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AN ANALYSIS OF THE TRADE
REGIME IN KENYA

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ABSTRACT:

Certain developments in international trade have made it inevitable
for LDCs to commence import-substituting industrialization. The measures
used to intervene in trade for this purpose have resulted in certain factor
and commodity price distortions in the domestic economies of LDCs, giving
rise to resource allocational and income distribution effects which are not
often appreciated. Tariffs quantitative restrictions, import duty drawbacks
on inputs as well as administrative controls are shown to have been widely
used in Kenya to promote industrialization and exports. Different combina-
tions of these policies have different effects on income distribution, resource
allocation and profits. The effects are further complicated by imperfections
in import-substituting industries. Certain measures are proposed for more
efficient combinations of the policies in the face of imperfections.

AN ANALYSIS OF THE TRADE REGIME IN KENYA:

This study proposes methods of examining Kenya's trade policies
and follows through to see whether these policies have exerted the intended
or other unintended effects on the economy. It is symptomatic of the
economies of most less developed countries, (LDCs), that a significant
proportion of their GNPs is dependent on external trade. This is in contrast
with most industrial countries such as the U.S.A. where the proportion of
the GNP generated through the foreign sector in less than 20 per cent. This
smallness of the foreign sector cushions the economy from external instabili-
ties.

Yet it is not the greater dependence on trade from which LDCs
suffer disadvantage and which makes the selected trade policies so crucial
to economic development. At a time like the present the prices of the
commodities in which LDCs trade are on a sharp upturn, with the price of coffee
already higher than ever recorded.[1] The improvement in commodity prices
is in response to world industrial recovery after a downturn in the business
cycle. When the boom busts the prices of the same commodities will take a
dip, pulling the GNPs of the exporting countries in the same direction.

The instabilities emanating from this feast-and-famine cycle of
commodity prices constitutes the most acute disadvantage of LDCs dependence
on trade. Most LDCs rely on a small number of primary exportables for a
large proportion of their foreign exchange earnings. The cyclical price
movements, together with the observation that rising incomes historically
accompany an increasing proportional allocation of incomes to manufactures
have pre-empted LDCs enthusiasm for the well known benefits of free trade
policy. Moreover, it has long been argued (against other academic counter
arguments,) that the real value of primary exportables secularly declines in
international markets against the value of exportable industrial products.
This is the terms of trade debate. Worsening terms of trade, together with
the recurring price adversities faced by primary commodities in trade have
led to chronic balance of payments problems in LDCs.

To counter the balance of payments problems, most countries have
erected home production of imports of certain commodities and applied other
measures to enhance domestic import-competing production. The measures applied

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1.   See the Economist 4-10 Sept. 1976.

have been discriminatory against other sectors of the economy such as
agriculture and exporting sectors. Terms of trade and income distribution
have turned against these sectors as import substituting industrialization
proceeded. Measures to counteract the adverse effects of tariff protected
import-substituting industrialization have been devised and applied to the
affected sectors, particularly the exporting sector. But the full implications
of these often hapharzardly applied measures are not appreciated.

In the first post of this paper we relate the above problems to
the mechanisms applied by LDCs in trade intervention. The second part relates
Kenya's experience in the application of these measures. Thirdly, proposed
methods of measuring these effects are set forth and, where the analyses
show the measures to have adverse effects on the economy as a whole, guide-
lines for economic policy are considered with a view to making the trade
intervention measures more efficient and less costly for the economy.

<center>I</center>

It is well known from the theory of international trade that inter-
ventions by trading partners substract from optimal world welfare. The fore-
gone optimality benefits, however, are obtainable through free trade policy
only under certain rather restrictive conditions. There is no reason to think
that if these conditions exist in MDCs they also exist in LDCs. Under monopoly
power in trade, a country can persue a policy of export promotion aimed at
reaping monopoly profits and this can be termed a proper policy.

The literature on free trade conditions and policy is extensive, and
we avoid repetition here. It is enough to observe that the principles of free
trade abstract from income distribution of free-trade-generated world welfare
benefits. Academic critics of LDC trade policies articulate the relative
quantities of commodities produced for given resource inputs, (Ricardo's
principle of comparative advantage,) or the quantities of domestic factors
absorbed in the production of commodities, (the Heckscher-Ohlin-Samuelson theorem).
The latter theorem implies that a labor-abundant country, for example, trades
in labor intensive commodities. This analysis   places the pre-trade partners
on points along their product transformation curves where the domestic marginal
rates of substitution, DRS are equalized with the domestic rates of transforma-
tion, DRT. Yet the reality, not to be gainsaid, is that all trading partners
do not share this horizontal correspondence in development.

Vertical differences in development play a role in giving a
"shrunken in" shapre to the transformation curves of LDCs whose factor
markets are distorted. It has been shown theoretically by Hagen (1958) that
where distortions of this kind appear as a result of a wage differential
between the import competing sector and other sectors, a case arises where
a combined tariff on imports and a subsidy on import competing production will
firstly raise real incomes in the economy and then restore equality between
the DRS and DRT. This analysis is one of the few instances where economic
theory has seriously saught to explain the prevalence of both import substitu-
ting industrialization and subsidies on such production. Yet both types of
trade interventions have been strongly followed in LDCs, notwithstanding their
discouragement under the General Agreement on Tariffs and Trade - GATT.

There are several arguments to explain LDCs import substituting
and export promotion measures which are beth disallowed by the free-trade-
leaning GATT. One view traces the import-substituting industrialization of
LDCs to the fall in the value of exports of primary commodities, particularly
during the "dirty thirties" of the depression. This decrease in export values
produced chronic shortages in foreign exchange and a fall in the ability of
LDCs to import manufactures from MDCs. In this argument, import-substituting
industrialization is cast as a move towards autarky.

Other arguments put forward for industrialization in LDCs articulate
the existence of external economies otherwise assumed away under free trade
conditions. These external economies envisage the concommitant benefits to
be derived in industrialization from technical progress and innovation.

A major devise in LDCs industrialization processes has been import
restriction. The popularity of this devise arose from its ease of application
for multiple purposes. Less known are the distortionary effects of import
restrictions on domestic factor prices, sectoral resource allocation, and the
fact that import restriction at once entails a tax on all sectors of the economy
not affected by the restriction. This is so because the restrictions shift
relative prices in favour of the restricted products. In the industrialization
process this shift redistributes income to protected industries and away from
those that are not protected. Antiprotected industries are inevitably the
export producers and particularly, agriculture. This is the source of worsening
terms of trade between agriculture and industry, making for the greater attrac-
tiveness of investments (in terms of both capital and labor) into the latter
sector.

It can be shown that a great number of the problems related to un-
employment, the rural-urban wage differential and excess capacity in manufac-
turing, correspond to shifts in income distribution and relative prices brought
about by import restrictions. Although these problems have become critical
in most LDCs, import controls have persisted and even been strengthened in
some cases.

One explanation of the persistence of trade intervening measures
is that they provide, (in the case of tariffs) a relatively easy form of
taxation to collect. In inducing the industrialization process, import
restrictions lend themselves to a wide range of attractive incentives for
both domestic and foreign investors. High rates of return are provided
through restrictions on imports of commodities produced by the import-sub-
stituting sector. These high rates of return redistribute incomes, so that,
through high rates of financial profit, an increasing proportion of total
saving in the economy accrues in the industrial sector. The reasoning behind
this redistribution is that higher savings in the hands of those most likely
to invest also implies higher rates of capital accumulation. However, this
often is an untruth where those domestic investors earning high profits
dissipate investment potential through (a) improvements in their standards
of living which often mean higher imports, and (b) acquisitions which involve
the transfer of already - existing assets. Thus in LDCs, the highest-saving
groups are not also necessarily the best placed groups in investing savings.
Where foreign investors are given the import-restriction facilities of
increasing their savings, the problem of these savings being translated into
expanded investment is often aggravated by remittances and transfer pricing.

Another aspect of import restrictions is their ability to curve out
an already established domestic market for domestic producers, through the
displacement of imports. The adverse effects on consumers' welfare are of
course, that the substitution of imports with domestic production under import
restrictions involves losses in consumers' surplus for every restricted
commodity, and invariably introduces market imperfections in the market for
the commodities involved.

There are several ways in which import restrictions are applied on
trade with varying effects on consumers, producers and government tax revenues.
Firstly, imports may be restricted by applying a tariff which raises the
domestic price of a given importable above world price by a component equal
to the world price times the ad-valorem tariff rate.

In the absence of domestic production, fixed exchange rates and
given world prices, for the taxed commodity, prices in the domestic market
rise by the exact amount of the tariff. The real income of consumers is
reduced in proportion to consumer spending on taxed commodities in exactly the
same way as domestic indirect taxes do. There are some exceptions which are
of relevance to LDCs. In the case where the exchange rate is flexible, for
instance, the reduced imports exert an upward influence on the foreign exchange
value of a country's currency. For every unit of the country's currency a
greater quantity of importables is obtained than before the tariff imposition.
Conversely, for every unit of currency earned by domestic exporters, less of
exports are sold, dissipating the country's competitive position abroad. This
mechanism has a parallel in the frequently overvalued currencies of LDCs which
affect imports and exports in exactly the same manner. There are some compelling
reasons for currency overvaluation in LDCs however.[2]

In the case where a country successfully introduces the domestic
production of importables through tariff protection, domestic prices and "home"
supply will rise along the domestic supply curve without revenue yield for
the government on the home-produced quantity. The tariff "burden" to consumers
is then no longer a share in the costs of government. It becomes a loss in
real incomes to consumers, emanating from a loss in the efficiency of resource
utilization.

A second form of import restriction is import licensing which affects
domestic prices in a similar manner to a tariff. However, the higher price of
importables accrues to the licence holders. It does not in this instance,
yield government revenue.

Thirdly, administrative controls can be applied in various forms.
The most common form of administrative control is the rationing of foreign
exchange. Besides raising domestic prices in a similar manner to tariffs and
quotas, administrative controls encourage inefficient utilization of capital
among LDCs manufacturers through increases in the marginal capital/output ratio.
This increment implies that for a given output, higher precautionary stocks
are held in inventory. Imported-input using manufacturers, anticipating lags
in foreign exchange allocations, hold higher quantities of the inputs for any

2.   A well known reason is the inelastic demand facing producers of
primary commodities in world markets.

given flow of output. Their capital investments are thus higher, for any given output, than would be the case in the absence of foreign exchange rationing. Nor would this inefficiency be resolved if imported-input using manufacturers abstained from hoarding. Delays in obtaining foreign exchange lead to slowdowns in domestic production, excess capacity in the affected firms, higher domestic prices, lower employment and a diminution in domestic backward linkages. It is clear that foreign exchange controls, originally introduced to combat worsening balance of payments problems in LDCs, have become a major form of control of domestic production and investment.

<div align="center">II</div>

The Kenyan Case:

(A) TARIFFS

All of the three main forms of trade restriction described in section I have been applied in Kenya over a long period. We studied an eight year period, 1967-1973, to see the trend taken in tariff protection, import restrictions and corrective measures to encourage exports. No information was available on foreign exchange allocations. The level of disaggregation in tariff impositions, increments, reductions or eliminations was such that no systematic analysis by S.I.T.C. classes was possible. Moreover, tariffs were found to converge with import licencing on certain commodities and to be the sole trade intervention measure in other cases. In both instances no information was available on the third measure of restriction, foreign exchange allocations although there appears to be a relationship between foreign exchange holdings for 1966-1975 and the application of interventionist measures.

One of the simplest relationships one can attempt to establish between the tariff changes overtime and changes in import substituting domestic production can take the following form.

(1) $\qquad \bar{S}_{it}/\bar{Q}_{it} = \alpha \, \bar{T}_{it}^{\beta} \varepsilon$

$\qquad\qquad\qquad i = 1, 2, \text{------} 8.$

where $\bar{S}_{it}$ is the mean domestic production in SITC class i, (at 2 or 3 digit level,) during year t, $\bar{Q}_{it}$ is the mean total quantity demanded domestically of commodities in class i during year t, $\bar{T}_{it}$ is the mean tariff rate ruling at year t on the importation of commodities in class i, and ε is a multiplicative error term.

It is understood that, since mean total quantity demanded $\bar{Q}it$ is
the sum of mean of total domestic production, $\bar{S}it$, and imports, the left hand
term of (1) measures the ability of the growth of domestic production to fill
in domestic demand over time, all other things equal. Equation (1) can be
transformed into

(2) $\log \bar{S}it - \log \bar{Q}it = \log \alpha + \beta \log \bar{T}it + \log \varepsilon$, which can be
fitted.[3] In this simple case, parameter β would indicate the weighted mean
of the elasticity of the domestic contribution to total domestic demand with
respect to the tariff rates, for all eight classes of the SITC.

IMPORT LICENSING

Import licensing in Kenya is legally provided for in the Import,
Export and Essential Supplies Act. Cap.502 and Legal Notice No.348 of 1968.
The latter provision was aimed at increasing the proportion of total imports
channeled into the domestic market through indegenous traders via the KNTC.

For the period examined in this paper, there appears to be a fairly
close correspondence between Kenya's foreign exchange holdings and measures
taken to curb the flow of imports. According to table 1 and diagram 1, the
periods 1967-1968, 1970-1971, and 1973-1975, show marked crises in foreign
exchange holdings. In facing the repeated crises in foreign exchange reserves,
the policies followed appear to have been aimed at (a) curbing the importation
of items in the current account of the balance of payments, and (b) increasing
the incentives of domestic producers to export.

The periods mentioned above coincided with intensified application

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3.   It is important to note the assumptions made concerning the least squares
estimator for β. This may clarify the need for other adjustments required on the
dependent variable before the estimator can be expected to be significant.
Firstly, the dependent variable is a ratio between mean domestic supply $\bar{S}it$ and
mean domestic demand $\bar{Q}it$, for SITC classes $i=1,2,----8$. Both domestic supply and
demand are unadjusted for the relevant commodity price elasticities. This assumes
that all domestic supply and demand responds to tariffs (through their responses
to prices) at the same rate. This is not true in economic theory. Important factors,
such as substitutability, in the case of $\bar{Q}it$, will determine the price elasticity
of each commodity. For all eight classes of the SITC, we would then have two vectors
$\bar{E}si$, $\bar{E}di$, $i=1,2,----8$ corresponding to the mean price elasticity of supply and mean
price elasticity of demand respectively. One of the ways of adjusting the dependent
variable to reflect the price elasticities is to weight $\bar{S}it$ and $\bar{Q}it$ with $\bar{E}si$ and
$\bar{E}di$ respectively, This does not, however, solve the problem completely. Relative
prices change over time, and the data observations are likely to refer to disequili-
brium positions because of lags in the adjustment process, especially in domestic
production. Technological change will also affect $\bar{S}it$ and $\bar{Q}it$ will change as
tastes change.

of the government's import-curtailment-export-promotion strategy.[4] Foreign exchange holdings seem to have improved somewhat except for the period 1973-1975 when holdings generally declined from the record levels of 1972[5]. We now examine the forms in which the above trade intervention policies are applied.

For the purposes of import restriction, all tradable commodities are classified into three schedules.

Schedule 1: Commodities originating outside of the East African Community, whose importation into Kenya is prohibited without an import licence.

Schedule 2: Commodities originating from any country whose importation into Kenya without an import licence is prohibited.

Schedule 3: Commodities originating from the East African Community which may not be imported into Kenya Save through the Kenya National Trading Corporation.

Table 1: KENYA: Foreign Exchange Reserves: Quarterly Holdings: 1967-1975

	March	June	K. Sh. Million Sept.	Dec.
1966				837.2
196	882.6	872.7	903.0	630.8
1968	718.3	764.5	823.6	859.0
1969	1044.1	1098.5	1252.0	1302.2
1970	1494.0	1451.0	1559.7	1682.5
1971	1768.0	1502.0	1294.0	1255.2
1972	1348.0	1246.0	1358.4	1443.0
1973	1679.2	2017.0	1942.0	1639.0
1974	1752.0	1501.4	1271.3	1302.0
1975	1589.4	1373.3	1172.1	1380.0

37 Observations
on Foreign Exchange Reserves.

Source: ECONOMIC AND FINANCIAL REVIEW
CENTRAL BANK OF KENYA: VARIOUS ISSUES

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4.   For 1967-1968 See for instance, L.N. 1 and L.N. 2 of Jan.3,1967, L.N. 62 of March 10, 1967, L.N. 115 of June 9, 1967, L.N. 162 of July 29, 1967, L.N. 193 of Sept.15, 1967, L.N. 17 of Feb.21, 1968, L.N. 281 of Sept. 13, 1968, L.N. 1 of Jan.3, 1968, L.N. 33 of Feb.2, 1968 and L.N. 268 of Aug.23, 1968.

DIAGRAM 1

KENYA: FOREIGN EXCHANGE RESERVES
QUARTERLY HOLDINGS 1967 — 1975
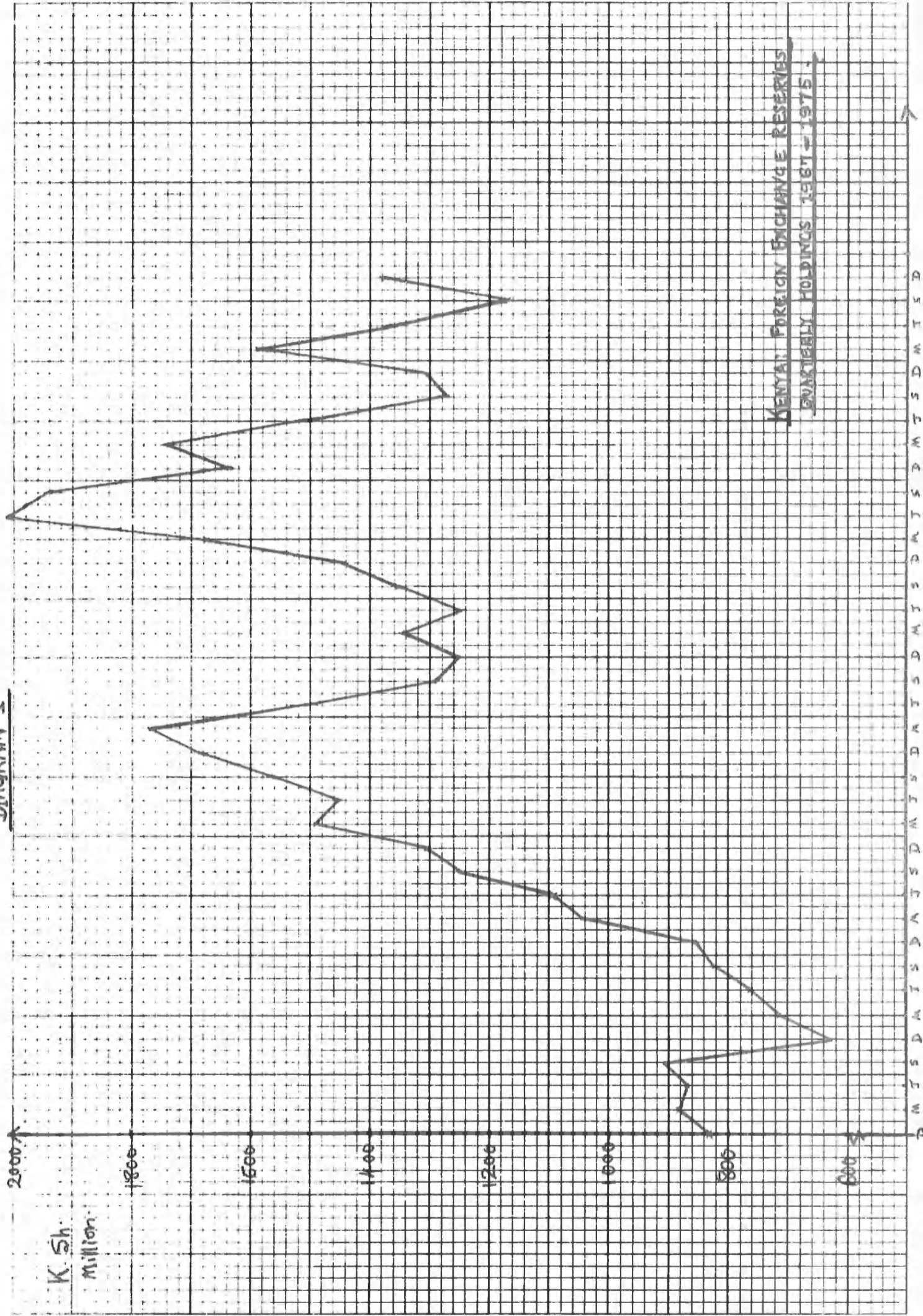
Quantitative restrictions (or QRs) in Kenya, effectively mean the inclusion of commodities in one or more of the above Schedules. These schedules are changed from time to time, increasing the restrictions or liberalizing trade somewhat. Removal from or inclusion of commodities in the schedules is effected through the publication of Legal Notices in the Kenya Gazette.

Regardless of the schedule in which a given restricted commodity is gazetted, the Director of Commerce and Industry may, in his absolute discretion decline to issue an import licence although appeals may be made to the Minister for Commerce and Industry. The Minister is empowered to prohibit, restrict or remove restriction on the importation of any commodity.

EXPORT PROMOTION

There are various interventionist measures taken by the government to affect the costs of production in industry. These take the form of duty drawbacks on imported inputs or duty remissions. The decision to grant duty drawbacks or remissions is based on the alternative uses of the imported input. If encouragement of an industry requires lower domestic input costs and the input (when imported,) has no alternative domestic uses, the practice is to grant duty remission at the point of importation. When the imported input has alternative domestic uses, however, encouragement of the user industry requires that evidence of imported-input content of the finished product be produced before a duty drawback is granted- Rates of duty remission or drawbacks vary from less than 10% to 100%.

Import duty remissions and duty drawbacks are not, however handled under the same law or government ministries. The Local Industries (Refund of Customs Duties) Act authorizes the Minister for Commerce and Industry to refund certain duties paid on imported inputs. Recipients of duty drawbacks must be "approved" industries under a Legal Notice and may or may not receive the refund on "exported quantities only".

Duty remissions are authorized under the Customs Tariff Act by the Minister for Finance and Planning, and automatically permit the importer to receive the imported input free of duty, or at partial duty remission, as specified by L.N. For the period studied, it was observed that the Tariff Act has frequently been used to reduce the costs of setting up joint ventures

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5.   The correlation between improvements in foreign reserve holdings and the use of government intervention is not so straight forward when the effects of the business cycle on primary commodity exports and prices are taken into account.

between the government, (or government parastatal bodies), and foreign or domestic investors.[6] It is not often appreciated that, whenever other firms exist in a given industry, the encouragement of a particular venture through cost reductions is discriminatory. When the new firm captures a sizeable share of the market, after official encouragement, commodity market imperfections may be generated, with the implications that domestic supply of the commodity will incur greater resource costs and also a loss in consumers' surplus.

Where the encouragement of local industry is effected through cost reductions, there are several features which distinguish import duty remissions from import duty refunds. Except in the case where import duty remissions impose monopoly powers in the commodity markets, it iseems more likely that cost reductions in this case may be transmitted to consumers in lower prices. It is also clear that the more intensively the industry granted the remission uses imported inputs, the greater will be the price reductions for consumers. A macroeconomic corollary of this boom to consumers, however, is that the tariff (which is remitted), granted to domestic producers of the intermediate goods tends to redundancy as their production becomes "unprotected". Less intensive users of imported inputs are unlikely to operate at much lower costs or sell at lower prices after duty remissions. Domestic producers of inputs for these industries will hence be generally less "unprotected".

There are reasons to believe that cost reductions on inputs or the attendant commodity price reductions likely to occur when duty remission is granted, are less likely to occur when producers are granted refunds on imported inputs after the incorporation of these inputs in the finished commodities. The administrative procedures for obtaining refunds of duty on imported inputs is complex, creating uncertainty in the producer's decision-making. The period of our observations revealed numerous cases where the re-funds were authorized under Legal Notice several months after the effective dates.[7]

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6.   See, for instance, L.N. 243 of Dec.1, 1973 with respect to Chemelil Sugar Co. and Mumias Sugar Co.; Cadbury Schweppes Kenya Ltd., Messrs Chui Enter-prises; Kenya Fishnet Industries Ltd; Messrs Pigeon Slide Works. L.N.34 of Feb. 25, 1975 with respect to 4 companies, including Pan African Paper Mills which has part ICDC ownership. L.N.124 of June 16,1972 with respect to a Steelworks Company, Emco Steelworks, Kenya Ltd.

7.   See L.N. 77 of April 28, 1972 effective date Jan.1, 1972, L.N. 61 of March 30, 1972 effective date Jan.1, 1972, L.N. 89 of May 12, 1972, effective date Jan. 21, 1972.

Apart from time lapses of the above kind, the administrative machinery for the lodging and authorization of refunds is both complex and time-consuming.[8] It is therefore inconceivable that, with the uncertainty involved, a producer is able to make production decisions which take account of the lower costs expected from an import drawback scheme. In order for lower input costs to accrue to the producers and lower commodity prices to be transmitted to the consumer, the import duties would have to be "drawnback" in time for each production period to reflect the increased competitiveness.

A special feature of the import drawback scheme in Kenya is its constant use in encouraging domestic producers to venture into export markets. This will be analysed more formally in Section III. Many producers are granted import duty refunds on intermediate inputs in "exported quantities only".[9] But where there are administrative lags in the granting of the drawbacks, it must be expected that the shot in the arm for Kenya's exports may often turn out to be a shot too late. The importance of time in this case is that late refunds for both domestic and exported quantities of a given commodity under the drawback scheme may be absorbed by the producer as additions to net profits rather than cost reductions. Even if a perfect administrative system were designed and the producers received their drawbacks on imported inputs in time to incorporate them into each production period, the scheme would still discriminate on two levels.

Firstly, established exporting firms which are also more intensive users of imported inputs would experience a shift in their export supply curves further to the right than "beginning" exporters who were not intensive users of imported inputs. Secondly, refunds on imported inputs encourage the domestic firms to import their materials rather than expand "import-substituted" backward linkages. That is, domestic producers of inputs granted the drawbacks will be discouraged. Where the refunds are on "exported quantities only", then they will be discouraged from domestically supplying that proportion of their total supply which would otherwise go into exportable production.

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8.   This has been shown before by R.C. Porter, "Kenya's Future as an Exporter of Manufactures" Eastern Africa Economic Review, Vol. 6 #1, June 1974.

9.   For 1971, See L.N. 29 of Feb. 19, L.N. 9 of Jan.15, L.N. 48 of March 19, L.N. 85; 86; 87 of April 23, L.N. 230 of Oct. 23, L.N. 135 of July 2.

There are two aspects of the drawback on exportables which should
make policy-makers more wary of the effects of the simple subsidy. The problem
of over-invoicing is now well known. To the extent that there is over-invoicing
of imports, intensive users of the imported inputs who are permitted to drawback
their import duties on inputs into subsequently exported quantities can reduce
their domestic costs/wider margins than (a) exporters who are less intensive
users of imported inputs and (b) smaller domestic producers who have not
generated the capacity to export.

The second aspect concerns the overvaluation of currency. If the
Kenya shilling is over-valued, the granting of drawbacks on exported quantities
creates a "stick-and-the-carrot" phenomenon in the perceptions of exporters.
Overvalued currencies (which few countries ever escape from time to time),
mean undervalued imports. That is it looks cheaper to domestic manufacturers
(including exporters,) to buy their inputs abroad, regardless of the drawbacks
granted on import duties. In the event of currency overvaluation it also,
conversely, looks harder for domestic producers to venture into export markets,
especially in non-traditional exports such as manufactures. The high domestic
prices of manufactures guaranteed by protection create export pessimism and
make foreign producers look more competitive than they really are.

III

One of the points raised repeatedly in this paper is that a tariff
on imports, or equivalent intervention constitutes a tax on exports and other
domestic sectors of the economy. It takes only a little analysis to establish
the symmetry between import taxes and export taxes.

Suppose a tariff X% was imposed on imports. This raises the domestic
price of importables to $Pw(1 + x)$, where Pw is the world price of imports. Thus,
the relative domestic price of imports to exports rises by a margin of $(1 + x)$,
drawing resources into the production of importables and increasing the incomes
of factors employed in the production of importables. Suppose on the other
hand an export tax of the same margin X% was imposed on exports. This lowers
the relative domestic price of exports by a margin $1/(1+x)$, giving rise to the
same resource allocation impact as in the case of a tax on imports.

The above outcome implies the following. To reverse the bias created
by import tariffs against domestic exports, a subsidy to exports, equal to the
tariffs, would be required. Such a subsidy restores the pre-intervention price
ratio between imports and exports in the domestic market.

The intervention picture in Kenya is complex. For the period analysed, numerous cases were found where QR^S are combined with tariff protection and both in turn combined with drawback schemes on imported tariff protected inputs.[10] The following is a limited analysis of the variant outcomes in income distribution, resource allocation and the abilities of domestic manufacturers to export their products under the drawback scheme. It is assumed that there are no time lags in the ability of producers to adjust to lower input costs resulting from government policies. That is cost-reducing measures aimed at promoting exports and expanding domestic production, among other objectives, automatically appear on the supply curve of the affected industry.

Only four cases are selected for detailed analysis although this does not exhaust the outcomes of possible combinations in interventionist policies. The four cases are the following:

      (A) Tariff ridden input-output prices, the monopolist and export promotion.

      (B) Tariff protection vs quantitative restriction, tariff ridden inputs and competitive industry.

      (C) Quota-equivalent tariff protection, the monopolist and tariff ridden input prices.

      (D) Tariff ridden input prices, the monopolist and quantitative restriction.

(A)   Consider the case where domestic production of an importable is initially set up under a monopoly which sells to the domestic market with imports of the commodity banned. There is no dearth of import substituting industries of this nature in LDCs. Supposing now that after capturing the domestic market, the industry is given incentives by the government to come out of infancy and export some of its output. Even if the firm responded favourably to incentives and commenced exportation, we would expect it to retain its monopoly on domestic sales. Designating domestic sales with Q_1 and exports with Q_2, the total product of the industry, Q, would be

(3) $Q = Q_1 + Q_2$

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10.   A few examples are illustrative of this complexity.
(1) Chewing gum: Quota: L.N. 11 of Jan.15, 1975, Drawback, L.N.# 135 of 2nd July, 1971.
(2) Socks: Quota: L.N.98 of June 8, 1970, Drawbacks L.N.# 9 of Jan.15, 1971
(3) Bicycle tyres & tubes: Quota: L.N.98 of June 8, 1970, Drawbacks L.N.# 172 of 20th Aug. 1971.
(4) Woolen fabrics: Quota: L.N.98 of June 8,1970 Drawbacks L.N.172 of 20th Aug'71.
(5) Trousers   Quota: L.N.98 of June 8,1970   "   " 197 " 21st Sept'72.
(6) Paper products Quota: L.N.   "   "
All of the above products are also tariff protected.

The monopolist maximizes his profit (π) where first order conditions are fulfilled,

(4) $\quad \dfrac{\partial \pi}{\partial Q_1} = \dfrac{\partial \pi}{\partial Q_2} = 0$

The profits to be maximized are equal to the total revenue from domestic sales $P_1 Q_1$ plus the revenue from export sales $P_2 Q_2$ less the cost of production $C(Q)$.

(5) $\quad \pi = P_1 Q_1 + P_2 Q_2 - C(Q).$

Denoting the domestic and foreign revenues with R_1 and R_2 respectively, and differentiating the profit function with respect to both Q_1 and Q_2, we have

(6) $\quad \dfrac{\partial \pi}{\partial Q_1} = \dfrac{\partial R_1}{\partial Q_1} - \dfrac{\partial C}{\partial Q} = 0$

$\quad \dfrac{\partial \pi}{\partial Q_2} = \dfrac{\partial R_2}{\partial Q_2} - \dfrac{\partial C}{\partial Q} = 0$

The equality of marginal revenues in equations (6) does not however, imply equality of prices in the two markets. Given the monopolist reaps monopoly profits in the domestic market, but faces a perfectly competitive export market, all that equations (6) imply is that the marginal revenue in each market must equal the common marginal cost of the output as a whole. Since the marginal revenue in the export market will equal export price and domestic price exceed domestic marginal revenue then the domestic price will be higher than export price. Using an alternative definition for marginal revenue in a monopoly (6) can be writen as

(7) $\quad MR_1 = P_1 \{1 - \dfrac{1}{n_1}\} = \dfrac{\partial C}{\partial Q}$

$\quad MR_2 = P_2 = \dfrac{\partial C}{\partial Q}.$

where n_1 is the price elasticity of domestic demand. An important rule emerges in the pricing and production of exports. From (6) and (7) it is clear that regardless of price differentials between the monopolist's domestic and export markets, the production of the exportable proportion of any industry should be priced at marginal cost.

Let us now examine diagramatically, how a monopolist, contrasted with a perfectly competitive industry, responds to different levels of tariff intervention in the commodity and input markets.

Figure 1
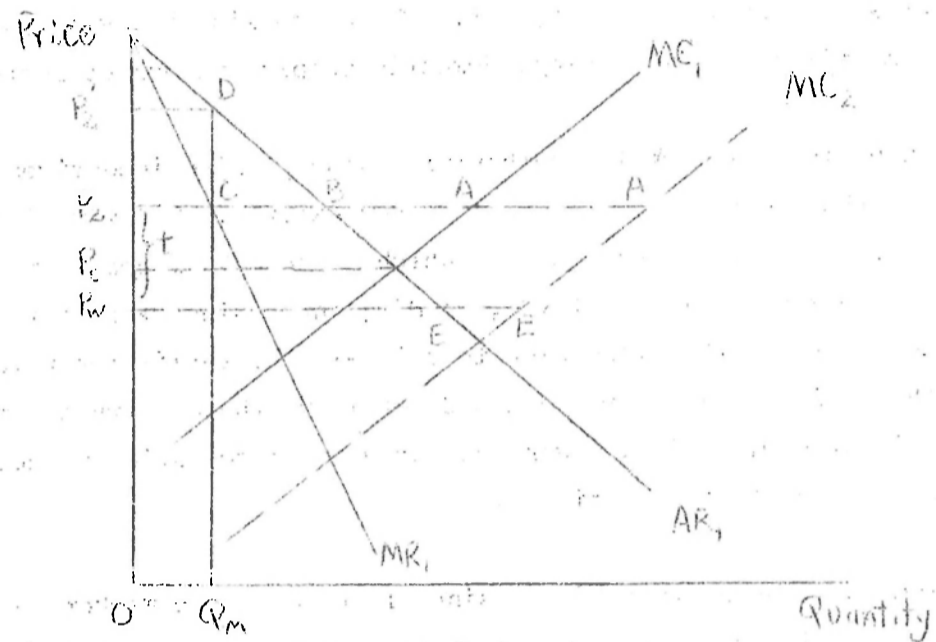
In Figure 1, $P_2 = Pw(1 + t)$ where t is the tariff rate on commodity imports and Pw is the world price. Pc is the competitive price of the commodity domestically. Suppose that tariff t is sufficient to exclude all imports of the commodity. Then, P_2 A, the total domestic production, is the same whether under monopoly or perfect competition. For the perfect competitor however the limiting price is P_2 where P_2B is supplied to the domestic market and BA exported,[11] But the monopolist will segment his market and restrict domestic supply to OQm sold at price P_2^1. The presence of monopoly and a closed domestic market transfers incomes to the tune of $P_2CDP_2^1$ from consumers to the producers and the loss in consumer's surplus is DCB. The monopolist, however, exports quantity CA which is CB greater than that exported under perfect competition although he faces anti-damping rules in his foreign markets.

Consider now the case where the authorities wish to remove the monopoly power of the industry domestically, returning income $P_2CDP_2^1$ to consumers but not jeorpadizing the export performance of the monopolist. Suppose a small downward adjustment in th tariff t, ceases to exclude imports. Market segmentation is no longer possible. If the monopolist sets a price just below the tariff inclusive price, he will not only be able to exclude imports as effectively as before, but he still exports BA of his output without contravening anti-damping

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11.   In a common market like East Africa, exports of BA could be sold by the least cost producer to other members so that the common tariff promotes exports to the common market rather than to the rest of the world, see the argument by R.C. Porter, ibid., on this class of exports from Kenya. To the extent that rising supply curves mean rising costs in this and the following diagrams depicting monopoly, it also implies monopsony power for the monopolist.

rules. Exports are reduced by CB which is transferred to the domestic market, and consumer's surplus increases by DCB. The monopolist behaves exactly like a perfect competitor in his pricing, domestic supply and export performance.

Supposing now that the authorities wish to give incentives to the monopolist so that he can restore CB (or more) exports. One way of doing this may be to devise cost reducing measures which affect the monopolist's input markets. Such measures will shift MC_1 to MC_2, increasing exports to BA^1. Note that now, unless the authorities wish to maintain the tariff for revenue purposes, the tariff could be removed and yet leave the country a net exporter (quantity EE^1) at world price, regardless of whether domestic production is under monopoly or perfect competition.

The above shows that the closing of the domestic market under monopoly releases low-cost exports but at the expense of a redistribution of income from consumers to producers and a loss in consumer's surplus. But higher exports may be generated (without redistributing incomes from consumers to producers) through cost reducing incentives to producers. Furthermore such measures may enable the authorities to gradually reduce tariff protection while leaving the country a net exporter of the commodity.

Figure 2.
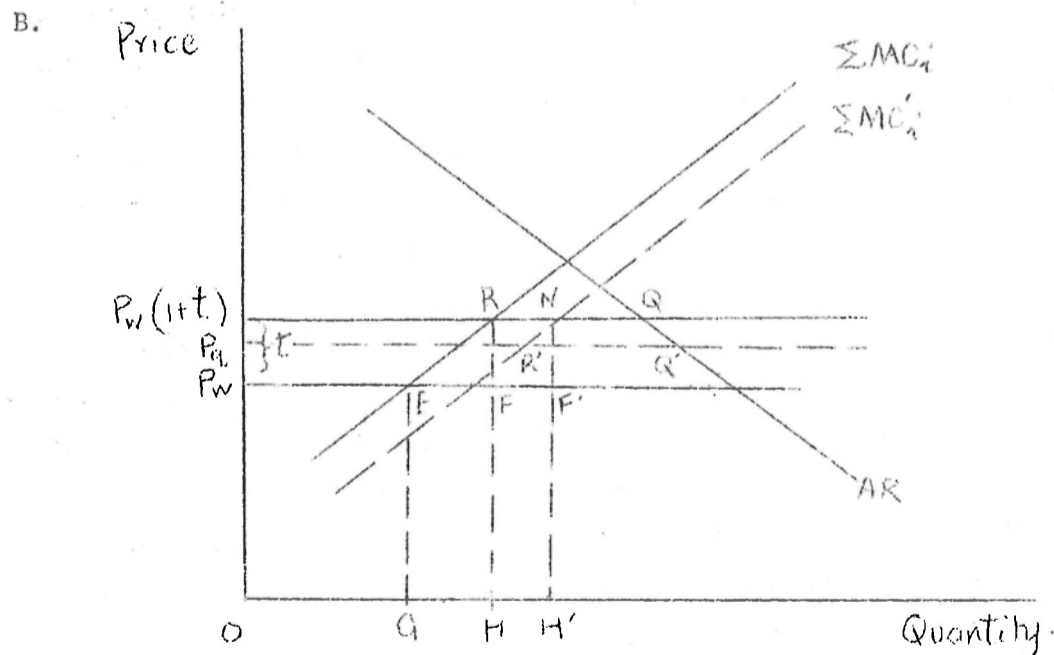
In figure 2, Pw is the world price of the commodity which is produced in a competitive domestic market. Tariff t, raises the domestic price to Pw(1+t) which increases domestic production from OG to OH with RQ of domestic consumption being filled in with imports. A quota which permits RQ of imports will have an

equivalent effect on domestic prices to the tariff, t, without yielding
government revenue. In both cases, resources EFHG are drawn from other sectors
of the economy into the tariff-distorted production of the import-competing
commodity.

Let us now examine the effects of granting lower input prices to
producers through measures such as import duty drawbacks. In the case of tariff
protection, the shift in the marginal cost curve does not affect price. Greater
domestic resources, HFF^1H^1, are bid away from the rest of the economy into the
production of the commodity, and lower cost imports are curtailed further from
RQ to NQ.

In the case of a quota, similar cost-reducing measures will result in
lower domestic prices although domestic production will not increase by as much
as it does in the presence of tariffs. The domestic price increasing effect
of the quota is, in this instance, dissipated somewhat as greater domestic
production occurs with no change in imports i.e, dM=0. There is thus a
redistribution from producers to consumers and a smaller resource-allocational
distortion from the economy as a whole to the high cost import-competing
production of the commodity. We thus conclude that for income distribution
and greater efficiency in resource allocation, cost-reducing measures for a
competitive industry will be more effective if imports are constant, dM=0,
than if quota-equivalent tariff protection is accorded to the industry initially.

(C)
Suppose now that the domestic industry in case (B) is a monopoly
operating against an import quota, dM=0. Fig. 3 shows that the demand curve
faced by the monopolist will be quota-distorted and horizontal to the true
domestic demand curve. The monopolist becomes only a dominant supplier to
the domestic market.

In Fig. 3, let AB be the importable quota. If AR is the domestic
demand curve, then the monopolist faces a quota-distorted demand curve ARq
and he is a dominant supplier in the domestic market. He equates marginal
cost with marginal revenue and charges price Pq at which quantity OQq is sold
domestically and supplemented with equal-priced imports of AB.

A tariff can be devised to induce the monopolist to supply the product
competitively domestically against his quota-distorted demand curve, while imports
equivalent to the quota continue to enter the domestic market. Such a tariff, t,

Figure 3.
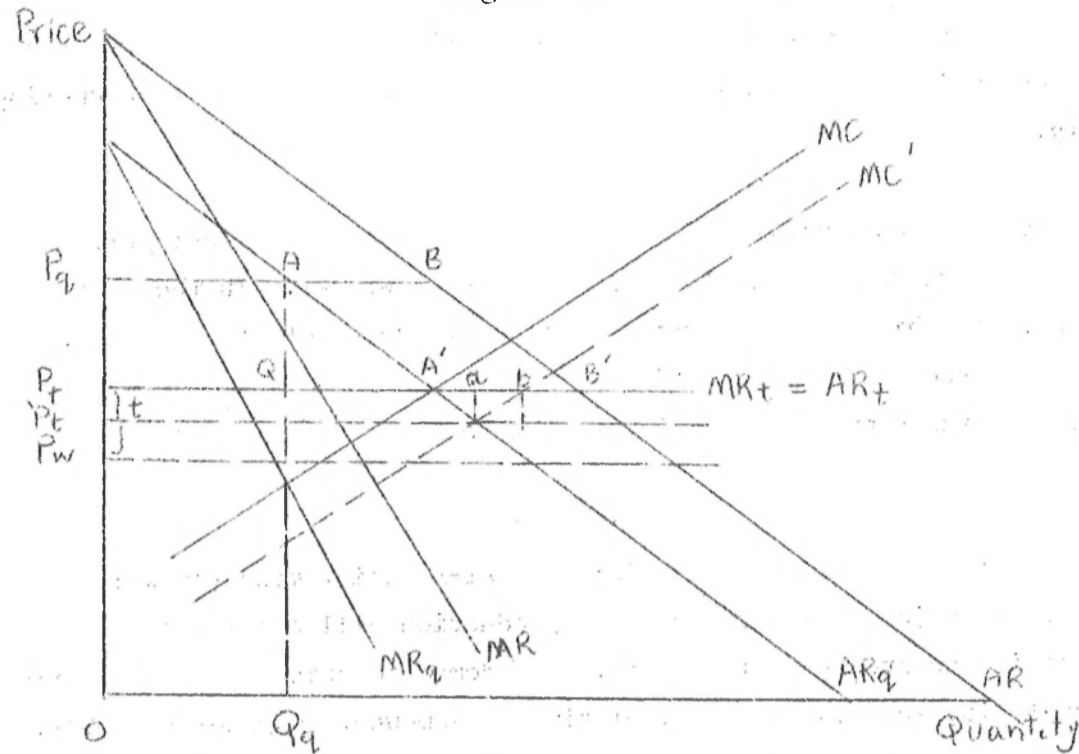
raises domestic price above world price Pw to Pt and the monopolist faces a kinked demand curve $P_tA^1B^1AR$. The flat portion $P_tA^1B^1$ coincides with the marginal revenue, MR_t. The monopolist now produces P_tA^1 corresponding to the intersection of MR_t and MC and competes perfectly with imports which enter the domestic market at the same price.

Under the tariff, the monopolist produces QA^1 which he would not produce under a quota and he further foregoes monopoly profits PqAQPt which he would reap under the quota. Triangle AQA^1 is a transfer (consumer's surplus) from the monopolist and licence holders to the consumers, effected through the use of the tariff rather than a quota. A tariff is clearly superior to a quota in curtailing both the monopoly power of domestic producers and the financial profits of importers.

Suppose now that after the curtailment of monopoly power the govern- ment wishes to encourage expanded production by granting input cost reducing measures to the monopolist. The new marginal cost is MC^1. Provided that imports are kept constant, dM=0, it is clear that the tariff inclusive domestic price will decrease while yielding expanded production. The price of imports will similarly be forced down to the new level ^1P_t and there is thus a transfer from the profits of importers to consumers.

Domestic production is, however, greater under a tariff, $P_t b$, and imports are curtailed to bB^1 without a domestic price reduction for the commodity. With imports constant, $dM=0$, and input cost reductions, domestic production is $P_t a < P_t b$, but domestic price is lower, $^1P_t < P_t$.

(D)

  Finally, we consider the case where the import quota with which the monopolist competes is maintained while input cost reducing measures are granted. In Fig.4, the monopolist is faced with a quota-distorted demand curve. He adjusts production to the point where his MR intersects the MC and sells OQq at price Pq, the balance of domestic demand being filled with imports of RS at the same price.

  Cost reductions which shift the marginal cost to MC^1 will similarly reduce/increase the monopolist's price/domestic production, and also reduce the price of imports. There is a transfer from the monopolist and import licence holders to consumers and increased lower-cost domestic production. The new domestic price of imports and domestic production is OP_q^1 and OQ_q^1 respectively.

Figure 4.
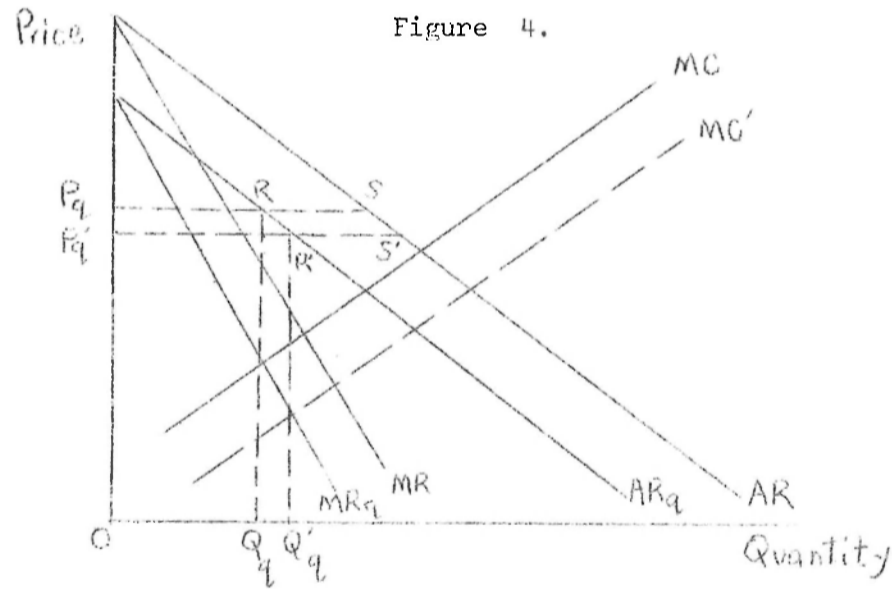
  To summarize the cases of Kenya's trade intervention examined, case (A) indicates that production by a domestic monopolist for a closed market redistributes incomes from consumers to the monopolist and bids away resources from other sectors of the economy to the inefficient monopolist. A domestic market closed to perfect competitors, however, while not similarly redistributing incomes from consumers to producers, similarly bids away resources from other sectors of the economy and generates lower exports than a monopoly. Tariff adjustment downwards may equate the behaviour of a monopolist to that of a

perfect competitor. A monopolist stripped of monopoly power by tariff adjust-
ment will respond to measures which reduce costs by increasing exports in a
similar manner to a perfect competitor.

Case (B) indicates that cost reducing measures will make domestic
production more competitive when an import quota is used and maintained, than
when a quota-equivalent tariff is in force. In both cases domestic production
increases but more so under the tariff than under a quota, while domestic
price decreases under a quota.

Case (C) shows that under a monopoly, a tariff is superior to a quota
in ridding the monopolist of monopoly power under which he exacts monopoly
profits from consumers at a price also charged by licence holding importers.
The switch from a quota to a tariff, when further accompanied by cost reducing
measures and constancy of imports ensures lower domestic prices and greater
production while the removal of the condition dM=0 increases domestic production,
leaves domestic price unchanged but curtails imports.

Case (D) analyses the case where the monopolist's quota-distorted
production and relevant commodity price are not corrected with a quota-equivalent
tariff, but input cost reducing measures are granted. It is seen that price/
domestic production will decrease/increase, but the element of income distribu-
tion from consumers to the monopolist (in monopoly profits) and licence holders
continues.

The cases examined indicate some of the effects of Kenya's policy
combinations in trade intervention. Further research of industries which fit
the categories analysed will verify the theoretical effects and indicate
corrective measures which should be persued towards resource allocation, export
promotion and income distribution.