

Benefits of exports in the economy are many but in particular the following can be singled out:

-Externalities

Exports have stimulating influence across the economy as a whole in forms of technological spillovers and other externalities. Exports exert these externalities because export industries are seen to be prime candidates to lead for reason that exposure to international markets calls for increased efficiency and provides incentives for product and process innovation, the increase in specialization allows the exploitation of economics of scale.

-Market expansion

Export markets remain important because the increased trade diversification emanating from exports tends to be economically beneficial in that it stabilizes economic activity and policy by shielding an economy against externally generated shocks, moreover domestic markets are enlarged to sustain the rates of growth required for improvement of economic welfare.

Outward orientation makes countries grow faster and permits use of external capital for development without the problem of servicing external debt.

Specialization in export markets increase in the proportion of output going for exportation and also make exporters more able to respond to export related risks and this reduce exposure expand the market.

-Economic of scale

Exports concentrate investment in activities in which a country enjoys definite advantages and exposure to international competition encourages operational discipline that reduces costs and promotes efficiency. Exporting generates economy-wide externalities and permits exploitation of economies of scale and this improve competitiveness of our products.

The result of all this is a strong causal link between the incidence of exporting and overall productivity this link being particularly efficacious when the composition of exports includes a large share of manufactured items.

Policy recommendation

Government should embrace actions to improve national infrastructure (in particular export infrastructure) and high incidence of costs particularly the costly bureaucratic procedure of setting up and doing business should be reduced.

Government should further create incentives to attract foreign investors (since measures that increase factor movements and re-allocate resources in response to trade reforms have definite export pay-off) and encourage local manufactures for exports.

Government should embrace a checked real exchange and interest rates, which are critical since a real depreciation of currency most likely increases not only the volume of exports but also the share of production going to exports.

There for, Government should provide exchange and interest rate instruments that should provide the foundation for the export strategy and instruments rate mechanism that should be responsive to the trade imperatives.

Fundamentally, Government should put policies in place that enable exporters have access to input imports at world prices and anti export bias should be reduced through trade and tariff liberalization and encourage a more open competition.

Government should promote market discipline and increase competitiveness, it is necessary to disperse internal market power by removing entry and exit barriers to attract new entrants particularly foreign investors, although there is need to protect our industries against any unfair competition.

Government should not hesitate to use any means to forestall any dumping, or any trade practices that pose an injury to our industry how ever, restrictive import regime and export growth can co-exist and this restrictions of imports will increase competition and lead to significant quality and productivity gains, it will also catalyze exports.

Export strategy should be upon sound macro-economic framework, appropriate and properly implemented macroeconomics policies are necessary conditions for export promotion and it is imperative that Government's policies are of a durable nature and based upon known guiding principles that are export friendly.

In export policy formulation it is important to bear in mind the link between exports and a country's overall productivity, which should be exploited in the quest for economic

Growth and development. Unfortunately, Kenya demonstrates a higher export potential only in products that are resource based, and her exports of manufactures are rather limited, however our products, whether primary commodities or manufactured goods, should be of the utmost concern to us, quality management of export policies are an important elements of our export strategy.

5.1.3 Limitation of over reliance on exports

Taken by themselves, these analyses would appear to constitute impressive evidence in support of the export led growth in view that outward-oriented development offers substantially better growth prospects than inward-oriented development.

The principal objection to high reliance on exports centers on its tendency to strengthen dependence on external economies but to limit internal integration of the various parts of the domestic economy and the implications for this is that development success becomes contingent upon events outside the control of the nation, especially the policies of other governments and unable to control this environment, the state is unable to plan coherently.

The absence of domestic linkages constrains future growth by diminishing the stake of many economic actors in the domestic economy while encouraging them to look abroad for growth opportunities. Thus, many of the positive externalities, spin-off effects, and backward and forward linkages associated with exports may not be captured by the domestic economy and instead redound to the benefit of other nations.

Exports trade requires a nation to engage in greater specialization than would otherwise be the case, but for small economies and those with a very narrow range of comparative advantage specialization can become excessive dependence to the extreme.

Specialization engenders uneven development that cannot be self-sustaining. In particular relatively small fluctuations in supply or demand conditions within a single export industry can doom an entire nation's economy to severe instability while long-term changes in a single product can condemn an economy to stagnation or decline.

This is particularly dangerous when the specialty export is itself prone to volatility and long-term decline in price and/or volume and these characteristics perfectly describe the primary products, which make up dominant share in the exports of Kenya.

In re-examining the export growth analyses, which suggest that "outward-oriented" nations have experienced more rapid growth, however some study point out some findings, which challenge its apparent implications.

First, it is not apparent that export expansion is the principal source of the superior macro-economic performance of so-called "outward-oriented" nations.

Second, outward-oriented strategy does not imply that a nation should expand her trade at a rate strikingly different from other countries (outward-oriented development do not imply trading notably more than those regarded as inward-oriented).

These findings raise questions about understanding "outward-oriented development" not to mean heavy reliance on exports only and this is emphasized by structural claims of political economists concerning the dangers of trade dependence which cannot be easily refuted, the counsel that nations should focus development efforts on expanding exports needs to be very carefully circumscribed.

Appendix 1

THE SUMMARY OF THE SIX EMPIRICAL STUDIES

	MARIN ('92)	AHMAD & HARNHIUM	HENRIQUES & SADORSKY ('96)	ISLAM ('98)	SHAN & SUN ('99)	EKANAYAKE ('99)
Countries	USA, Japan, UK, Germany	ASEAN	Canada	15 Asian	USA	8 Asian
Data	- Quarterly - 1960-87 - Export, GDP, Terms of trade, World Output	- Annual - 1966-88 - Export, GNP	- Annual - 1870-1991 - Export, Gdp, terms Of trade	- Annual - 1967-91 - Export, GDP, import, Investment, Government Expenditure	- Quarterly - 1980-97 - Export, GDP, Import, Investment, labor, foreign production Index	- Annual - 1960-97 - Export, GDP
Methodology	- Multivariate Model - DF, ADF Test - Error Correction Model	- Bivariate model - DF, ADF test - Engle & Yoo - Granger test	- Multivariate model - ADF, Phillips & Perron test - Johansen test - Granger test	- multivariate model - ADF test - Johansen test - Granger and error correction tests	- Multivariate model - ADF test - Granger no causality test	- Bivariate model - ADF test - Johansen test - Granger and error correction model
Major finding	ELG	GLE	GLE	ELG	TWC	TWC

Notes: ELG= export-led growth, GLE=growth-led exports, TWC=two-way causality

Appendix 2

YEAR	literacy	Infant mortality rate (per 10000)	Crude death rate (per 10000)	Crude birth rate (per 10000)
1980	56.3	870	13.3	50.8
1981	57.8	850	12.9	50.4
1982	59.3	830	12.5	50.1
1983	60.8	816	12.2	49.3
1984	62.4	802	11.9	48.5
1985	63.9	788	11.7	47.8
1986	65.2	774	11.4	47
1987	66.6	760	11.1	46.2
1988	68	742	11	44.6
1989	69.4	724	10.9	43
1990	70.8	706	10.7	41.3
1991	72.1	688	10.6	39.7
1992	73.3	670	10.5	38.1
1993	74.6	666	10.8	37.6
1994	75.8	662	11.1	37
1995	77.1	658	11.5	36.5
1996	78.1	654	11.8	35.9
1997	79.2	650	12.1	35.4
1998	80.3	638	12.4	35.1
1999	81.4	626	12.7	34.9
2000	82.4	614	13.1	34.6

Figures in (US million dollars)

Appendix J

YEAR	GDP	CAPITAL	LABOUR	EXPORTS	IMPORTS	GOVTCON	PRICON	GDP(Net exports)
1970	1778.40	433.87	1521.75	478.23	491.67	325.55	1144.01	1300.17
1971	2107.30	503.98	1618.21	509.32	625.80	372.60	1309.37	1597.98
1972	2509.00	560.07	1899.28	560.28	605.36	419.44	1473.96	1948.72
1973	2969.90	766.57	2499.07	687.31	719.31	535.97	1883.46	2282.59
1974	3259.30	839.48	2735.11	1000.14	1214.60	636.16	2184.84	2259.18
1975	3474.60	630.35	2577.14	972.04	1124.85	608.58	2138.64	2502.56
1976	4494.40	909.64	3277.40	1127.53	1103.39	729.86	2550.02	3368.87
1977	5303.70	1254.71	4517.25	1571.19	1419.92	939.84	3302.72	3732.51
1978	6234.40	1855.36	5318.72	1534.65	2051.90	1211.56	4257.58	4699.75
1979	7265.30	1619.43	5618.40	1605.58	1970.76	1438.81	4853.13	5659.74
1980	6854.50	2003.08	5538.61	2030.40	2837.39	1273.81	4565.08	4824.10
1981	6437.10	1781.37	5333.81	1761.59	2318.19	1185.71	4319.82	4875.51
1982	5984.10	1306.82	4749.88	1606.98	1848.35	1101.59	3817.14	4377.12
1983	6191.90	1289.29	5195.96	1496.96	1523.79	1076.47	4130.04	4694.94
1984	6131.10	1271.89	4755.29	1624.14	1709.40	1071.33	3768.48	4506.96
1985	7240.50	1879.15	5887.73	1551.65	1616.83	1325.83	4595.82	5688.85
1986	7971.90	1734.99	6360.88	1869.47	1856.83	1480.49	5243.56	6102.43
1987	8519.40	2068.74	6963.20	1701.23	2107.85	1537.62	5713.75	6818.17
1988	8340.90	2081.81	6905.11	1864.20	2315.06	1495.83	5638.29	6476.70
1989	8533.20	2106.83	6515.36	1922.69	2539.72	1597.73	5307.89	6610.51
1990	8043.10	1952.47	6294.47	2233.72	2679.08	1367.01	5068.54	5809.38
1991	8001.70	1700.63	6886.17	2199.79	2302.18	1287.27	5526.88	5801.91
1992	4977.40	870.16	4663.92	2154.14	2192.63	893.28	3570.60	2823.26
1993	7148.50	1258.87	5643.92	2326.11	2050.94	1083.31	4461.72	4822.39
1994	9046.70	1745.22	7664.96	2644.47	2419.98	1345.07	6263.28	6402.23
1995	9220.40	2010.13	7278.50	2967.07	3502.61	1479.75	6255.84	6253.33
1996	10572.00	1719.54	8923.46	3019.50	3416.90	1714.82	7716.20	7552.50
1997	11579.00	1685.65	9279.92	2976.68	3755.81	1881.21	8450.06	8602.32
1998	10603.00	1437.46	8456.67	2850.60	3742.45	1790.74	7664.69	7752.20
1999	10552.19	1155.95	8731.87	2,691.10	3479.27	1626.82	8007.01	7861.09
2000	10449.19	1097.21	9547.39	2,775.60	3,768.50	1914.77	8852.39	7673.59

Source :Global Development Finance & World Development Indicators.

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