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**EXPORT INCENTIVES, EFFICIENCY, AND GARMENT
EXPORTERS IN KENYA:
Applying the Policy Analysis Matrix Approach.**

BY

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151 000

Research Paper Submitted to the Department of Economics,
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for the Degree of Master of Arts Economics.

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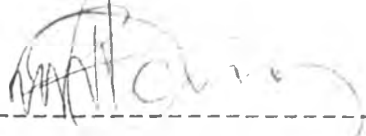


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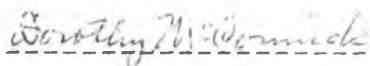
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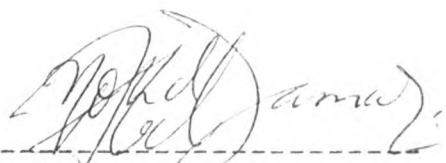
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DEDICATION

To my Parents

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ABSTRACT

Many countries, including Kenya, have established a wide range of incentives for exporters in hopes of reaping economic gains through employment creation, foreign exchange earning and technology transfer, and at the same time rectifying the anti-export bias of their policy structures.

This study is concerned with competitiveness and efficiency of garment exporters within the liberalized regimes (MUB and EPZ) in Kenya. The study was motivated by lack of systematic analysis of the impact of policy incentives on profitability and resource allocation. To assess these impacts a new approach of analysis policy (The Policy Analysis Matrix, PAM) was applied.

Based from available evidence and the PAM results, it was found that while production of garment for exports has been the handiwork of incentive policies pursued by the government which lowered firms' costs, the nominal incentive to clothing exports was still low due to poor implementation of the green channel scheme meant to hasten import and export documentation. Further, it was found that an overvalued exchange rate did not allow exporters to reap higher profits.

More important than the competitiveness of garment production was that, when the domestic economy is distorted, the incentive policies confer social gains and can be seen to be "engines of development" as hoped so by Kenya.

CHAPTER ONE

1.0 INTRODUCTION

Kenya is among the many developing countries to have recently become actively committed to promoting non-traditional exports, including manufactured goods and to have established a wide range of incentives as components of this effort.¹ This range of incentives aims at developing a fast growing industrial sector based on export promotion. The desire for this new strategy arose from the disillusionment with the past industrial policy regarded by policy makers as costly, underwriting inefficiency and limited growth.²

Efforts to increase export earnings in the past decades through policy reforms have proved no simple task. While the share of imports in Kenya's GDP had grown from 26.8% in 1964 to 40% in 1984, the contribution of exports had only grown from 19% to 25% during the same period. The East Asia model of economic development suggests that achieving satisfactory response has required broad economywide policies and institutional measures over a long period of time (Inoue, 1992).

Since independence, the domestic market has played a key

¹ Non-traditional export are all exports except Coffee, Tea, and Petroleum products

² The import-substitution regime (through tariffs, quantitative restrictions and exchange controls) deprived exporters inputs at world prices, and dampened competitiveness. High effective rates of protection and an overvalued exchange rate made the development of the export sector impossible.

role in fostering a dynamic manufacturing sector in the economy.³ As the domestic market becomes saturated, and the pressure to finance import bills to enable the economy to grow at 5.6% a year for the rest of the century becomes intense, industrial exports must expand at over 6% a year in real terms (as projected in the sessional paper No.1 of 1986).

Successful export performance must hinge on labour-intensive manufactured exports, since this gives labour surplus economies like Kenya a competitive advantage over the developed countries in a broad range of manufactures.

Export performance, which is crucial to the success of trade liberalization, depends on the level and stability of the real effective exchange rate. In turn exchange rate policy depends on the policies for managing domestic demand.

1.1 EXPORT PROMOTION POLICIES: A Review of Kenya's

Export Incentive Structure

Export promotion policies are intended to facilitate rapid expansion of production for the export market, which in turn contributes to the stability of the balance of payment, fosters industrialization in the limited market demand economies, generates foreign exchange, and alleviates unemployment.

In line with this new industrial policy, the government has recently pursued a more market-based incentive structure together with an enabling policy environment to stimulate production of

³ Domestic demand contributed two-thirds of output growth, while exports accounted for only 5% of the increase in manufacturing output.

non-traditional manufactured exports. The range of alternatives includes nominal exchange rate manipulation, various tax and tax remission schemes, and direct subsidization. The following sections examines key policy structures envisaged for the development of the export sector.

1.1.1 Exchange Rate Management

Because many manufactures are internationally traded goods, trade and exchange rate policies are the most important policy instruments. Maintaining a real exchange rate that is reasonably stable and adequate for a sustainable balance of payment will benefit Kenyan-based exporters.

Since independence, Kenya pursued first, a fixed exchange rate policy (1966-82) and later since 1982 a managed float system. The objective of the former was to keep the value of the shilling fixed regardless of the depreciation or appreciation of the major trading currencies. This kept the shilling at unrealistic levels, depressing export growth and exacerbating the balance of trade situation.

In December 1982, a market-based exchange rate programme was adopted with the aim of maintaining a competitive value of the shilling and providing profitable margins of export earnings to stimulate exports. This flexible exchange rate policy and a series of devaluations in the 1980s was consistent with the long-term goal of using exchange rate policy as a major instrument for increasing exports and for regulating imports.

Recently, in accordance with the structural adjustment

programmes and aid conditionalities, the government has embarked on a series of devaluations in an attempt to keep the shilling at realistic levels. Although there are few studies to provide evidence that Kenyan exports respond strongly to an improved exchange rate, the experience of other countries suggest that exchange rate policy is important in this respect.

1.1.2 Direct Export subsidization

Kenya's export subsidy legislation was introduced in December 1974, as the tool for promoting non-traditional exports. This Local Manufacturers (Export Compensation) Act was originally meant to replace a duty drawback system, but not as a pure incentive (i.e. export subsidy). Until 1980, the scheme was set at a flat rate of 10%, calculated on the f.o.b value of manufactured exports. Since then, the scheme has been frequently revised, indicating dissatisfaction with the its operation.

Studies have indicated that manufacturing firms in Kenya have responded poorly to the availability of the export subsidies.⁴ However, other firms have utilized the export compensation scheme as a substitute for duty drawback without which they would not be able to compete in the international markets.

Export compensation is offered to exporters of eligible goods. Exports of most goods are eligible for a refund equivalent

⁴ Some of the inherent weakness include, payment delays, and limited coverage (see Low, 1982). The fact that only two products received nearly 50% of the total payments in recent years reveals the problems.

to 20% of the f.o.b value of the exports, provided that the goods have a local value added of at least 30% and duties on major imported inputs account for at least 20% of the c.i.f value of the imports.

In many countries, export subsidies have been used in lieu of devaluation and to try to offset domestic protection. Although results have been disappointing, used with appropriate macroeconomic and exchange rate policies and access to imported inputs, subsidies can have a direct and immediate impact on exports.

1.1.3 Trade and Investment policies

Past industrial policy relied heavily on high tariff rates and import quotas. Both of these tools became increasingly protectionist in effect and in intent after the first Oil Crisis of 1970/71 which saw a worsening balance of payment situation.

Throughout the 1980s, Kenya's import policy continued to be based on high tariff rates and quantitative restrictions typified by import licensing and foreign exchange rationing. This trade restricted regime continued to reduce the profitability of exporters, at the same time misallocating resources in the economy.

Significant tariff reform has been underway since 1981 both as an inducement for domestic industry to operate efficiently and to reduce costs for potential exporters. High tariff structures inhibit direct and indirect exporters from obtaining inputs rapidly at world or near-world prices. Thus exporters require

special regimes to insulate them from the negative effect of import protection.

Kenya has followed a "mixed" economic development model since independence. This strategy has been to promote rapid economic growth through public investment while at the same time providing incentives for both local and foreign private investment. New investment policies will give top priority to export oriented operations which are deemed by policy makers as superior in job creation, domestic resources utilization and foreign exchange generation in line with the new industrial policy.

1.1.4 Fiscal and Institutional Incentives

Recent studies have indicated that Kenya's effective rates of taxation are high vis-a-vis those of other developing countries with outward looking export-oriented industrial strategies.⁵ This fiscal regime has acted as a disincentive to export producers in the past decades. An early attempt to neutralize these high rates was a provision of 20% tax rebate for manufacturing exports by the Ministry of Finance (see Finance Act 1974).

Towards the end of 1980s, the main fiscal incentives put in place include: exemption from custom duties and value added tax (VAT) of imported plant and equipment up to a maximum c.i.f value of Kshs 40 million; duty exemption for imported raw material for use in manufacturing for export; investment allowance taking the

⁵ Kenya's Development Plan 1988-93

form of a tax deduction applied through accelerated depreciation of capital assets; and the introduction of carried forward loss provision.

Other institutional measures important to exporters are the Manufacturing-Under-Bond (MUB) scheme, introduced in 1988, and the 1990 Export Processing Zone (EPZ) legislation. The manufacturing under bond allows for duty free imports⁴ of raw materials and local purchases tax free provided the eligible production facility is licensed entirely for export production. More attractive fiscal packages are available to EPZ producers and include, apart from those of MUB, 10 year corporate tax holiday, and exemption from payment of with-holding tax on dividends. Other promotional activities include, green channel schemes for faster processing of export documents, export credit insurance and guarantee scheme, and creation of Kenya External Trade Authority (KETA) to strengthen promotional activities.

1.2. GARMENT EXPORTERS AND EXPORT INCENTIVE POLICIES

1.2.1 The Kenyan Garment Manufacturers

Clothing^b is well known as an early manufactured export from developing countries and the starting point for export-led industrialization, yet it remains one of the under-studied sectors in Kenya. The East Asia experience in labour-intensive exports of manufactures, suggests that Kenya could also gain from

^b Clothing, apparel and garments are used interchangeably in the study.

the same, given the availability of cheap labour.

Several factors suggest a niche for garment exporters: untapped overseas garments market; incentives accorded for export diversification and non-traditional manufactured exports; and rising wages in earlier large garment exporters. The international trade regime acts favourably for potential clothing exporters. Kenyan-based exporters can benefit from the big market that exists overseas for ready-made garments. Four trade arrangements directly affect potential clothing exports from Kenya. One, the Lome Conventions provides for unlimited duty-free access to EC markets for manufactured exports from ACP countries that fulfil certain rules of origin. Two, the Preferential Trade Agreement (PTA) provides a wider market, and the industry can benefit from the present reduction in tariffs and other charges of equivalent effect of 30%. Third, is that Kenya is not affected by Multi-Fibre Arrangement (MFA) which restricts the volumes of most imported textiles and clothing products entering North American and Western Europe markets from developing countries. Fourth, is the Generalized System of Preference (GSP) where a wide range of Kenya's manufactured products are also entitled to preferential duty treatment in most developed countries.

The MFA quota system affects only the developed of the developing countries (notably, NIC's in Asia - Hong Kong, Taiwan, Singapore, and Korea), and this may affect Kenya in two ways. First, the well-established exporters faced with quota restrictions will tend to look for off-shore investment opportunities where joint ventures with local entrepreneurs permit them to export to developed countries without quota

restriction. Second, the quotas have held down imports from certain large producers, leaving opportunities in quota affected markets for new entrants like Kenya. However, this relocation effect is yet to be proved.

Rising wages in earlier garment exporters give comparative advantage to labour surplus entrants. Kenya has an abundant supply of low-wage labour. Wages in Nairobi's large garment factories are approximately \$0.38 per hour (see McCormick, 1992). However it is feared that the productivity gains resulting from the rapid diffusion of microelectronic-based innovations in the North could undermine the low wage based comparative advantage of developing countries (Hoffman and Rush, 1980; Rada, 1981; Kaplinsky, 1981).

Apparel manufacturers have responded positively to export incentives offered by the government. While a majority of the MUB users are apparel producers, they are also quick to establish in EPZs. Despite this apparently favourable domestic and international climate, Kenya has not succeeded well in exporting garments. For some garment products, the Kenyan manufacturers are not efficient. For others they are only efficient enough to penetrate the export market and to keep out most imports. The few adventurous garment firms that have begun to sell into the European markets face impediments. Given sufficient incentives, they are likely to influence the world garment trade.

1.2.2 Exchange Rate Policies and Garment Trade

Experience from other developing countries (e.g. Colombia) single out exchange rate policy as a major influence on profitability and growth of garment exports. A de facto reversal of a well managed real exchange rate appears to be a contributing factor in the decline of garment trade (Morawetz, 1982).

The dollar prices that Kenyan clothing firms receive for exporting garments to the world markets are determined by aggregate supply and demand in those markets and are outside Kenya's control. The main variable relating to the profitability of exports that the government and producers are able to affect are the number of shillings received per dollar of exports. Nominal exchange rate and export subsidy manipulation are important in this respect.

The Kenyan economy as a whole deteriorated since the mid-1970s for many reasons, one of the major ones being an overvalued exchange rate. In an attempt to restructure the economy, the government embarked on a series of devaluations. Average annual devaluation during the period 1980 to 1991 was 27% in respect to Ksh per US dollar.⁷ While these devaluations are deemed necessary for overall economic growth by the World Bank and IMF, little has been done to assess their impacts on potential manufactured exports (like garments).

With successful exports already occurring and new investments being installed specifically for the export market.

⁷ This is rough calculation using data from Central Bank of Kenya Quarterly Economic Review and Annual Reports

it would seem that, given a little consistent encouragement, Kenyan firms should be able to increase their garment exports, especially since Kenya has not nearly used up its EEC quota.

1.3 STATEMENT OF THE RESEARCH PROBLEM

Government policies in Kenya since independence have had the effect of re-orienting production and trade policies towards relatively less efficient industries. Tariffs, import restrictions, a variety of export promotion schemes, and re-adjustment of the exchange rate have been used to protect industry and to promote exports. Several studies (see among others, McKinnon, 1973; Krueger, 1978; and Naqvi and Kemal, 1991) have shown that such incentives can create a distortion in both product and factor markets that may lower social welfare and thus fail to maximize employment generation and economic growth.

Further empirical works have attested to the superiority of real exchange rate and macro policy as influencing the profitability and efficiency of export manufacturing. Export industries may operate inefficiently, because in a bid to increase the number of export industries substantial incentives may be given. It is essential to devise an appropriate set of government policies to minimize the domestic resource cost (DRC) of earning (saving) foreign exchange so that the growing export industries are those in which the country has a comparative advantage.

As Kenya sought to rectify the anti-export bias of its policy structure, the question of how this can be optimally

achieved has assumed greater relevance. This study assesses the incentive effect on manufacturers of this policy structure, particularly with the experience of exchange rate manipulation.

One potential exporter of manufactured goods that has utilized the incentive structure in Kenya is garment manufacturing. It is not known whether the garment exporters have the potential to generate export earnings given the current conditions, and whether the justification of resource use allow for efficient production. The study attempts to fill this information gap by assessing the impact of incentives on the pattern of domestic resource allocation and the profitability of the garment exporters.

The effect of exchange rate manipulation is used to ascertain the production response which the policy change might induce. This policy analysis needs to be supplemented by similar studies of the level of export incentives for the potential exporters. Filling this information gap required an application of a new organizational framework for analyzing policy, The Policy Analysis Matrix (hereafter, referred to as PAM), discussed extensively in Chapter Three.

1.4 STUDY OBJECTIVES

The main purpose of the study is to analyze major policy incentives intended to promote manufactured exports. The broad objective is to design a simple policy analysis matrix for analyzing pro-export policies.

The specific objectives of the study are:

1. To determine financial profitability under current policy condition and a simulated policy change for the garment exporters.
2. To determine economic efficiency (or comparative advantage) of the clothing exporters.
3. To analyze the transfers created by distorting policies and market failures in garment manufacturing
4. To suggest policy reform based on the analysis.

1.5 SIGNIFICANCE OF THE STUDY

The study is significant in at least four ways. First, apart from informing the government the appropriate action to be taken to boost export production, the policy analysis will stimulate debate among those policy makers wishing to change policies (reformist), and those who wish to maintain them.

Second, the clothing industry is one of the first sectors where developing countries (notable examples are the NICs in Asia, particularly Hong Kong, South Korea, and Taiwan) achieved a rapid growth of manufactured exports to the industrialized economies. Kenya could gain from this "demonstration effect" given an "enabling" environment. Apart from exploring this potential, the study attempts to test Kenya's comparative advantage in garment trade.

Third, through relentless application of the concept of economic profit, the study provides the basis for cost-benefit

analysis of many export-oriented projects consistent with the methods of donor and research organization.

Finally, the study offers a new methodological approach giving researchers an alternative analytical framework for policy recommendation. The study hopes to stimulate research in related fields based on simple and easily understood analytical framework - The PAM.

1.6 ORGANIZATION OF THE STUDY

The study is organized as follows. The next chapter presents an analytical review of the literature. This chapter focuses on the past work, methodologies used to address the related research issue, their findings and limitations.

Chapter Three deals with methodological and estimation issues. It first discusses how the new approach fits into the research issue, and then presents the analytical framework (The PAM approach) and shows how it is adapted for the study. Data requirements are discussed in later part of the chapter.

Chapter Four presents the framework for empirical estimation of PAM. Section one of the chapter considers the issues in the organization and presentation of the "representative" firm-level budget data. The last section attempts to develop the principle components for economic evaluation in keeping with the PAM approach.

Chapter Five is devoted to the analysis of the results. It presents useful results from the field, and results derived from the application of the method of analysis described in chapter

three.

Finally, Chapter Six presents summary and research findings, and based on these suggests policy implications. The limitations of the study are considered in the last section of this chapter.

CHAPTER TWO.

2.0 REVIEW OF THE LITERATURE.

This chapter outlines both the theoretical and empirical literature related to the study subject. The theoretical literature forms the basis for the conceptual framework that follow in the next chapter. The theoretical underpinnings of the methodology to be adopted owe much to the theoretical literature to be reviewed, in particular, the partial equilibrium theory of international trade. The impetus of adopting an outward oriented system is also based on this literature.

The failure of theoretical models to provide guidance on developing countries trading patterns and on the impact of trade policies on certain variables has provoked an enormous body of empirical work which lacks firm theoretical foundations. The empirical studies reviewed are thematic. Later an overview of the literature is presented in the last section of this chapter.

2.1 THEORETICAL LITERATURE.

2.1.1 Theoretical Justification of Trade.

International trade theory presents little guidance as to the trading patterns of developing countries, or as to the impacts of trade policy on macroeconomic variables like exports.

Ricardo's neo-classical doctrine of comparative advantage

asserts that difference in technologies determines a country's trading pattern. Later extensions of this theorem by Hecksner, Ohlin and Samuelson (H-O-S, 1939) provide powerful argument for trade in simple manufactures (e.g clothing) for low-wage, labour-surplus economies.

The concern of welfare effects in trade owes much to the normative theory of international trade in which the standard 2*2 static case for a liberal trade regime is attributed to the gains of trade theory developed by Samuelson (1939;1962) and later Kemp (1962). Both attempted to show with certain assumptions, that free trade is not only pareto-superior but also pareto-efficient to restricted trade. They argued that the gains from trade result from the fact that world prices allow the economy to reach the maximum consumption possibility frontier (Corden, 1974). This general model for international trade provides theoretical justification for using world prices as the benchmark of efficiency in production.

The literature also identifies dynamic gains resulting from an open trading system consistent with an export promoting trade strategy. Apart from greater market accessibility and increased access to imported inputs which embody new technology, open trade provides increased competition that ensures efficient domestic production.

Theoretical arguments in favour of interventionist policies are also developed. This explains why policy makers in developing countries have attempted to guide resource allocation through trade policy in favour of import substituting industries. These arguments include the infant industry, terms of trade, and market

imperfection considerations (Prebisch, 1954; Krueger, 1984). However, proponents of a liberal trade still argue that protectionist policies are only "second-best" solutions (Corden, 1984).

These two contrasting schools of thought have raised the issue in the literature on the optimal allocation of resources to export industries and import-competing industries during the growth process. In LDC's, policy makers have guided resources through trade policy depending on their perception of the appropriate strategy (Krueger, 1984).

In the Kenyan case the height of protection has been so great in the import substitution regime such that the development of new export industries or even the expansion of the existing ones was largely discouraged.

2.1.2. Export-Promoting Trade Strategy.⁸

Literature on the definition of export promoting (EP) and import substituting (IS) are varied but the most widely accepted, relate to incentives. The literature stretches back to the traditional concept of "export-led" growth associated with Nurkse's and Lewis's (1959) export pessimism. In export led growth a country's exports generate income expansion attributable to direct gains from trade and indirect beneficial effects.

Development economists such as Chenery and Associates (1962) have used the terminology in a very different fashion. They have

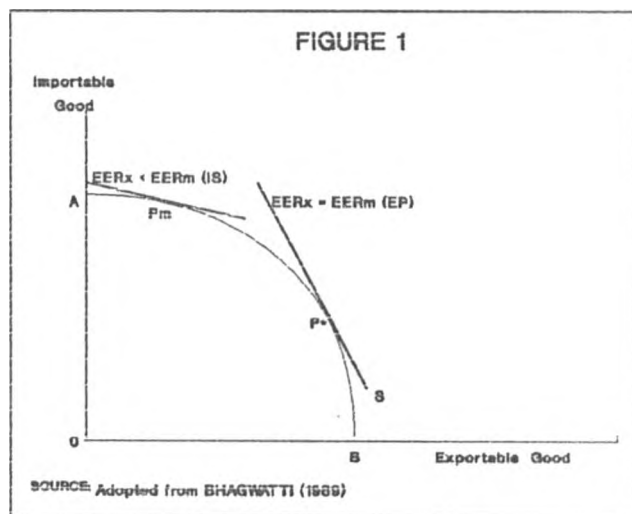
⁸ The material in this subsection draws much on Bhagwati (1989).

typically used identities to decompose observed growth of output in an economy into components attributable to EP, IS, and other categories.

A more pragmatic terminology in the literature is the laissez-faire model. The absence of government intervention is seen to yield a trade-neutral or bias-free strategy. However, experience from countries characterized by considerable government involvement in the economic system, negates this definition.

The widely accepted model is the incentive-based definition. The import substituting strategy is defined as the adoption of an effective exchange rate for the country's exports (EER_x) which is less than for imports (EER_m). In the two-good model, EP and IS can be distinguished from the Figure 1.

Theoretical Justification of Adopting a Trade Strategy



AB is the country's production possibility curve. With given international prices P^i 's, equilibrium production would be reached at P^i unified exchange rate which ensure that the relative goods

prices domestically are equal to P^* 's. Therefore, at P^* , we have $EER^X = EER^M$, where EER refers to the effective exchange rate. This is the export promoting strategy.

When the incentive to produce the import-competing good exceeds that to produce the exportable good, because of a tariff or overvalued exchange rate, production shifts to P^M . Here $EER^X < EER^M$ designate an import substituting strategy.

An incentive-based (e.g. production subsidies and the use of floating exchange rate) export promotion strategy drives the economy close to where international marginal rate of transformation is equal to domestic marginal rate of transformation ($IMRT = DMRT$) (see Bhagwati, 1978; Krueger, 1980; Khan and Zahler, 1983). However, a note of caution results from the model developed by Rotemberg (1987). Rotemberg argues that some minimum production capacity is necessary for outward orientation to be beneficial to a nation. He warns that export subsidization in under-resourced nations may lead to undesirable results and a lowering of society's welfare function arising from a distorted market.

2.2 EMPIRICAL LITERATURE.

2.2.1 Export incentives and export sector performance.

The wisdom of adopting an export promoting trade strategy arose from the disillusionment with the import substituting policy. Empirical evidence of strong positive correlation between export performance and economic growth (see among others

Massel, Pearson, and Fitch, 1972; Michaely, 1977; Krueger, 1978; Balassa, 1978; Salvatore, 1983; Ram, 1987; Chow, 1987) has added impetus to the adoption of such a policy. The policies that are likely to succeed in this strategy are those geared to increasing the profitability of the exporters. To the extent that exporters are well paid, they are likely to expand (Keesing, 1979).

Empirical literature on incentives and export interaction are vast but most of them are in the area of exchange rate policy. Bhagwat and Onitsuka (1974), studied responses of imports and exports to devaluation among non-industrialized countries in the 1960s. To measure the impact of devaluation on exports, they compared average growth rates of exports before and after the devaluation. This was done by estimating a ten-year trend growth of exports and comparing with the three-year average annual growth rate before and after devaluation. Their results indicate that in almost all countries with independent and discrete devaluation, the performance of the export sector was significantly better in the post-devaluation three-year period than three-year period preceding the devaluation.

Balassa (1977), did a comparative analysis of export incentives and their effects on exports and export performance in eleven LDC's (Argentina, Brazil, Chile, Colombia, Mexico, Israel, Yugoslavia, India, Korea, Singapore, and Taiwan). Results indicated that export orientation in the system of incentives had beneficial effects on economic growth. Yet another study by Westphal and Kim (1979) found a correlation coefficient of 0.29 between export incentives and the share of output in 1968 in their cross-section investigation of 92 sectors in Korea. The

coefficient was statistically significant at 1% level.

Bautista (1981) investigated exchange rate changes and LDC's export performance under generalized currency floating. Using a sample of 22 LDC's and taking export performance as an endogenous variable, he modelled deviations from trend of export earnings for quarterly data of 1974-79. The results indicated that real exchange rate uncertainty was more important in determining export supply than the changes in relative prices arising from nominal exchange rate adjustment and major currency realignment. He found out that variability of these two measures negatively affected exports.

Another study by Balassa (1990) on incentive policies and export performance in Sub-Saharan Africa (SSA) indicates similar results with the experience of exchange rate adjustment. Regression results for export-output ratios in SSA countries are summarized in table 2.1 below. The real exchange rate variable has the expected sign and it is statistically significant at the 1% level in the equations for the 1974-82 subperiod and the entire 1965-82 period, but not for the 1965-73 subperiod. In the latter case, the regression coefficient is significant at the 10% level for the exports of goods and services. The coefficients for the real exchange rate variable are more uniform for SSA countries than for all developing countries, for which estimates are presented in Balassa (1989).

TABLE 2.1: Regression Results for Export-Output Ratios in SSA Countries

	constant	real exchange rate	R ²
1. 1965-73:			
(a) Exports of goods/ non factor services	-0.05 (-0.87)	0.37 (1.97)	0.022
(b) Merchandise exports	-0.14 (-1.77)	0.27 (1.04)	0.028
2. 1974-82:			
(a) Exports of goods/ non factor services	-0.02 (1.13)	0.78 (6.60)	0.270
(b) Merchandise exports	-0.02 (-0.65)	0.91 (4.07)	0.127
3. 1965-82:			
(a) exports of goods/ non factor services	0.01 (0.76)	0.88 (8.49)	0.210
(b) Merchandise exports	0.02 (0.54)	1.01 (5.93)	0.116

SOURCE: World Bank data base.

T-values are in the parentheses.

These results conflict with the popular notion, according to which changes in the real exchange rate would have less of an effect on the exports of SSA than in countries at higher levels of development. But they are consistent with the observation that African countries which let their exchange rates become greatly overvalued experienced considerable losses in export market shares.

In the Kenyan context, empirical studies on exchange rate and export interaction are given by Okore (1987), Mwamadzingo (1988), and Akara (1989). Okore studied the market potential for Kenya's manufactured exports in the EEC market. Distinguishing between supply and demand side factors, Okore specified a log

linear simultaneous equation model of the following,

-Supply side:

$$\ln X_s = a + b \ln RER + c \ln CAP + d \ln NFL + e \ln DDP + U$$

-Demand side:

$$\ln X_d = a + b + \ln RER + c \ln YEEC + d \ln EXR + U$$

where: RER = real exchange rate
 CAP = manufacturing sector capacity
 NFL = no. of large scale firms proxied by percentage of industrial output accounted for by firms employing more than 50 workers
 DDP = domestic demand pressure on Kenya's manufactured exports proxied by GDP at constant 1976 prices.
 YEEC = real income of EEC
 EXR = official exchange rate, Kshs/\$.
 U = error term

Regression results showed that exchange rates had inconsistent signs and were not significant even at 10% level. He concludes that supply side factors better explain manufactured exports of Kenya to EEC market.

Mwamadzingo investigated the effects of exchange rate changes on economic growth, imports, exports and other variables by specifying a simultaneous equation system. His export equation contained the following variables:

$$X=f(ER, X-1, WY, PRODC, M-1, X/WXS)$$

where: X = exports
 ER = nominal/real exchange rate
 PRODC = productive capacity
 WY = world income
 X-1 = lagged exports
 M-1 = lagged imports
 X/WXS = export share in the world export supply

For both nominal and real effective exchange rate, for the period 1966-86, regression results showed no discernible relationship between the exchange rate and exports. He used aggregated data and made little attempt to incorporate appropriate lag structure associated with exchange rate

Akara also studied the impact of trade incentives on certain macroeconomic variables, including exports. By taking the real exchange rate as a specific trade incentive, he specified the export function as follows;

$$X=F(RER, WY, Y, RK, K-1, RY, U)$$

where: X = real export earnings
 RER = real exchange rate
 WY = index of real GDP of all market economies
 Y = capacity output proxied by real GDP

RK = rate of gross fixed capital formation
(gross investment)

K-1 = level of capital stock lagged one
period

RY = rate of growth of real GDP

U = error term

Using two stage least squares and log linear specification for time series data 1966-86, he found RER statistically significant and the coefficient having unitary elasticity. He however did not estimate real exchange rate misalignment which is a better measure of trade policy.

2.2.2 Trade Policy, Efficiency and Exports

Trading policies pursued by governments have some impacts on exports. Empirical studies on this area are limited since varied trade regimes undergone by developing countries are a recent phenomenon.

National Bureau of Economic Research (NBER) conducted a study on foreign trade regimes and economic development (Krueger, (1978); Bhagwati, 1978) using a very different approach. Taking 10 developing countries, the study classifies their trade regimes into five phases. Ranging from phase one, a situation of excessive use of quantitative restrictions (QR) in an unsophisticated manner, through various stages of liberalization (phase two, three and four) to phase five where a country has no QR's with the use of flexible exchange rate and a prudent

monetary and fiscal policy to achieve balance of payment equilibrium without exchange controls. To determine the effect of trade liberalization on macroeconomic variables, the study considers the effect of different trade regimes on economic growth by using dummy variables to estimate the following equation;

$$\log GDP = a + bT + c \log X + dD1T1 + eD1T2 + U$$

where: T = time (proxy for structural and other factors affecting growth

X = index value of exports relative to average exports over the period (1954-71)

D1 = 1, in phase one and two
= 0, if otherwise

D2 = 1, in phase four and five
= 0, if otherwise

U = error term

NBER results showed that the coefficient of the export variable was significant at 1% level indicating that exports expanded during a liberal regime leading to higher output. The dummy variables were not significant. The study takes into account only QRs and exchange rate devaluations as the major trade reform policies, while neglecting other forms of liberalization like tariff reduction and exchange rate unification. These may not fully account for the anti-export bias resulting from the divergence between domestic and international prices (Balassa, 1982).

Krueger (1966) attempted to evaluate the economic costs of the Turkish exchange control system. Her empirical work was based upon primary data gathered in 1965 for a relatively small sample of Turkish manufacturers consisting of four potential export firms and five import-substituting firms. Krueger, like Johnson (1960) defined economic cost as the international value of goods extracted from the economy through resource reallocation and trade, while leaving final consumption of all goods and services unchanged. She adopted the domestic resource cost (DRC) approach, unlike Johnson, because of difficulty in establishing equilibrium exchange rate. Krueger's calculations of the Turkish trade regime suggest that twice as much output, in value terms, could be obtained from new resources with a liberalized trade regime and an equilibrium exchange rate. She also concluded that the Turkish trade policies removed virtually all incentives for the potential export firms studied since they found domestic market more profitable. Further, she argues that, for countries with significant overvaluation, the kind of trading policies in Turkey may explain the failure of non-traditional exports to grow.

McKinnon's (1973) study on tax neutrality and export compensation scheme found implicit taxation of Pakistan and Indian exporting firms. He argues that exporters sold in foreign markets at a less favourable real exchange rate thus the impetus of increasing exports was largely choked off. He further found out that the subsidies accorded to exporters in Pakistan encouraged low real value added activities and high import intensity. McKinnon suggested the removal of existing tariffs and quotas on imports which has led to an overvalued exchange rate

to ease implicit tax burden on exporters and to encourage rational allocation of resources.

Navqi and Kemal(1991) analyzed the extent to which government policies have nurtured inefficient industries, including some that actually subtract value from the economy. The study builds on their earlier work on the structure of protection in Pakistan (1980-81) and estimated effective protection rate (EPR) and (DRC) on the basis of an extensive survey of 750 manufacturing firms. The study yielded some unconventional results of which an important one was that export industries were the most inefficient of the lot, and non-competing import industries rank next to them. This result was not entirely unexpected since according to them, in a bid to increase the number of export industries substantial incentives were given to all kinds of industries, including a large number of infant industries.

In Kenya, few studies exist on the effect of trade policies on resource allocation. This may be due to the fact that the adoption of a more open trade system has not been followed up by analysis of the likely effects.

Low (1982) has shown in a survey study the experience of Kenya in the use of direct export subsidization. From the evidence of the study, Low argues that while there was a positive link between export orientation and responsiveness to export subsidies, the policy had not achieved the results that might have been expected of it. With little quantitative exactness, it was clear from the sample survey material and some aggregated data that a number of eligible exporters had not

claimed the subsidy, and others had claimed it but treated it as a windfall gain. This is attributed to poor implementation leading to delays and uncertainties which reduced the nominal value of the subsidy. Further, the existing level of the domestic protection and budgetary constraint made it impossible to offset the anti-export bias. Low recommends a combination of devaluation and trade tax/subsidy changes to lower and standardize domestic market protection levels so as to improve export performance.

Another study by Coughlin (1985) on steel industries in Kenya attributed excessive capacity under-utilization to anomalies in the protection regime. In his analysis of the effect of export compensation scheme on steel industries, he found that the net impact of import duties and export subsidy discriminated against exporters.

Langdon (1981) blamed the failure of the outward looking strategy on the operations of multi-national corporation (MNC) in Kenya. However he does not consider the impact of such a strategy if it were to succeed.

2.2.3 Literature on Kenyan clothing industry

The clothing sector in Kenya is relatively under-studied and very little can be drawn about the problems and efficiency from the few studies available.

Coughlin (1986), studied 25 textile factories and garment manufacturers attached to these mills. Using primary sources, he examined the structure of the industry and the problems it faces and attempts to recommend policies to hasten the industries'

penetration into the export market. The study speculates that if inputs were available at international prices and at a realistic exchange rate, most garment and textile producers could export. It further argues that the effective rates of export promotion are low coupled with delays in receiving export compensation payment. These, Coughlin argues, have dampened businessmen's enthusiasm for exports.

A study by McCormick (1992) attempted to address the problems faced by Nairobi's small garment manufacturers and their export potential. She noted three problems to be addressed by policy makers to assess the feasibility of direct participation by small enterprises in producing clothing for export: Loans for working capital; quality control and standardization; and market co-ordination. However, the study did not shed light on the effects of government policies on garment producers.

2.3 OVERVIEW OF THE LITERATURE

From the reviewed literature, it is clear that studies in the realm of trade and industrial policy tend to focus on one aspect of policy in isolation from others. The range of incentive policies are limited in these studies. Inspired by empirical works that have attested the superiority of exports in economic growth (see among others, Michaely, 1977; Krueger, 1978; and Balassa, 1978), many research studies have focused on the interaction between exchange rate policies and export sector performance by taking the exchange rate as a major policy variable. Little attention has been given to other incentives

that may also affect export performance, viz export subsidies, tax and tax remissions, and import duties. The focus on trade reforms and macroeconomic impacts is a recent phenomenon in the literature, partly due to the fact that trade liberalization in developing countries is a recent issue arising out of disillusionment with the earlier industrial strategy.

Attention is also focused on the effect of protectionist policies on manufacturing firms particularly on the efficiency of import substituting industries. As countries attempt to liberalize their trading policies and provide incentives for the promotion of exports, the scope should be expanded to include efficiency of export industries.

While the theoretical literature tends to favour open trade regimes and a flexible exchange rate system over an inward orientation, empirical works to validate this preference are few and unreliable. Most studies have attempted what has been known in the literature as "casual empiricism" whereby they attempted to link trade incentives or reforms with macroeconomic impacts. The issue of trade policy and efficiency which is critical in the achievement of industrialization is still at stake both theoretically and empirically.

Apart from being too aggregative, some studies (see among others, Bhagwat and Onitsuka, 1974; Balassa, 1977; and Bautista, 1981) reviewed are cross-country using annual time series secondary data. Because they fail to capture country specific characteristics, results should be interpreted cautiously. They too do not escape the inherent weakness associated with secondary data and aggregation problems which might bias elasticity

estimates.

The most widely used methodologies are correlation analysis, simulation models, and econometric techniques. While these methodologies have significantly contributed to knowledge in the subject area, their results are not statistically robust. Those that have attempted to address the issue of trade policy and efficiency (e.g. Krueger, 1978; and Naqvi and Kemal, 1991) have used appropriate techniques.

Studies that have employed econometric techniques, particularly in Kenya (Okore, 1987; Mwamadzingo, 1988; and Akara, 1989) have suffered mis-specification problems. This together with inherent assumptions underlying econometric techniques have minimized the value of their conclusions. Other studies in Kenya in the area of trade policy that have used different approaches are more or less exploratory and lack quantitative exactness (notably, Low, 1982; Langdon, 1981; and Coughlin, 1985). These studies have shown that manufacturing firms have responded poorly on the availability of export incentives, but have not shed light on the efficiency of these firms and whether the incentives are sufficient to promote export production. The above methodologies are weak in policy implication due to their aggregative nature and problems in interpreting results to policy makers.

Although significant studies have been done on textile and clothing sector in the developed countries, the Kenyan garment industry is still unexplored. Coughlin notes that the industry had gradually matured in the import substitution phase, but little is known on its export potential.

The present study is a contribution in the realm of industrial policy analysis through the application of an analytical framework, The PAM, for which the underlying assumptions are theoretically consistent. The new methodology is highly disaggregated and analyses are done at micro-level. The study was motivated by lack of systematic analysis in industrial policy and the effects of trade policy incentives on profitability and efficiency of potential exporters. Such analysis is important in the face of Kenya's new industrial strategy and the growing concern for prudent resource management.

CHAPTER THREE

3.0 METHODOLOGICAL AND ESTIMATION ISSUES

The first section of this chapter discusses briefly the changing industrial policies and the issues emerging as critical to the achievement of industrialization. This provides the link to the new approach of analyzing policy. Next, the PAM approach is presented and followed by a conceptual framework. Section 3.4 shows how the new approach will be adopted for the study. The last section (3.5) discusses the data requirements, the sample survey, base year, and strengths and weaknesses of the data.

3.1 INDUSTRIALIZATION POLICIES AND THE NEW APPROACH.⁹

One of the principal issues that has emerged in recent years as being critical to the achievement of industrialization, and likely to shape future policies is growth and efficiency. The fast growing developing economies are seen today as those that have achieved the most efficient and rapid growth in manufacturing industries.

In its abstract sense, economic theory predicts the existence of competitive national and international markets to ensure optimal use of resources, including factors of production, according to their marginal productivities. However, in real

⁹ The material here draws on Cody, Hughes and Wall (1982)

sense these markets are not competitive to guide government policies in developing countries. The most practical approach to set an industrial base was to protect infant industries via such instruments as tariffs, QRs, exchange rate overvaluation, and preferential financial policies. Consequently, excessive protection created structural inefficiencies and tended to limit economic growth by raising input costs into the export sector and other non-manufacturing activities.

Later on with the success of East Asian model of economic development, policies became increasingly focused on internationally competitive and export oriented industrialization as a way of improving resource allocation. A wide range of incentives was adopted by most countries, including Kenya with the aim of increasing the profitability of manufactured exports by reducing costs or increasing revenues. Such measures, among others, include export exchange rates, subsidies to export values, tax and duty concession, and preferential credits. These, however, created a further bias against the rest of the economy in that they fail to achieve the social profitability which is the aim of any "ideal" scheme of export incentives. Social profitability considerations call for providing equal incentives to exports and imports since from the point of view of the national economy, a dollar earned in exporting is equivalent to a dollar saved through import substitution (Balassa, 1977).

--- Doubts have arisen about the cost of such policy incentives and the significance of the benefits obtained. Development of exports must not be based on the proliferation of every kind of incentive without taking into account the repercussions that this

can have on the rest of the economy, nor should it consist solely of the mere manipulation of exchange rate policy. Thus a strategy designed to contribute to the integral development of the national economy requires a more elaborate approach to export promotion policy.

The achievement of ambitious industrial targets based on export orientation require improvement in economic management capacity, with concomitant policy changes. While practical policy formulation process is not as simple as such a theoretical scheme might suggest, a useful approach of analyzing policy is the objective-constraint-policy framework. Export promotion strategy requires policy restructuring (price and macroeconomic reforms) to further conflicting government objectives (efficiency, foreign exchange earnings, and employment creation) in the face of economic constraints (imperfect information, resources, and structural rigidities).

Since it is difficult to design policies that are clear and direct, yet flexible in the sense that they can reflect changing circumstances over time, this chapter builds around an analytical approach termed the Policy Analysis Matrix that can assist policy makers in the selection among policy alternatives so as to improve the effectiveness of the policy framework for export orientation. Macroeconomic and incentive policy measures affecting garment trade are considered in terms of their impact on economic efficiency and competitiveness. Ideally, various manufacturing activities should be considered to understand the impact of policy change.

Traditionally, economic analysis of policy change has relied

heavily on econometric techniques. But, in practice, sufficient historical time series data of reliable quality are rare and too aggregative to enable full assessment of the impact of government policies on the behaviour of a particular activity.

The approach adopted makes it possible to assess the effects of a policy action on private incentives and efficiency for an activity (garment manufacturers in this case). Essentially, any policy action which affect the costs, returns or methods of production can be addressed by PAM.

The major strength of the PAM is that its results, in the form of a simple accounting matrix, are easily understood by policy makers with little training in economics. Consequently, PAM results are more likely to receive consideration than the less transparent models. Some of its inherent weaknesses are considered in Chapter six in the section on limitations of the study.

3.2. THE POLICY ANALYSIS MATRIX (PAM) APPROACH. ¹⁰

The following sections are designed to provide background information on the PAM framework. The PAM method can be understood as an application of social cost-benefit analysis and the basic concepts of trade theory to policy analysis. The PAM (shown in Table 3.1) is a three by four accounting matrix designed to display the financial (private) and economic (social) returns to an activity.

¹⁰ The material draws heavily on Monke and Pearson (1989) and Winster-Nelson (1991)

TABLE 3.1: THE PAM APPROACH

	Revenues	cost of Tradable Inputs	Cost of Domestic Factors	Profits
Private values	A	B	C	D ¹
Social values	E	F	G	H ²
Divergence	I ³	J ⁴	K ⁵	L ⁶

1. private profits, $D=A-B-C$
2. social profits, $H=E-F-G$
3. output transfers, $I=A-E$
4. input transfers, $J=B-F$
5. factor transfers, $K=C-G$
6. net transfers, $L=D-H; I-J-K$

PAM is a product of two accounting identities- one defining profitability (D and H) as the difference between revenues and costs, and the other measuring the effects of divergence (distorting policies and market failures; I, J, and K) as the difference between observed parameters and parameters level that might exist if the divergence were removed.

Private Profitability (D)

The first row (A is revenues; and B and C show input cost) of the matrix represents the budget faced by private firm when considering an activity. In PAM, "private" refers to observed data on revenues and costs reflecting actual market prices received or paid by the firm. The actual market prices incorporate the underlying economic costs and valuations plus the effects of all policies and market failures that create transfers in the system. The results of private profitability calculations show the extent of actual competitiveness of the firm, given current technologies, output values, input costs, and policy

transfers.

Social profitability (H)

The second row of the matrix resembles the first except that efficiency prices (world prices) are used instead of market prices. It reflects the profitability of the activity to the society rather than to the private individual. Borrowing from Little-Mirrlees method of project evaluation and from trade theory, world prices are taken as efficiency prices for tradable inputs. The social value of domestic factors is estimated indirectly. The market rates for these inputs are collected and then adjusted by known policies and market imperfections to arrive at an estimate of the social rate. The term "social" refers to valuations that attempt to measure comparative advantage or efficiency in production.

The distinction between the cost of tradable inputs (those that can be traded internationally) and domestic factors (labour, land, and capital) is useful in policy analysis since these cost types tend to be affected by different types of policies. The components of such inputs can be decomposed into tradable inputs proper and domestic factors, and then evaluated accordingly—world prices for tradables, and shadow prices for domestic factors.

Effects of divergence

The final row of the PAM is the difference between the first and the second row. In the absence of market failures, this row

summarizes the impact of policies on the incentives to an activity. The PAM format allows for explanation of the impact of product policy (shown in I), and macropolicy (K) on producer profits. If market failures are identified, the divergence can be disaggregated to isolate the separate effects of policy and market imperfections.

3.3.1 Definitions

1. Output Transfers (I), defined as the difference between private and social revenues, A-E.
2. Input Transfers (J), defined as the difference between private and social tradeable inputs, B-F.

-Output and input transfers arise from two kinds of policies that cause divergence between observed and world product prices: product-specific policies and exchange rate policy.

3. Factor Transfers (K), defined as the between private and social domestic factors, C-G.

-The divergence is not only caused by macroeconomic and product prices policies, but also market imperfections.

4. Net Transfers (L), has double definition: (1) I-J-K

(11) D-H

-Caused by policy and market failures and is the sum of separate effects from the product and factor markets.

5. The study also presents estimates of ratio indicators to adequately account for the effect of all incentives and efficiencies.

(i) Private Cost Ratio (PCR)

-defined as the ratio of domestic factor costs (C) to value added in private prices (A-B),

$$\text{i.e. PCR} = C/A-B$$

The objective is to minimize this ratio.

(ii) Domestic Resource Cost ratio (DRC)

defined as, $G/E-F$

-It serves as a proxy measure for social profits (efficiency). Minimizing the DRC is thus equivalent to maximizing social profits.

(iii) Nominal Protection Coefficient (NPC)

-is the ratio that contrasts the observed (private) product prices with a comparable world (social) price, thereby indicating the impact of policy (and on any market failures not corrected by efficient policy) causing a divergence between the two kinds of prices.

(a) NPC on tradable outputs, defined

as, A/E

indicates the degree of output transfers.

(b) NPC on tradable inputs, defined as, B/F shows the degree of input transfer.

(iv) Effective Protection Coefficient (EPC) is another indicator of incentives defined as the ratio of value added in private prices (A-B) to value added in world prices (E-F).

$$\text{i.e. EPC} = \frac{A-B}{E-F}$$

- This coefficient measures the degree of policy transfer from product market output and tradable input policies, but ignores the transfer effects of factor market policies.

(v) Profitability Coefficient (PC) is an extension of the EPC to include factor transfers, defined as, $\frac{A-B-C}{E-F-G}$, or $\frac{D}{H}$.

-The PC measures the incentive effects of all policies and thus serves as a proxy for the net policy transfers (since $L=D-H$).

(vi) Subsidy Ratio to Producers (SRP) defined as, $\frac{L}{E} = \frac{D-H}{E}$

-The SRP shows the net policy transfers as a proportion of total social revenues, or the proportion of revenues in world prices that would be

required if a single subsidy or tax were to be substituted for the entire set of actual product and macropolicies.

3.3 THEORETICAL FRAMEWORK

Manufacturers faced with a small domestic market can only increase their profits through production for exports. Foreign markets are associated with high competition and only efficient producers with comparative advantage in the production of that good can survive.

For producers to expand manufacturing exports, a stable macroeconomic policy is required. Access to inputs at tax-free international prices for exporters is therefore important. The restriction placed on imports or exports (trade policy) either affects the prices of tradeable commodities (tariff) or its quantity (quota) to drive a wedge between the world prices and the domestic price. Trade policy for exports involves limitation of the quantity exported through imposition of either a per unit export tax or an export quota, causing the price prevailing domestically to diverge from world prices. Direct export subsidies used to try to offset domestic protection have also the same effect.

Export subsidies raise the price received by exporters, hence making exporting more attractive. In addition, subsidies make similar or identical goods sold on the home market scarcer and so raise their prices. Apart from direct subsidization, there are many indirect ways of subsidizing exports. One is through a

multiple exchange rate system where the exchange rate provided for some or all exports is especially favourable compared with that available for imports. A second is the provision of export credit at low rates of interest or the provision of preferential export credits. The third is the preferential treatment of exports in the award of import licensing. Countries thus promote exports by providing subsidies including tax rebates which may have a positive effect on exports.

In most developing countries, macroeconomic policies have a major impact on the profitability of manufacturers. The impact of these policies on microeconomic incentives is represented by two main linkages. First is the impact of fiscal policies on the macro prices (interest rates, wage rate and exchange rate). Changes in these prices create changes in input and output prices which in turn affect firm profitability. Second is direct manipulation of macro prices, through government macro policy. Such actions internationally distort macro prices, usually in pursuit of non-efficient objectives.

Management of real exchange rate to keep exports profitable and to minimize demand for imports significantly affects export manufacturers. High protection discourages exports indirectly by overvaluing the exchange rate and attracts domestic productive resources to industries that compete with imports. Thus exchange rate policy linkages can impose an implicit tax on export producers. Unlike other policy incentives, exchange rate is a more efficient resource switching instrument. Devaluation of the exchange rate raises prices in domestic currency received by home exporters (the effect is like a uniform export subsidy) hence

inducing increased domestic production for exports. While on the other hand, it raises the domestic currency of imports thus having a similar protective effect to that of an uniform tariff.

Exchange rate is a powerful instrument for promoting industrialization around the home market and through exports Keesing (1979). Promoting exports then is largely a matter of tipping the effective exchange rate in the direction of being undervalued or at least not overvalued.

3.4 ADAPTING PAM FOR THE STUDY

The central purpose of PAM analysis is to measure the impact of government policy on the private profitability and on the efficiency of resource use. The PAM has been used in the field of agriculture as a primary mechanism for improving capacity in policy analysis. In these applications, macroeconomic and sectoral policy measures affecting agricultural enterprises are considered in terms of their impact on competitiveness, economic efficiency, social equity and, food security at national, regional and household level. The variety of applications indicates that there is a wide spectrum for its useful application in other fields at different production levels.

Since the study is concerned with competitiveness and efficiency at firm level, it ignore analysis of the whole product system. Private profitability and competitiveness are likely to be uppermost in the minds of those concerned specifically with assessing production response which a policy change might induce. The specific issue to be addressed by PAM are the pro-export

policies geared to increasing the profitability of the garment exporters. To the extent that exports are well paid, they are likely to expand summarizes how the specific issue fits into the wider policy context of promoting the export sector.

On the other hand, social profitability and efficiency are often emphasized by economists concerned with the allocation of resources among competing sectors and the growth of aggregate income in the economy. Substantial incentives may render exporters inefficient contrary to the recent consensus of growth and efficiency being critical to the attainment of industrialization. Optimal allocation of resources is important so that the growing export industries (clothing in this case) are those in which the country has a long run comparative advantage.

Both sets of issues ultimately focus on the incentive effects of policy -part of the difference between private and social parameters (divergence)- and how such policy incentives might be altered.

The empirical application of PAM to meet the objectives of the study requires six research inputs into the PAM approach (refer to table 3.1 above) - private revenues (A), private cost of tradable inputs (B), private costs of domestic factors (C), social revenues (E), social costs of tradable inputs (F), and social costs of domestic factors (G). Subtraction within the matrix then yields six research results - private profits ($D=A-B-C$), social profits ($H=E-F-G$), output and input transfers (respectively, $I=A-E$ and $J=B-F$), factor transfers ($K=C-G$), and net transfers ($L=D-H=I-J-K$). The research strategy is to find entries for all twelve elements in the matrix.

Data for the first row are obtained first. These data are observable but rarely available in precisely the desired form. The completion of the second and third rows is done pragmatically and in an ad hoc manner. Information from any available sources that is of reliably good quality is used. In most cases the calculations entail educated guesses and simplifying assumptions and constitute a tricky part in the study.

The structure of PAM thus allows for fairly simple exposition of the impact of a policy on private income and efficiency. Within this framework, policy changes can be simulated by altering the prices that are affected by the action. This study examines the case of devaluation and implicit export subsidization as policy incentives to the garment exporters. The PAM analysis entails comparing private incentives and the magnitude of the divergence before and after the policy change to assess the impact of the policy.

3.4.1 Hypotheses

The working hypotheses for this study are as follows;

(1) the incentive policies pursued by the government, have facilitated export manufacturing by increasing the profitability of garment exporters. This flows from the surveyed literature and theoretical framework that provided a strong positive link between incentive policies and the performance of exports. This hypothesis is tested at micro-level.

(ii) garment exporting would not survive without government enacting policies to support it. Surveyed literature on trade policy and efficiency indicate that export industries have misallocated resources because in a bid to promote them, substantial incentives may render their activities inefficient.

(iii) distorting policies and market failures cause divergence between private and social parameters in garment trade in pursuit of non-efficient objectives. Theoretical framework depict policy choices that are suboptimal in resource allocation and "anti-exports".

3.5 DATA REQUIREMENTS

The empirical estimation of PAM required computation of the values of outputs and inputs in terms of both private prices and world prices. The standard source of the data on the values of output and input at private prices is the sample survey questionnaire for a number of garment exporters in Nairobi. Primary data across garment firms are averaged to come up with representative firm-level budget data for PAM analysis.

World prices were not directly obtainable, and it required calculation of implicit world prices by adjusting domestic prices to take into account the effect of policy.

Data on interest rates, exchange rates, and inflation, were provided by the Central Bank of Kenya publications and Economic survey.

3.5.1 The Sample

The scope of selection of representative firms is determined by the research problem. The government policies have acted as a disincentive to potential exporters, and recent attempts to rectify this have not been followed by empirical studies on the likely effects of this policy shift on exporters. The combined aggregate effects of these policies would be estimable if reliable data were available on a broad category of industries for international and domestic prices and annual censuses of manufacturing. Such data are not available. Hence, the current analysis is based upon specially gathered revenue and cost data for individual garment manufacturers engaged in export production.

To select a representative sample, a list of exporting firms operating in MUB and EPZ was obtained from the Custom and Excise department (Customs). It was found that almost all of the exporters in MUB scheme were garment producers. The Custom list only provided export list, and export values and quantities, but firm level information on costs, number of employees and investments could not be obtained. List of firms operating in EPZ was obtained from Export Processing Zones Authority (EPZA), and it was found that only one firm located in Sameer Industrial Park exported garments.

To generate a representative firm-level budget for PAM analysis on a consistent and comprehensive basis, fairly large garment exporters were selected based on two criteria: availability of data, and representativeness of the firm

currently exporting. The data availability criterion was the limiting one.

Data were rejected only if they were not believed to be sufficiently accurate, a purely judgement decision. Altogether, data for four firms (one EPZ and three MUB) survived this test and the other three (all in MUB) were used with caution to determine a "representative" firm data for PAM analysis. Fortunately, variation in the price and cost data generated across firms was minimal. This explains why reduction in the list to only seven firms was necessary, though the initial list of potential representative garment firms was longer than the research project could manage. Screening firms during the initial visit saved time for the research efforts by allowing a focus on representative firms that had accessible and quality information.

Most of the cases considered here are reputed to represent outstanding examples of export successes and can be cited as justification for export promotion policy. This emanates from the fact that they have been able to export despite adverse policies which have made other garment firms close down.

All these considered together and given the inevitable resource and time constraint, suggest that the sample, while small, will yield an estimate of a representative input for the PAM approach.

3.5.2 Base year

The selection of base year was determined by the research interest, since the adoption of an export promoting strategy and

the establishment of a wide range of incentives as a component of this effort is a recent undertaking by the government. The firms' data were carefully collected to reflect the operation of the firm for the year 1992. Although the economy had deteriorated during this period, a series of macroeconomic reforms were undertaken thereafter in favour of export production. The selection of base year was also dictated by availability of data. Some flexibility was needed to accommodate firm accounting procedures. Nonetheless, data collection was done on a per month basis for the year 1992 to allow the study to be performed on the chosen calendar year basis.

3.5.3 Strengths and Weaknesses of Data

In keeping with the inductive nature of the study, the structure of the questionnaire was designed to allow flexible answers so as to minimize the chances of losing important information, given the limited sample. The approach worked well in gathering very sensitive data that may not be otherwise revealed. Guarantees of confidentiality were key in the data collection process. Much of the data collection exercise concentrated on activities that are most important in the firm operation and PAM construction. In a few cases, the interview was followed by a brief plant visit. The complete questionnaire is reproduced in Appendix A.

Perhaps the major weakness of the data is accuracy. Cases of reluctance to release exact figures were common, and persistent guarantee of confidentiality yielded estimates. Asian

businessmen are notoriously secretive especially on matters touching on the profitability of their going concerns. But since the present study attempts to build a PAM activity analysis for a "representative" firm, the individual firm's practices in the sample will not be revealed in the results, or released in a format which may reflect the operations of any responding firm.

Data on world prices was another limiting case. More often world prices for particular items in trade data were missing or biased, and in some cases required calculation of implicit world prices. Negligible items that did not affect so much the total cost of the firm was ignored.

CHAPTER FOUR

4.0 EMPIRICAL ESTIMATION OF PAM

This chapter sets out a framework for the construction of a "representative" firm level PAM for garment exporters. Primary data of cost and revenue are the building blocks for the PAM, and are disaggregated in two ways to facilitate estimation of social costs and the analysis of the impact of divergence: quantity and price data, and tradable and nontradable input costs. The remainder of the chapter develops the principle components for social evaluation in accordance with PAM analysis.

4.1 THE STRUCTURE OF "REPRESENTATIVE" FIRM ACTIVITY BUDGET FOR THE PAM ANALYSIS

The evaluation of input requirements and outputs for the "representative" firm was determined by comparing the responses across firms within the sample (see Table 4.1). Since there was not much difference among firms in production technology, the variable inputs were standardized by expressing the reported results as per unit of product output.¹¹ The items for the representative firm activity budget are categorized, quantified, and priced in private and social terms. The costs and returns of the firm are then summed to generate the total costs and revenues for the garment production (Table 4.2a and 4.2b)

¹¹ Production technology in apparel manufacturing has remained universal in the past, except in developed countries where rapid diffusion of microelectronic-based innovation has taken place

TABLE 4.1 DETERMINATION OF THE "REPRESENTATIVE" FIRM-LEVEL

<u>BUDGET DATA</u>				
	Range reported by firms	Means	Representative firm	Comments
<u>INPUTS</u>				
Fixed Inputs:				
1.Sewing Machines	17-30	22.35	22.00	
2.Land/Factory building	0.8-1.5	1.22	1.20	-For all fixed inputs, mean values are rounded.
3.Furniture/Fixtures	2.0-5.0	3.45	3.50	
4.Transport Equip.	1.2-3.0	1.87	2.00	
Labour:				
1.Unskilled				-Average values are used in rounded form. Data for 1 firm not in the range are excluded.
-No. of workers	150-300	217	220	
-Wages	1300-1600	1450	1500	
2.Skilled				
-No. of workers	350-500	405	400	
-Wages	2200-3200	2570	2500	
Raw Materials:				
1.Fabric				-Mean values slightly adjusted to account for overstating
2.Accessories	20-40	32.65	28.56	
	3.5-6.0	6.20	5.84	
Intermediate Inputs:				
1.Fuel	0.4-0.8	0.65	0.60	-Values around the mean are selected and rounded.
2.Electricity	0.25-0.45	0.40	0.36	
3.Water	0.03-0.07	0.05	0.05	
4.Repairs/m'tenance	0.3-0.5	0.50	0.42	Unreliable estimates for 2 firms are discarded.
5.Tel./Telex/Postal	0.5-0.9	0.82	0.72	
6.Handling costs	0.4-0.7	0.65	0.60	
7.Banking charges	0.09-0.35	0.30	0.24	
8.Others	0.15-0.45	0.40	0.36	
<u>OUTPUT</u>				
1.Finished Garments	42-90	65-20	67.55	-Mean value adjusted to account for understated estimates.

SOURCE: Survey of Firms

NOTE: -All data are for 7 firms except where indicated

-Figures are in Kshs Millions, except for no. of workers and wages.

4.1.1 Fixed Inputs

Since fixed inputs have a useful life of many years, only a portion of their costs is attributed to the base year (1992). Capital equipment showed little variation in the initial costs, and most mills were recently established. Sewing machines were estimated at Kshs 22m, with useful life of 15 years and Kshs 4.4m salvage value.¹² The value of land and factory buildings was approximated by rental costs (Kshs 1.2m). Furniture and transport equipment, each with useful life of 10 years, were approximated at Kshs 3.5m and Kshs 2.0, respectively.

To determine the annual equivalent value for each fixed input through the Capital Recovery Factor (CRF) method, the private rate of return was assumed to be 12% in line with the Kenya's level of development.¹³ The calculation of annualized cost of fixed input by CRF is presented in Appendix B.1.

4.1.2 Direct Labour

Garment manufacturing is labour intensive and labour costs are important components in the total production costs. For the interviewed firms, labour costs ranged between 15-30% of the

¹² See Appendix B.1 for the determination of both useful life and salvage values

¹³ A rough rule of thumb is used here. Countries with high per capita income levels usually have larger amounts of capital stock, thus have low rates of returns to investments (ranging between 2-6). The reverse is true. Low income countries rate of return usually range from 10-15%, thus for Kenya an arbitrary 12% is consistent.

total production costs. Average wages for skilled and unskilled labour categories are estimated respectively, as \$ 0.22 and \$ 0.37 for 220 and 400 workers in the representative firm.

No distinction was made between labour of different ages, sex, and skill level. However, it was observed that about 70% of workers are female of the age between 17-24 years. Skilled labour include managerial and professional labour.

4.1.3 Raw Materials and Intermediate Inputs

Apparel production is highly fabric-intensive, with fabric constituting about 35 to 60% of the total costs depending on the garment produced by the firm. Prices for fabric varied from one firm to the other depending on the fabric used and was averaged at \$ 3 per yard. Total fabric use, including accessories and packaging materials, was estimated at Kshs 34.39m for the representative firm in the year 1992.

Garment mills in MUB and EPZ are big users of electricity estimated at Kshs 0.36m a year (approximately 300,000 Kw hours). Other intermediate inputs include: fuel (petrol/diesel) with estimated consumption of 0.028m litres (approx. 0.6m per year), water, repairs and maintenance, telephone, and handling costs. Minor ones are included in the "other" category.

It was found that explicit costs of these inputs were not kept and firms had a tendency to overstate their costs. Several strategies were used if data could not be recalled with accuracy. It involved collecting data on unit cost per day or per unit of output basis, then converting and standardizing into the time

frame (1992).

The commodity-in-process category of input cost was largely ignored in most cases, partly because most firms interviewed commenced operation late 1991 and it is possible to assume a starting point for the base year during this period. Further, data were gathered on a monthly basis for the year 1992 to adjust the firm's accounting year to the calendar year.

4.1.4 Output

The revenues are based on evaluation of all outputs of the firms within the sample. The representative firm's output is designated finished garments to represent all different types of garments produced by the firms.

Data about sales were highly sensitive and most firms tended to give conservative figures. Since firms recorded fluctuations in sales, it was possible to come up with unbiased estimate of about Kshs 67.55m for the year 1992 (see Table 4.1).

4.1.5 Disaggregating Intermediate Inputs

Decomposition of intermediate inputs was necessary to permit identification of tradable inputs and domestic factor divergence. An arbitrary decomposition format is presented in Appendix B.2 with the coefficients shown in Table 4.6b. While these rely heavily on judgement, the effect on results is trivial. Because information is not readily available, fixed input costs are classified entirely in the capital cost category and direct

labour in the unskilled and skilled category.

The decomposition exercise was limited to the intermediate inputs that are important in the total costs of the firm. A standard rule of thumb was to decompose nontradables representing more than 5% of the total production costs. Fabric, accessories, and packaging materials were treated as pure tradable inputs with private decomposition coefficients of 1.00. Fuel, electricity, repairs and maintenance, telephone charges, handling costs and "others" are decomposed accordingly (see Table 4.2b).¹⁴

4.2 COMPONENTS OF ECONOMIC EVALUATION

Although policy makers have been concerned with the benefits and costs of MUB and EPZ schemes, they have stopped short of formal benefit-cost analysis (Warr, 1982). It would seem that some of the objectives, viz, foreign exchange earning and employment creation, in establishing the two schemes in Kenya have been achieved at the expense of domestic resources used. The PAM approach allows empirical application of the concept of Net Social Profitability (NSP) in ascertaining this. The aim is to measure efficiency associated with garment production when all output produced and inputs employed are evaluated at their social opportunity costs (through the use of shadow prices), and when all external effects on the domestic economy are given a social valuation and included in the measure.

The present subsection sets out a general approach. Implicit

¹⁴ Appendix B.2 also provides the rationale for decomposition

world prices for tradable are derived (c.i.f import prices and f.o.b export prices) by removing the distortion effect of policy, and correcting for the effect of factor market distortions for domestic factors. I must stress that the data base for all these calculations is such that only rough estimates are expected. Sweeping assumptions cannot be avoided.

4.2.1 Tradable Inputs and Foreign Exchange Earnings

Over 50% of the inputs and all finished apparels from MUB and EPZ garment firms are internationally traded. Private and social prices for imported raw materials are assumed to be equal since firms obtain them at international prices, therefore no adjustments are made to find social values.

The export values are the foreign exchange earnings from the firms and are not subject to any direct taxes. The requirement that firms in MUB declare their export proceeds and apply for allocation to purchase inputs at official exchange rate through Central Bank of Kenya, in effect, is an implicit taxation. The firm in EPZ has autonomous control of foreign earnings and are only taxed when converting at the official exchange rate for domestic spending. The exchange controls and domestic protection imply that the social value of foreign exchange in terms of domestic currency exceeds the official exchange rate.

The evaluation of the economic impact of this involves adjusting exchange rate for the impacts of output distortions and macroeconomic policy effects. Studies on the estimates of the degree of overvaluation take into account adjustments on domestic

protection, balance of payment deficit, quantitative restrictions, and the effect of exchange rate control. Such corrections are unnecessary for PAM construction and entails enormous amounts of empirical details to make such calculations.

One case in which adjustment is desirable to arrive at the social value of foreign exchange is when the government manages the exchange rate in such a way that inflation effects are not fully reflected in the exchange rate. This inflation adjustment corrects for the past or projected movements in the country's real exchange rate (RER).

To illustrate the principle of calculation, a number of assumptions are in order. One is that the dollar is the major foreign currency since most of the garments are sold in U.S.A. The official exchange rate is assumed to be Kshs 32 / \$ at the beginning of the year 1992. The government is assumed to depreciate the exchange rate by 10 per cent annually, thus reaching Kshs 35.2 / \$ at the end of the year. The inflation rate of Kenya's principal trading partner is weighted at 5 per cent, while that of Kenya is assumed to be at 40 per cent.¹⁵ Hence the inflation adjustment factor is 140/105, or 1.333. The yearend (1992) social value of foreign exchange is estimated as the official exchange rate times the adjustment factor: Kshs 35.2/\$ * 1.333 = Kshs 47/\$. This seems true as a measure of overvaluation considering the first devaluation of 33 per cent by the government early 1993 in anticipation of revamping the economy.

¹⁵ Economic survey estimate inflation as 27.5%, but the present study suspects the figure to be as high as 40%

4.2.2 Estimates of Shadow Prices of Labour and Capital

The government concern for employment generated in these schemes reflects the view that the social benefits derived from generating an additional job outweigh the costs. Essentially, the wage received by the worker exceeds the opportunity cost of his or her employment. Since over 70% of the workers are women, without previous experience in formal employment, the measurement of their opportunity cost is quite difficult. Probably, if they were not employed in these garment firms, many would have continued to work in their family households.

Estimates of the opportunity cost of unskilled labour in Kenya (Debebe, 1977) lie in the range of 42 to 98 per cent of the market wage rate for the assumed discount rate of 10 and 15 per cent respectively.¹⁶ The difficulty of applying these estimates arises in relation to the transfer of skills to the employees by these firms, the cost of migration, and the high value attached by the government to generating additional jobs. The present study assumes that the shadow wage rate for unskilled labour is not different from the wage rate received owing to the combined effect of high premium attached in job creation and the high cost of migration.

Skilled labour, which includes managerial and supervisory personnel, has an assumed social opportunity cost of 75 per cent of wages received. This rests on the crude assumption that the value of training received is 25 per cent of the wage received,

¹⁶ Debebe's estimations of shadow wage rate and social price of Capital, are presented in Appendix C.

considering the fact that apparel production is labour intensive and has little technological knowledge to offer which is not already widely available. This had the effect of lowering by such training the social opportunity cost of the employment of these workers in the EPZ and MUB.

The most widely used method to estimate the shadow price of capital is the Squire, Little, Durdag (SLD). In most countries, studies have reported widely different estimates shadow prices of capital since it is highly sensitive to the estimation method. Debebe's estimation in Kenya gives plausible estimate of social rate of return. Because of inability to determine the unique value for the consumption discount rate, Debebe assumption of 10% gives a social rate of return of 5.25 per cent.¹⁷ The present study adopts this estimate.

4.2.3 Social Valuation of Other Inputs

The social value for fuel inputs was obtained implicitly by adjusting the effect of a 50% tariff in the tradable component. For electricity, rates charged to commercial user are assumed to be 70% of the long-run marginal cost implying a subsidy of 30%. The same logic applies to telephone charges. Where the proportional adjustments to private prices are impossible, in particular inability to isolate quantity and price data, I simply assumed equality between private and social values. This was the case for water, handling costs, banking charges, and those in the "other" category.

¹⁷ See Appendix C

In sum, the various annual components of the social evaluation, constructed along the principles discussed above, are summarized in Table 4.2a and 4.2b. The social adjustments are incorporated in the decomposition coefficients (see Appendix B.2 for actual values) and their totals shown accordingly.

TABLE 4.2a: "REPRESENTATIVE" FIRM-LEVEL BUDGET DATA FOR GARMENT EXPORTERS IN 1992 (FIXED INPUTS AND LABOUR in Kshs Millions)

FIRM-LEVEL ---							---private decomposition coefficients---				PRIVATE	---social decomposition coefficients---				SOCIAL
-----CRF METHOD TO ANNUALIZE FIXED COSTS-----											CAPITAL					CAPITAL
B 1: FIXED INPUT	Useful Life	Share of Ann. Use	Rate-of-Return Priv	Rate-of-Return Soc	Initial Cost	Salvage Value	UL	SL	K	T	COST	UL	SL	K	T	COST
1. Land/Factory																
Building									1.00		1.20			1.00		1.20
2. Sewing Machine	15.00	1.0000	0.12	0.05	22.00	4.40			1.00		3.11			1.00		1.92
3. Furniture/																
Fixtures	10.00	1.0000	0.12	0.05	3.50	0.70			1.00		0.58			1.00		0.40
4. Transport																
Equipment	10.00	1.0000	0.12	0.05	2.00	0.40			1.00		0.33			1.00		0.23
TOTALS									5.22		5.22			3.74		3.74
-----budget information-----							---private decomposition coefficients---				PRIVATE	---social decomposition coefficients---				SOCIAL
B 2: LABOUR	Unit	Price	Quant	Freq	TOTAL	UL	SL	K	T	TOTAL	UL	SL	K	T	TOTAL	
1. Unskilled Labour	Days	7.81	220.00	0.00	3.95	1.00	0.00	0.00	0.00	3.95	1.00	0.00	0.00	0.00	3.95	
2. Skilled Labour	Days	13.02	400.00	0.00	11.98	0.00	1.00	0.00	0.00	11.98	0.00	0.75	0.00	0.00	8.98	
TOTALS						3.95	11.98	0.00	0.00	15.93	3.95	8.98	0.00	0.00	12.94	

TABLE 4.2b: "REPRESENTATIVE" FIRM-LEVEL BUDGET DATA FOR GARMENT EXPORTERS IN 1992 (INTERMEDIATE INPUTS AND OUTPUT DATA in Kshs Millions)

B3: INTERMEDIATE INPUTS	-----budget information-----					---private decomposition coefficients---				PRIVATE	---soci
	Unit	Price	Quant	Freq	TOTAL	UL	SL	K	T	TOTAL	UL
1.Fabric	yards	105.00	0.27	1.00	29.56				1.00	28.56	
2.Accessories					3.76				1.00	3.76	
3.Packaging Materials					2.08				1.00	2.08	
4.Fuel(petrol/diesel etc	litres	21.00	0.03	1.00	0.60	0.10	0.05	0.25	0.60	0.60	0.10
5.Electricity	Kw Hrs	1.20	0.30	1.00	0.36	0.15	0.30	0.50	0.05	0.36	0.15
6.Water	Cons. lits.				0.05	0.15	0.20	0.50	0.15	0.05	0.15
7.Repairs/m'tenance					0.42	0.05	0.10	0.25	0.60	0.42	0.50
8.Telephone/telegraph /postal/telex	Hours	4.00	3000.00		0.72	0.10	0.30	0.30	0.30	0.72	0.10
9.Handling costs					0.60	0.30	0.30	0.30	0.10	0.60	0.30
10.Banking charges					0.24	0.10	0.30	0.30	0.30	0.24	0.10
11.Others					0.36	0.10	0.30	0.30	0.30	0.36	0.10
TOTALS						0.45	0.77	1.04	35.49	37.75	0.64

B 4: OUTPUT	PRIVATE
1.FINISHED GARMENTS	67.55
TOTAL REVENUES	67.55

CHAPTER FIVE

5.0 ANALYSIS AND RESULTS

The results of field interviews on the responses of garment manufacturers are briefly presented with a view of understanding the clothing industry and how policy incentives offered by the government affects the manufacturers. This is done in the first section (5.1) in the present chapter. The rest of the chapter is devoted to analysis and interpretation of PAM results.

5.1 PERCEPTION OF THE FIRMS PROBLEMS AND EXPORT INCENTIVES

The section attempts to provide useful information on the garment exporters perception of export incentives. The analysis flows from field interviews with clothing exporters. I adopted a flexible interview approach in order to explore important aspects, given the small sample size and lack of time.

5.1.1 Some problems

The interviews with the sample firms began with questions on problems faced by the firm, product produced and sold in the export market, the value of the exports, and the scheme which the firm operates in. There are diverse reactions to the problems faced by the garment firms. Most notable are problems associated with import procedures. Six firms in MUB scheme noted delays in processing of import entries, unnecessary verification

requirement for imported goods, lengthy process in the application of letter of release, and delays in custom clearing houses in Jomo Kenyatta International Airport and railage delays from Mombasa (Table 5.1). It would seem that, though the green forms meant for exporters (under the green channel scheme) are available to firms, import documentation is still cumbersome. The process is slowed further since the customs officers are not always present at all times to handle clearing documentations. A further complaint was the low value of in-bound airfreight sample shipments currently at Kshs 4,000.

The EPZ firm had little problems with import procedures since all customs procedures are handled at the zone level. However the problem of railage from Mombasa was severe. Although the problem of power is a general problem for manufacturers in Nairobi, it adversely affected garment producers since they are big users. Two firms incurred extra overhead cost for purchasing power generators to safeguard themselves from this menace.

Labour is an important input in garment production, and only two firms were unable to meet their orders promptly due to labour strikes. Table 5.1 gives the response of manufacturers on these typical problems. Of the seven interviewed firms, five stressed power problems, and six (MUB users) complained of import procedures. Labour strikes were somewhat important and few reported problems associated with communication, particularly railage from Mombasa.

TABLE 5.1

RESPONSE OF MANUFACTURERS ON SOME TYPICAL PROBLEMS

Nature of the problem	Very Important	Somewhat Important	Not Important
1. Delays in import procedures	6	0	1
2. Power failure	5	2	0
3. Labour strikes	2	4	1
4. Communication problems	3	3	1

Source: Interview with firms.

5.1.2 Garment exports

Most firms I interviewed exported all their products and did not consider producing for the domestic market. Responding on the volume produced for the domestic market, one firm retorted, "we do not produce for domestic market, we cannot even meet our export orders." This partly summarizes the profitability of the export market and the fulfilment of the condition pertaining to bonded manufacturing.

Garment products sold in the export market varied from one firm to the other. The firms covered exported sports and beach shorts, jeans, shirts, pants, and a wide variety of men's, children's and women's apparel. Two firms that were highly secretive, only quoted finished garments as their exports.¹⁸ The average value exported by these firms in U.S dollars did not vary considerably (Table 5.2), although fluctuation in sales was common. Only two firms exported output valued at over \$ 200,000.

¹⁸ These firms seem to keep their operations highly confidential for fear of competition

TABLE 5.2

RANGE OF AVERAGE OUTPUT EXPORTED BY FIRMS IN 1992

Monthly Output in \$	No. of firms
100,000 -150,000	2
151,000 - 200,000	3
over 200,000	2
Total	7

Source: Interview with firms

When asked about the trend of the firm exports for the past two years, all firms recorded an increasing trend.¹⁹ An inquiry on the factors responsible for this change showed a uniform response (Table 5.3) with increase in productivity and investments as key. Six firms in the sample, recorded a positive response in sales due to the introduction of foreign exchange retention accounts. The firm in EPZ did not cite this to be important since the scheme provided for autonomous control over foreign exchange earnings.

TABLE 5.3

FACTORS RESPONSIBLE FOR CHANGES IN EXPORT VOLUME RESPONSES

	Important	Not Important
1. Increase in productivity	7	0
2. Increase in investments	6	1
3. Better capacity utilization	5	2
4. Foreign exchange retention	6	1

Source: Own Survey

¹⁹ This applies only to five firms that started operation two years ago

5.1.3 Incentive Packages

The most important single reason Kenyan exporters of clothing began to export and grow is that the government export incentive policies had begun to make them profitable. The incentive packages give the two schemes a competitive edge over other incentives offered around the world, except that Kenyan enterprises cannot clear their imports and exports within 48 hours as their world counterparts can.

The incentive packages offered are quite favourable. Firms producing for exports inside the two schemes enjoy all tax exemptions which include exemption from payment of all custom duties on imported raw materials and capital equipment; and exemption from all export taxes. The upgrading of incentive packages available in MUB puts the firm users on an equal footing with the EPZ firm. This liberalized regime has enabled the garment firms to compete effectively with foreign producers operating under similar schemes.

Perhaps one of the most important advantage the EPZ firm has over the others is that EPZ firms are served by a separate one stop entity (the Export Processing Zone Authority (EPZA)). Simplified import and export documentation is available in EPZ compared with that managed by the Investment Promotion Centre (IPC) and The Customs.

The firms I interviewed acknowledged tax exemptions as a major influence on profitability and as an incentive to export. Favourable export prices also contributed to exporting. A rough calculation of the effective subsidy implicit in MUB and EPZ

scheme users is done below.²⁰ The estimate serves as the nominal incentive to clothing exports for the firms. Following Teigero and Elson (1973);

$$ES = m/x (t_i)$$

Where:

ES = Effective subsidy implicit in MUB and EPZ

m/x = The percentage of the value of exports for the representative firm that is represented by imported inputs (for MUB and EPZ users it is approximated at 60% in 1992).

t_i = The average tariff on imported inputs-fabric, accessories and packaging materials (approximately 65.5%).

$$\text{Therefore, } ES = 0.60 (0.655) = 0.393$$

This means that firms in the two schemes enjoy an effective subsidy of 39.3% of the value of export proceeds in 1992.

Although exchange rate manipulation was rarely mentioned here, it was too important. It will be considered explicitly in the PAM analysis.

5.1.4 Nonprice factors

Although export incentive policies pursued by the government seem to have played a vital role in exports of apparel, nonprice factors were also crucial. Interviewed firms were responding to

²⁰ The calculation attempts to estimate quantitatively, using a common denominator, the nominal incentive to exporters

orders from foreign buyers, and the largest share of exports was destined for U.S.A and Europe. All firms responded favourably to the presence of foreign collaborators in the marketing of their products. The firm operating in EPZ relocated to Kenya to meet the specified order which is been undertaken by the parent firm. It is possible that the MFA quota system affecting the developing countries textile and clothing exporters explains the firm's decision to locate in Kenya. The firm is a subsidiary of well established Philippino firm exporting jean trousers to U.S market. Those in MUB scheme acted on the specification from the foreign buyers who tend to favour firms located in countries that provide a favourable policy environment.

5.1.5 Costs: Labour, Fabric, and Exchange Rate

The f.o.b export price manufacturers quote to potential foreign customers for a garment depend upon the cost of producing the item (i.e. cost of labour, fabric, and other inputs), the exchange rate, and the profit margin.

One of the assistant factory managers of a firm I interviewed revealed that "most foreign buyers are targeted to Kenya simply because of availability of cheap labour." This was true for all cases. Monthly wages varied little from firm to firm and were approximated to be Kshs. 1,500 (approximately \$0.29 per hour) and Kshs. 2,500 (\$ 0.48) for unskilled and skilled workers respectively.²¹ These figures are comparable to wages paid in

²¹ The Kenyan official exchange rate (Kshs 35/\$) in 1992 is used for conversion

East Asia in the year 1973. Indeed, one can talk of clothing manufacturing as contributing, so to speak to "labour exports." Labour costs are important in garment production and ranged between 20%-30% of the total costs for all interviewed firms. On education level, one director of a firm noted that "Kenya has a highly educated labour force which is highly trainable and quick to learn how to operate sewing machines." Close observation of the composition of the labour force showed that over 70% of the workers in all firms visited are women. Most firms attributed this to the relative ease of training women, and even some contended that women are less troublesome.

Apparel manufacturing is more fabric-intensive than it is labour-intensive. For almost all the firms interviewed, and depending on the type of garment, the average share of fabric costs in the total production cost is approximately 50%.²² Under the two schemes a wide range of cotton and synthetic fabric is available to garment exporters at world prices. Six garment firms import fabric, except one that was integrated to the local textile mill. None considered drawing fabric from domestic source, because of price and quality reasons. For all other inputs (accessories, packaging, thread, zippers, and other embellishments), firms preferred importing and only resorting to local sources when foreign supplies were delayed.

The reaction to devaluation showed that it had the effect of lowering production cost for three firms that quoted wages in terms of U.S dollars. Clearly, other things being equal, labour

²² This is only an average figure, and depending on the garment produced the range was between 35-60% for the interviewed firms

costs expressed in dollars would be more in shillings after devaluation. A negative effect noted by most firms is that it made procurement of imports difficult, noting that most inputs are drawn from abroad.

5.1.6 Capacity Utilization

The degree to which capacity is underutilized has some influence on total costs, and hence on price. Of the seven firms in the sample, only one firm commenced two-shift operation this year, another was considering the same in due course, while the rest only operated on one shift basis. Two firms had a high (80%) capacity use based on one shift and the others, slightly less (approximately 75% on average). Few firms worked less than 48 hours per week. Nor did they experience serious problems in running one shift (Table 5.4).

TABLE 5.4

REASONS FOR UNDERUSING CAPACITY IN 1992

	RESPONSES		
	Important	Somewhat Important	Not Important
1. Difficulties over raw material supplies	1	2	4
2. Recession in the world market	0	2	5
3. Strikes/lockouts	2	2	3
4. Power failure	6	1	0
5. Infrastructural difficulties	1	1	5
6. Unavailability of spare part	0	0	7
7. Shortage of skilled labour	1	1	5

Source: Interview with firms

By far, most reported power failure was the major cause of unusual stoppage slowing down the level of output, followed by labour strikes. Other factors seems to be of little importance.

5.2 THE PAM ANALYSIS

The various annual inputs and output of the representative firm-level PAM for the year 1992 derived in chapter four tables 4.2a and 4.2b are summarized in Table 5.5 below. The private and social measures are compared in terms of revenues and costs, and the difference represents the effect of policy and market failures.

TABLE 5.5: FIRM-LEVEL SUMMARY OF COSTS AND OUTPUT FOR GARMENT EXPORTERS IN 1992
(Kshs. Millions)

	PRIVATE MEASURES	SOCIAL MEASURES	EFFECT OF POLICY AND MARKET FAILURES
1. TOTAL REVENUES Finished Garments	68	91	23
2. TOTAL COSTS	58	66	
A. Tradables	35	48	(12)
B. Dom. Factors	23	18	5
(Unskilled)	4	5	(0)
(Skilled)	13	10	3
(Capital)	6	4	2

SOURCE: Computations Derived From Tables 4.2a and 4.2b

NOTE: Figure may not add up due to rounding

To assess the overall competitiveness and efficiency and the effect of divergence, the accounting matrix of the representative firm (The PAM) based from the foregoing calculations are presented in Table 5.6. To compare these results with the

situation showing the absence of nominal incentive, the results depicting the later case is presented in table 5.7. In order to establish the impact of 34% devaluation on the returns to garment production, private profits and the magnitude of the divergence before and after devaluation are compared. This is done by presenting the effect of simulated devaluation in table 5.8. The estimates of private and social indicators are presented and summarized in table 5.9 in order to adequately account for the effect of all incentives and efficiencies. Finally, sensitivity analysis provides a way of assessing the impact of changed assumptions on profitability. This is done and summary results are shown in table 5.1

5.2.1 Interpretation of the Firm-level Results²⁵

The accounting matrix depicting the current situation faced by garment exporters is presented in the table below

TABLE 5.6 Firm Level Results For Garment Exporters
Kshs per Firm ('000,000)

	REVENUES	TRADABLES	DOMESTIC FACTORS	PROFITS
PRIVATE	67.55	35.49	23.41	8.65
SOCIAL	90.52	47.89	18.34	24.29
DIVERGENCE EFFECT	(22.97)	(12.40)	5.07	(15.64)

NOTE: -Negative figures are in parentheses
-Figure may not add up due to rounding
SOURCE: Own Computations

²⁵ The reader is advised to refer to the section on The PAM Approach in Chapter 3 for the definitions and formulas in this subsection

5.2.1.1 Private and Social Profitability

In 1992 garment production in MUB and EPZ on the representative firm was privately profitable given the current conditions; the activity generated revenues (hence foreign exchange) of Kshs 67.55m per firm at a cost of Kshs 58.90m, thus resulting in profits of Kshs 8.65m per firm (table 5.6). This is attributed to the incentive policies pursued by the government, especially tax exemptions that kept costs down.

The Private Cost Ratio (PCR) is 0.73 (see table 5.9) before devaluation. This shows that garment exporters are able to pay 73% of domestic factors and still remain competitive after earning normal private profits.

The production of garment for exports require manufacturers to rely on imported quality fabric. Consequently, the cost of fabric and other imported embellishments exporters pay has major implication for the profitability of the firm (see table 5.7). In the absence of duty exemptions, garment producers would have to pay extra

TABLE 5.7: Firm Level Results for Garment Exporters with no Effective Subsidy
KSHS per Firm ('000,000)

	REVENUES	TRADABLES	DOMESTIC FACTORS	PROFITS
PRIVATE	67.55	62.04	23.41	(17.90)
SOCIAL	90.52	47.89	18.34	24.29
DIVERGENCE EFFECT	(22.97)	14.15	5.07	(42.19)

NOTE:-Negative figures are in parentheses

-Figure may not up due to rounding

SOURCE: Own Computations

costs of approximately 39.3% (this is the effective subsidy derived in subsection 5.1.3) of the export proceeds. This implicit subsidy would mark up tradable cost by Kshs 26.55m per firm. In such a case profits would be negative of the magnitude Kshs 17.9m, and garment producers would not be induced to export. Given the current exchange rate, the tax exemption is necessary if garment production is to be exported.

In social terms, the table shows positive social profits of the magnitude Kshs 24.29m indicating that the garment exporting would survive without any government support. This row capturing the scenario in the absence of distorting policies and market failures suggest that the production of garments for exports is efficient. The Domestic Resource Cost (DRC) ratio which also serves as a proxy measure for social profitability is 0.43. This ratio will be equal to one if social profitability measure equals zero. Thus minimizing DRC is equivalent to maximizing social profits. In this case DRC is positive and less than one indicating that social profits are high and greater than zero.

These two measures of private and social profitability, shows competitiveness and efficiency (comparative advantage) of garment production, respectively. They are important results of the PAM approach.

5.2.1.2 Output Transfers

The results of the analysis showed that the social value of the finished garments exceeds the private value. This divergence (caused by implicit taxation) of Kshs 22.97m per firm results

from the effect of an overvalued exchange rate. Because the official exchange rate is held below the realistic level, the government receives a transfer of resources from the garment exporters of over Kshs 22.97m. per firm. A devaluation would affect these transfers (see table 5.8).

The Nominal Protection Coefficient (NPC) shown in table 5.9 is 0.74 before devaluation. This means that private revenues are 74% below what they would be if the exchange rate was not overvalued. This ratio indicates the impact of overvaluation on incentives, or the degree of output transfers. Clearly, the ratio equals one after devaluation since the transfer away from exporters dissolves to zero.

5.2.1.3 Input Transfers

5.2.1.3.1 Tradable costs

The official exchange rate devaluation affects the transfers through tradable input costs. With the shilling overvalued, the domestic price of these inputs (fabric, accessories, packaging materials, etc) is 35% below the world price. In the current situation (table 5.6), apparel exporters receive a transfer from the system of over Kshs 12.40m because of an overvalued exchange rate which constitute about 99% of the tradable input transfers, and the balance on import duties levied on indirect inputs (i.e. fuel and spare parts purchased locally). Under these conditions, the only distorting policy creating the transfer away from the garment exporters is the overvalued exchange rate unlike the

scenario where manufacturers are unable to obtain inputs at world prices (see table 5.7). In this case, tariff transfers are more pronounced and thus the government receives transfer from apparel producer of the magnitude Kshs 14.15m. Before devaluation, firms pay only Kshs 35.49m on the world market. After devaluation this implicit transfer to garment producers of Kshs -12.40m per firm dissolves into higher input prices giving a near zero value of Kshs -0.34m.²⁴ The remaining discrepancy results from tariff protection on some intermediate tradable inputs (table 5.8).

Nominal Protection Coefficient for tradable input is 0.74 (35.49/42.89) before devaluation and boils down to about one after devaluation. This means that private tradable costs are 74% below what they would be if there were no devaluation, in the former case. The effective protection coefficient (EPC) displays the effect of incentive policy on value added. Before the devaluation the EPC was 0.75 implying that value added was 75% lower than it would be in the absence of policies. After devaluation the EPC rises to about 1.01 since garment exporters have been insulated from the effect of these protectionist policies.

²⁴ While the EPZ firm enjoy tax rebates, the net effect of MUB firms which do not enjoy this incentive, constitute the the discrepancy

**TABLE 5.8 Firm level Results for Garment Exporters After
Devaluation in 1992
Kshs per Firm ('000,000)**

	REVENUES	TRADABLES	DOMESTIC FACTORS	PROFITS
PRIVATE	90.52	47.55	23.41	19.56
SOCIAL	90.52	47.89	18.34	24.29
DIVERGENCE EFFECT	0.00	(0.34)	5.07	(4.73)

NOTE: -Negative value in parentheses

-Figure may not add up due to rounding

SOURCE: Own Computation

5.2.1.3.2 Domestic Factor Costs

The divergence effect on factor cost (labour and capital) is positive (Kshs 5.07m) both before and after the devaluation. This effect is a combination of policy distortion and market failures. Because of inability to isolate policy distortion effect, it is expected that an overvalued exchange rate will not reflect the social value of the domestic factor (labour) given up by the workers (hired by the MUB firms with the domestic currency they receive in the Central Bank, prior to exchange control liberalization) in exchange for it. This applies to 3 firms that quoted wages in dollars. There is no reason to expect the devaluation to influence this situation.

The divergence can be wholly associated with market failures which include; government concern for job creation (attaching a premium to the opportunity cost of labour), the value of training received by worker, the low rates charged to commercial electricity and telephone user which does not reflect the long-

run marginal costs, and low social opportunity cost of capital considering the fact that much of the private investments are foreign financed.

The profitability coefficient (PC), an extension of EPC to include factor transfers is 0.36, implying that value added was 36% lower than it would be in the absence of policies. After devaluation the PC rises to 0.81. The PC measures the incentive effects of all policies and thus serves as a proxy for the net policy transfers of Kshs -15.64m and -4.73m before and after devaluation, respectively. The subsidy ratio of producers of 0.17 and 0.05 before and after devaluation shows the proportion of revenues in world prices that would be required if a single subsidy or the implicit tax were to be substituted for the entire set of actual product and macropolicies.

TABLE 5.9 Indicators of Profitability, Efficiency, and Policy Incentives in Garment Production.

	FORMULA	BEFORE DEVALUATION	AFTER DEVALUATION
PRIVATE PROFIT	$D = A - B - C$	8.65m	19.56m
PRIVATE COST RATIO (PCR)	$C / (A-B)$	0.73	0.54
SOCIAL PROFIT	$H = E - F - G$	24.29m	24.29m
DOM. RES. COST RATIO (DRC)	$G / (E-F)$	0.43	0.43
NET POLICY TRANSFER	$L = I - J - K$	(15.64m)	(4.73m)
NOM. PROTECTION COEFF. (NPC)	A / E	0.74	1.00
EFF. PROTECTION COEFF. (EPC)	$(A-B) / (E-F)$	0.75	1.01
PROFITABILITY COEFFICIENT	D / H	0.36	0.81
SUBSIDY RATIO	L / E	(0.17)	0.05

NOTES: Negative value are in parentheses

SOURCE: Own Computation

5.2.1.4 Effect of Simulated Devaluation

The effect of a devaluation is modelled by altering the private price of tradable input and output by the amount of devaluation. In this case, the value of all tradables was increased by 34% (Appendix D gives the results after modelling for devaluation).

After devaluation, the situation improves dramatically. At the firm level garment exporters' profits more than double, to 19.56 per firm.

The devaluation has no effect on social prices since these

were calculated using real exchange rate. Nonetheless, the net divergence decreases from Kshs -15.64m to Kshs -4.73m after devaluation.

5.2.2 Sensitivity Analysis

The social prices for outputs and inputs described above incorporate some degree of analytical imprecision, and thus sensitivity analysis is applied to social estimates. The analysis provides a way of assessing the impact of changed assumptions on profitability. Although all parameters need to be subjected to sensitivity analysis, attention here is only focused on social estimates of long-run world prices for garments, the cost of labour, and the cost of capital. Table 5.10 below shows the results of a percentage change in DRC given a 1% change in noted parameter.

These indicators shows the elasticity of social profits with respect to a particular parameter. The calculations of these elasticities proceeds by increasing the parameter of interest by an arbitrary percentage (in this case 1%), and social then profitability is recalculated and compared to the initial value to estimate the percentage change in social profits.

The table shows that, a 1 per cent change in shadow wage rate of unskilled labour results in a 25 per cent change in social profitability. For shadow price of skilled labour and capital, a 1 per cent change leads to 52 per cent and 23 per cent in social profitability, respectively. While 1 per cent change in value of Finished Garments results in 208 per cent change in

social profitability. This shows a high sensitivity to social estimates (note that DRC is a proxy measure of social profits).

TABLE 5.10: Sensitivity analysis

PERCENTAGE CHANGE IN DRC GIVEN A 1% CHANGE IN NOTED
PARAMETER.

	<u>DRC</u>
1.Shadow price of Unskilled Labour-----	0.25
2.Shadow Price of Skilled Labour-----	0.52
3.Shadow Price of Capital-----	0.23
4.Value of Finished Garments-----	(2.08)

SOURCE: Own Computation.

CHAPTER SIX

6.0 CONCLUSION AND POLICY IMPLICATION

This chapter is divided into three sections. Section one gives a summary of the paper and research findings. Section two deals with policy implications. Finally, section three presents the limitations of the study.

6.1 SUMMARY AND RESEARCH FINDINGS

In accepting the supremacy of export promotion to expand industrial growth, it becomes important to consider the range of incentives available to exporters. The study has considered two major policy incentives: nominal exchange rate manipulation, and indirect export subsidization. Although not stated explicitly in this research paper, the pure tax exemption incentive policy is the implicit effective subsidy to export manufacturers. Resort to export incentives for export promotion purposes has encouraged exporting activities particularly garment trade in the MUB and EPZ schemes.

The main purpose of this study was two fold: to analyse the impact of Kenya's attempts to redress the anti - export bias of her policy structure through the introduction of export incentives, on garment exporters; and to ascertain the efficiency of export manufacturers utilizing these incentive policies. The method of analysis described in chapter three was applied to meet these objectives.

On the basis of research findings, it can be argued that while there was a positive response among garment exporters on the availability of tax exemptions, the policy has not worked smoothly due to poor implementation that reduced the nominal value of the incentives. Although it was difficult to calculate with any quantitative exactness using a common denominator the nominal incentive to garment exporter, it was clear from the sample information that a number of exporters did not receive the full benefits of the policy incentives. It would seem that, though the green forms meant for exporters existed, import documentation procedures reduced the value of the incentive.

Kenya has the potential to attract new business in garment trade. Manufacturing firms were producing garments for the already existing foreign market. These foreign buyers tend to favour firms located in countries that provide a favourable policy environment. More important also is the possibility of foreign investors especially from the Far East to relocate in Kenya. Although only one firm has set shops in the EPZ, more may operate in the MUB schemes since they offer almost similar competitive packages. This also explains why the present firms in MUB noted reluctance to establish in the more attractive EPZ scheme.

Apparel producers in these schemes produce specifically for the export market. While manufacturers acknowledged that the export market was profitable, none ruled out profitability in the domestic market. Indeed this explains the condition attached to eligibility of the incentives.

The results of the application of PAM analysis, showed that not only were export incentives important, but also nominal

manipulation of exchange rate. Current situation resulted in financial profits to garment exporters of the magnitude of Kshs 8.65 million. The incentive packages, mainly tax exemption, ensured positive profit margins which more than doubled after an official exchange rate devaluation. The results also showed that since clothing exporters relied on quality fabric from abroad to meet the specified orders, it was important that the manufacturers obtain this input at world prices. Otherwise garment production will not be competitive. This supports the hypothesis that incentive policies pursued by the government have facilitated export production. The competitiveness is even increased after a further incentive of devaluation.

The calculation of net social profitability suggests that garment exporting would survive without government enacting policies to support them. The activity leads to positive social profits of the magnitude Kshs 24.29 million. It can be deduced that producers have comparative advantage in garment trade. While it was shown in the results given in table 5.7 that garment manufacturing was not competitive, the handiwork of incentive policies that removed the distorting effects almost yielded the same social analyze as the private profits (see table 5.8).

The analysis of the effect of divergence caused by distorting policies showed that an overvalued exchange rate transferred resources away from garment exporters to the government. The devaluation would serve the economic efficiency objective of the government since private prices would be brought closer to social prices.

6.2 POLICY IMPLICATIONS

In hastening the reform programme, the policy incentives that are likely to succeed in the export promotion trade strategy are those geared to increasing the profitability of exporters. Based on the research findings, the nominal incentive to clothing exporters is quite low due to poor implementation of the 'green channel' scheme which aims to speed up import and export procedures.

The following recommendations are useful to hasten import documentation in order to provide rapid expansion of garment exports.

(1) the notification of the letter of release for imports be facilitated through the use of a single letter

(2) the information from Customs regarding the imported goods which are to be manufactured and converted into finished garments exports should be copied and forwarded on the appropriate entry form to the Ministry of Commerce and Industry to reduce delays in verification procedures

(3) Custom officers be deployed for each MUB facility to speed up clearing documentation

(4) the value of in-bound air freight sample shipments

be increased from the current Sh 4,000 to Sh 30,000 allowance without obtaining a letter of release

On the basis of the PAM results, tax exemptions yielded positive profits. Indeed from the field analysis, three garment enterprises earned nearly \$ 6 million foreign exchange in 1992 from the export of finished garments. An official exchange rate devaluation will also positively affect apparel exporters. After devaluation profits increased more than two fold for the representative firm. It would seem from this study that the series of devaluations that occurred in the early 1993 served the garment exporters well. Profits, other thing being equal, must have doubles after the first devaluation of 27%. The production response arising from this will not counter the government objective of earning foreign exchange. Therefore given a 34% of devaluation, the incentive policies (tax exemptions) should not be altered.

The results also indicate positive social profits associated with garment manufacturing. From economy's point of view, the benefits from expanding garment trade are greater since the country has the comparative advantage. The exporting industries can be allowed to grow since they minimize domestic resource use in earning foreign exchange (in this case the DRC is 0.43). Because the government's recent concern on industrial policy has addressed the issue of efficiency and is likely to shape future policies, garment production may fulfill this government objective. Above all, this type of exporting exposes domestic businesses to examples of internationally competitive

enterprises. This demonstration effect is valuable especially in the early stages of industrialization.

For labour surplus economies like Kenya, garment trade can be an efficient and productive means of absorbing surplus labour. Garment exporting can be thought of as a form of labour export. These labour intensive manufactured exports relieve unemployment. It is possible that expansion of these manufactured exports will raise economic growth and the higher economic growth will in turn, further reduce unemployment. However, the degree to which the sector's activities are linked to the domestic economy is so small that workers can be thought of as working essentially outside the country.

6.3 - LIMITATION OF THE STUDY

Apart from weaknesses inherent in the data (discussed in chapter 3), this study suffers from a few limitations. First, the assumptions underlying the justification of using world prices as a benchmark of efficiency in social evaluation are too restrictive. Some economists have argued that world prices are themselves inefficient, leaving the pursuit of comparative advantage in jeopardy.

Second, the social valuation of both output and inputs when adjusting, entails educated guesses and simplifying assumptions. While sensitivity analysis has shown that social profitability was highly responsive to changes in social parameters, social evaluation remained tricky in the study.

The third limitation concerns the approach adapted in the

study. The PAM analysis poses two typical problems. First, as with any social cost-benefit analysis, it is difficult to judge with certainty how the level of physical inputs would change if social prices prevailed or if policies were enacted to change relative prices. In general, an assumption of fixed input-output coefficients was made. This implies that the same quantities of inputs are used under differing scenarios. Second, the analysis concerns competitiveness and efficiency at firm level only and neglects the whole commodity system (i.e from cotton production level, spinning, weaving to finished garments stage).

Fourth, the study analyses only one potential exporting activity (garment manufacturing) and other studies will need to be conducted on firm basis for other exporting industries to ascertain how profitability and efficiency are affected by export incentives for a well designed export promotion policy. However, meaningful conclusion can be made from analysis of clothing manufacturing.

Finally, because the data for the PAM represent a chosen base year (1992), the results are static and applicable to that year. Nevertheless, it is potentially applicable for other years also.

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APPENDICES

APPENDIX A

STRUCTURE OF THE QUESTIONNAIRE

STUDY ON EXPORT INCENTIVES AND EFFICIENCY OF GARMENT EXPORTERS

PART ONE

(A) GENERAL INFORMATION.

- (1) Name and address of the firm.
.....
.....
.....
- (2) Telephone.....
- (3) Name and position of person interviewed
- (4) Year production began
- (5) Dates of accounting year.....
- (6) What products do you produce?.....
- (7) What products do you export?.....
- (8) What is the volume/value of your exported products?
.....

(B) PERCEPTION OF FIRM PROBLEMS, TRADE POLICIES AND EXPORT INCENTIVES.

- (1) What are the major problems faced by your firm?
 - (a).....
 - (b).....
 - (c).....
 - (d).....
- (2) Do you export directly, through export traders or through export houses?
If Direct=0, Export traders=1, Export houses=2
- (3) Which scheme do you operate in?
If MUB=0, EPZ=1, none=2
- (4) When did you begin exporting?.....
- (5) Which of the following affected your decision to begin exporting your products? If Yes=1, No=0
 - (a) Favourable export prices
 - (b) Export incentives:
 - (i) tax rebates
 - (ii) tax exemptions
 - (iii) export compensation scheme

- (iv) green channel scheme
- (v) export credit insurance and guarantee scheme....
- (vi) PTA arrangements
- (vii) export information and promotion (KETA)
- (viii) Foreign exchange retention scheme
- (ix) any other, please specify.....

(6) This section concerns the specific regulations drawn up to to implement export incentives measures listed in item (4b). It requires brief response about the status of their implementation.

(a) Export compensation scheme:

- (i) what is the approximate duration for processing and payment of claims?.....
- (ii) Is the government's three-stage duty draw-back facility in operation?.....
- (iii) Is there any eligibility criterion applied by the government? if yes, state
- (iv) is such payment taxed? if yes, at what rate....
- (v) how is the applicable rate of payment determined?
- (vi) give other comments, if any, about this scheme.

(b) Green channel scheme:

- (i) comment on steps required to receive administrative approval for import licenses and foreign exchange release.

-
- (ii) are the green forms meant for exporters available to you?.....
- (c) concessions available in MUB or EPZ:
 - (i) are you exempted from all import duty and sales tax?.....
 - (ii) what conditions are attached to the exemption?.....
 -
 -
 - (iii) are you entitled to any tax holiday? if yes, what rate?.....
 - (iv) other comments, if any specify.....
 -
 -
- (d) For Export credit insurance and guarantee scheme, briefly comment if you have benefited from it. Is the government-set Consortium^{in operation?}.....
-
-
- (e) Briefly, comment on the benefits your firm have received by Kenya becoming a signatory to the Preferential Trade Area (PTA) Treaty or any other PTA arrangements.....
-
-
-
- (f) Have you benefitted from any Trade Fairs or any other promotional activities organized by Kenya External Trade Authority (KETA)? If yes, briefly comment.
-
-
-
- (g) Has the devaluation of the shilling affected your

business? comment

(h) please comment on any other Trade policies affecting your firm.....

(7) Have the following made you look for the export market?

If Yes=1, No=0

- (a) difficulty to sell products domestically
- (b) export market is more profitable
- (c) attractive government commercial policies (e.g import licencing)
- (d) availability of collaborators' assistance in marketing (i.e Kenyan/Foreigner)
- (e) any other, please specify:

(8) Has the volume of your firm's exports increased, decreased or remained constant during the recent years?

If increased=1, decreasing=0, constant=2

Please specify the factors responsible for the changes

If Yes=1, No=0

- (a) increase in productivity
- (b) increase in investments
- (c) better utilization of capacity
- (d) improved marketing
- (e) export credit
- (f) compensatory rebates

(8) To what extent has the following affected your export performance?

- (a) recently introduced foreign exchange retention scheme.....

(b) recently introduced donor agencies sponsored scheme, notably;

(i) World Bank sponsored Kenya Exporter Assistance Scheme (KEAS).....

(ii) USAID's Kenya Export Development Support (KEDS).....

(9) Please rank the following in order of importance the main factors keeping your exports low.

- (a) insufficient incentives
- (b) problems encountered in the claims of rebates
- (c) unfavourable world prices
- (d) problems associated with obtaining export licences and import licences
- (e) insufficient production
- (f) lack of information about export market
- (g) lack of finances
- (h) inability to obtain foreign exchange

PART TWO

PART TWO.

CONFIDENTIALITY:

- Your completed questionnaire will be treated as confidential, and the information filled will be used to come up with a representative firm budget by averaging values across garment exporters visited. Any information contained in the questionnaire will never be published whatsoever, nor released in a format which may reflect the operation of any responding firm.
- The information you supply will assist me complete the master programme and useful for policy implication which might benefit your firm.
- Values in this section should be given to the nearest shilling reflecting the operations of the year 1992.
- Your co-operation is highly appreciated.

THANKS.

LABOR FORCE DATA

Professional Staff/Managers

OR-PRODUCTION WORKERS
Agricultural Staff
Supervisors

Managers

PRODUCTION WORKERS
Trilled

Unskilled

NO. OF EMP

PER WEEK

PER WEEK

EMPLOYMENT COST

PER WEEK

PER WEEK

PERCENT OF FTE

PERCENT

PERCENT

PERCENT

PERCENT

PERCENT

Type of Asset	Acquisition Cost	Original Value of Assets	Book Value of Asset	Expected Useful Life	Estimated Depreciable Cost	Gross Investment During the Year
1. Primary Building
2. Residential Buildings
3. Land
4. Machinery and equipment
5. Furniture/Fixtures
6. Transport equipments
7. Others Specific
.....
.....
.....
.....

1

INTERMEDIATE INPUT DATA.

	Input code	Quantity	COST OF INPUT value
1. Fuel (petrol, diesel, others)	-----	-----	-----
OTHER COSTS:			
Name of input	Input code	Quantity	COST OF INPUT value
1. Electricity	-----	-----	-----
2. Water	-----	-----	-----
3. Transportation	-----	-----	-----
4. Repairs/m'tenance	-----	-----	-----
5. Advertising costs	-----	-----	-----
6. Other selling expenses	-----	-----	-----
7. Banking charges	-----	-----	-----
8. Royalties	-----	-----	-----
9. Telephone/telegraph postal/telex charges	-----	-----	-----
10. Handling costs	-----	-----	-----
11. Auditor's Fee	-----	-----	-----
12. Legal charges	-----	-----	-----
13. All others	-----	-----	-----

PROPERTY IDENTIFICATION DATA

Product	Code	Date of measurement	ANALYZED CAPACITY Quantity Value	UNREFILED Quantity	REMARKS Code
---------	------	---------------------	-------------------------------------	-----------------------	-----------------

1.-----

2.-----

3.-----

CAPACITY UTILIZATION. (cont.)

1. What has, on average been the number of shifts worked during the year?
2. Have there been any unusual stoppages in your factory slowing down the level of output? yes/no
3. What would have been the number of shifts had there been any unusual stoppage?
4. Are the number of shifts, reported above sufficient to yield desired output? yes/no
5. If the number of shifts is not sufficient to yield desired output, then please specify the number of most profitable shifts which would yield the desired output.
6. If you feel that capital is underutilized, please specify the reason(s) for underutilization.

If yes=1, no=0

- (a) unavailability of local inputs
- (b) unavailability of imported inputs
- (c) unavailability of spare parts
- (d) recession in the world market
- (e) recession in the domestic market
- (f) lack of supervisory staff
- (g) shortage of skilled labour
- (h) shortage of unskilled labour
- (i) strikes/lock-outs
- (j) power failure
- (k) any other, specify

APPENDIX B.1

CALCULATING ANNUAL EQUIVALENT VALUES OF FIXED INPUTS BY CAPITAL RECOVERY FACTOR METHOD (CRF).

Calculations required the knowledge of input's useful life and discounted present value of salvage value. Because of lack of better information about useful life, a rough rule thumb was used: machinery and equipments 10-15 years; and furniture / fixtures. Calculations are illustrated below. The rate of return used is 12 per cent.

	Sewing Machine	Furniture/ Fixtures	Transport Equipment
Initial Cost ('000)	22,000	3,500	2,000
Useful life (years)	15	10	10
Salvage value ('000)	4,400	700	400
Present value of Salvage value ('000)	820	230	140
Net Initial Cost ('000)	21,180	3,270	1,860

The annual capital cost per firm is determined by the product of the net initial cost, the CRF, and the share of annual use.

-The determination addresses two issues:

- (a) the annual repayment of the fixed input over the useful life
- (b) the provision of an economic rate of return on the investment

App. B.1 (cont.)

The formula for calculating CRF is given as:

$$CRF = (1 + i)^n \cdot i / (1 + i)^n - 1$$

where: i = rate of return

n = useful life

Input	Net Initial cost '000	CRF	Share of Annual Use	Annual Capital Cost '000
Sewing Machines	21,180	0.146820*	1.0000	3.110
Furniture/Fixtures	3,270	0.176984	1.0000	580
Transport Equip.	1,860	0.176984	1.0000	330

* CRF = $(1.12)^{15} \cdot 0.12 / (1.12)^{15} - 1 = 0.1468201$

APPENDIX B.2 DECOMPOSITION OF INTERMEDIATE INPUTS : GARMENT SECTOR (1972) (KSHS '000)

Intermediate Inputs	DECOMPOSITION OF PRIVATE COSTS						DECOMPOSITION OF SOCIAL COSTS						Net Social Policy Effects
	Tradable Inputs	DOMESTIC FACTORS				Total Private Costs	Tradable Inputs	DOMESTIC FACTORS				Total Social Profits	
		Unskilled	Skilled	Capital	Total			Unskilled	Skilled	Capital	Total		
1.Fabric	28,600	-	-	-	-	28,600	38,270	-	-	-	-	38,270	-9,670
2.Accessories	3,760	-	-	-	-	3,760	5,038	-	-	-	-	5,038	-1,278
3.Packaging materials	2,080	-	-	-	-	2,080	2,787	-	-	-	-	2,787	-707
4.Fuel and Lubricants	360	60	30	150	240	600	720	60	24	12	96	316	-216
5.Electricity	18	54	108	180	342	360	25.2	54	82.8	18	154.8	190	180
6.Water	7.5	7.5	10	25	42.5	50	10	7.5	7.5	25	40	50	0
7.Machinery Repairs	252	21	42	105	168	420	436.8	210	33.6	105	348.6	785.4	-365.4
8.Telephone/ Postal	216	72	216	216	504	720	288	72	165.6	28.8	266.4	554.4	165.6
9.Handling	60	180	180	180	540	600	78	180	138	60	378	456	144
10.Banking	72	24	72	72	168	240	96	24	55.2	72	151.2	247.2	-7.2
11.Others	108	36	108	108	252	360	144	36	82.8	108	225.8	370.8	-10.8
TOTALS	35,533.5	454.5	766	1,036	2,256.5	37,790	47,893	643.5	589.5	429.8	1,661.8	47,554.8	-11,764.8

APPENDIX B.2

Appendix B.2 (cont.)

The intermediate inputs are first classified as either tradable or nontradables. Fabric, accessories, and packaging materials are classified as pure tradables on the basis of budget information. The others are classified as nontradables, and decomposed into labour, capital, and tradables based on the following judgement:

-Intermediate input items that make up less than 5 per cent of total costs are broken arbitrarily. The total private costs are Kshs 58.94 million per firm. In the study, only water and bank charges are small enough to fit this definition.

-For fuel, electricity, and machinery repairs, the breakdown is based on the proportions used in other studies.

-The rest (Telephone/postal/telex, handling, and "others") is done using a distributive share rule by assuming one-third labour, one-third capital, and one-third tradables.

APPENDIX C

CALCULATION OF SHADOW PRICE OF CAPITAL AND UNSKILLED LABOUR BY DEBEBE 1977

-Shadow Price of Capital

$$P^{inv.} = (1-s)q / i-sq$$

where: s = marginal propensity to save
 q = the rate of capital accumulation
 i = consumption discount rate

The value of s and q are given as 0.20 and 0.286, respectively. Due to inability to determine a unique value for the consumption discount rate, Debebe provides a range of values namely 10, 15 and 20 per cent per annum

Solving the above equation for Kenya gives:

$$\begin{aligned} P^{inv.} &= 5.35 \quad \text{for } 0.10 \\ &= 2.47 \quad \text{for } 0.15 \\ &= 1.60 \quad \text{for } 0.20 \end{aligned}$$

-Shadow wage rate for unskilled labour

$$W^t = z + s^{cap} (P^{inv.} - 1) W$$

where: z = direct opportunity cost of labour
 l = labour-capital ratio
 W = market wage rate

s^{cap} = propensity to save of capitalists

$$\begin{aligned} \text{For } P^{inv.} = 5.35 \quad , \quad W^t &= 303.19 \text{ per month} \\ &= 2.47 \quad , \quad = 125.02 \text{ per month} \\ &= 1.60 \quad , \quad = 71.21 \text{ per month} \end{aligned}$$

MODELLING FOR EVALUATION

BUDGET #3 - FIRM-LEVEL

-----budget information-----						---private decomposition coefficients---				PRIVATE	---social decomposition coefficients---				SOCIAL
B3. INTERMEDIATE INPUTS	Unit	Price	Quant	Freq	TOTAL	UL	SL	K	T	TOTAL	UL	SL	K	T	TOTAL
1.Fabric	yards	105.00	0.27	1.00	28.55				1.34	38.27				1.34	38.27
2.Accessories					3.76				1.34	5.04				1.34	5.04
3.Packaging Materials					2.99				1.34	2.79				1.34	2.79
4.Fuel(petrol/diesel etc	litres	21.00	0.03	1.00	0.60	0.10	0.05	0.25	0.20	0.60	0.10	0.04	0.02	1.20	0.92
5.Electricity	Kw Hrs	1.20	0.30	1.00	0.36	0.15	0.30	0.50	0.20	0.41	0.15	0.23	0.05	0.07	0.18
6.Water	Cons. lits.				0.05	0.15	0.20	0.50	0.20	0.05	0.15	0.15	0.50	0.20	0.05
7.Repairs/m'tenance					0.42	0.05	0.10	0.25	0.20	0.50	0.50	0.08	0.25	1.04	0.79
8.Telephone/telegraph /postal/telex	Hours	4.00	3000.00		0.72	0.10	0.30	0.30	0.40	0.79	0.10	0.23	0.04	0.40	0.55
9.Handling costs					0.60	0.30	0.30	0.30	0.13	0.62	0.30	0.23	0.10	0.13	0.46
10.Banking charges					0.24	0.10	0.30	0.30	0.40	0.26	0.10	0.23	0.30	0.40	0.25
11.Others					0.36	0.10	0.30	0.30	0.40	0.40	0.10	0.23	0.30	0.40	0.37
TOTALS						0.45	0.77	1.04	47.60	49.73	0.64	0.59	0.43	47.89	49.55

APPENDIX D

		PRIVATE	SOCIAL
B4 OUTPUT			
1.FINISHED GARMENTS	67.55	90.52	90.52
TOTAL REVENUES		90.52	90.52