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The Welfare Cost of Speculation During Kenyan Trade Reforms

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February 1994

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1. Introduction

While the theory of economic behaviour in the absence of credibility is fairly advanced, it has not been empirically tested. This paper provides such a test. More specifically, we quantify the social cost created by incredible trade reforms using Kenyan data.¹ The theory can be summarized by examining how private consumption and production decisions differ from those under perfectly credible policy reforms. These deviations may be due to either socially costly private action or a lack of desirable action. In consumption the welfare cost can result from non-optimal intertemporal substitution as private agents consume more today in anticipation of a higher future price (Calvo 1987). Similarly, consumers may accumulate speculative inventories of durable imports (Calvo 1988). In production, a lack of credibility is likely to encourage inaction, such as refraining from reallocation of factors of production to the export sector (Rodrik 1989), or deferral of investment until uncertainty concerning the future trade policy has been resolved (van Wijnbergen 1985). While waiting, entrepreneurs may accumulate excess foreign savings or speculative stock of imported inputs in anticipation of reversal of the reform. Our empirical analysis concentrates on speculative accumulation of stocks of durable imports and deferral of investment in Kenya during 1975–91.²

There are two necessary conditions for credibility: (i) time-consistency and (ii) macro compatibility of the reform. As suggested by Engel and Kletzer (1987) and Froot (1988), both these conditions are likely to be probabilistic rather than on-off situations. In the former case, private agents may not be certain about the true intentions of the liberalizing government and attach a subjective probability to default of the reform. In the latter case the possibility of adverse external shocks may undermine the permanence of liberalization. In the absence of sufficient political will to devalue, the only way the government can respond to a deterioration in the terms of trade is to reverse the reform. This possibility affects the expectations of private agents concerning the future price of importables and their intertemporal behaviour. If the public has rational expectations, it perceives the objective probability of collapse, whereas in the absence of rational expectations it will have to rely on a subjective probability. Regardless of the degree of uncertainty (including its absence), incredibility creates a social cost.

Time-inconsistency may arise for several reasons. First, if the government is of a redistributive type, and factor mobility is costly, it is not able to credibly commit itself to the optimal policy of free trade. The public knows that the government will subsequently have an incentive to impose a tariff (explicit or implicit) and distribute the receipts to its favoured group (Staiger and Tabellini 1987). Second, time-inconsistency may result from conflicting goals of the public and the government, for example, regarding public spending (Daveri 1989). The private sector knows that the government will try to raise its revenue by unexpected inflation, once people have built up their real cash balances. As the increased revenue is used for its self-concerned spending, the government cannot commit itself to free trade. The presence of conflicting goals is equivalent to a distortion which interacts with another distortion, i.e. trade restrictions. If one distortion remains, it may not be optimal to remove the other. Third, there may be uncertainty whether the government is a true liberalizer or a redistributive one. In other words, uncertainty prevails over whether or not the time-consistency problem arises. As indicated above, this approach makes the lack of credibility probabilistic. Finally, the government can be endogenized as a political process where a majority, for example, determines whether the reform will be undertaken at all. In this case, time-inconsistency may result in a reform that never takes off due to uncertainty about winners and losers (Fernandez and Rodrik 1990).

¹ Other aspects of Kenyan trade liberalization have been studied by Ikiara (1987), Bevan *et al.* (1991) and N'geno (1991).

² Blanchard and Fischer (1989) analyze standard theories of inventory holding, such as production smoothing and avoidance of stock-outs.

The other necessary condition for credibility is compatibility of trade liberalization with macroeconomic policies, such as fiscal, monetary and exchange rate policy. Similarly, to the time-consistency problem, private agents may observe incompatibility with certainty due to misguided government policies, or incompatibility may be probabilistic due to uncertainty created by the possibility that adverse terms-of-trade shocks will occur in the future. Many African economies use import controls to manage their balance of payments. By definition, the endogenous trade policy rule implies that any liberalization is temporary, unless the positive shock, which initially prompted the reform, turns out to be permanent rather than temporary. If private agents have rational expectations concerning the type of the shock, they are also able correctly to anticipate the fate of the reform. As a corollary, if there is no change in the terms of trade when a trade reform is undertaken, compatibility has to be brought about by a simultaneous devaluation, or by a reduction in the money supply. Temporary foreign aid, for example, allows the government to buy back domestic currency with foreign currency, provided aid will not increase public spending.

Unlike the necessary conditions, the sufficient conditions for credibility are much more difficult to identify, or to predict. Even if the two necessary conditions are being met, there is a continuum of other reasons that may create a credibility problem, such as the number of years to the next election, or an expected shift in the balance of political power.

Expressed as a function of the probability of collapse, the total social cost of incredibility is a non-monotonic curve with kinks. First, the welfare cost in consumption is an increasing function of the probability of collapse with a jump. While the cost of sub-optimal intertemporal substitution is monotonically increasing in the subjective probability, the speculative holding of stocks is likely to be nil at low probabilities. When the probability reaches a critical level, there is a jump in the social cost when stocks are purchased, given the levels of tariffs and interest rate. Hence, below the critical level there are no costs related to inventories but there is sub-optimal intertemporal substitution, and above the critical level the cost of holding stocks increases monotonically. Second, when the probability increases, the anticipated return to capital in the export sector relative to the formerly protected sector becomes less attractive. The incentive to relocate resources diminishes, increasing the welfare cost monotonically in the probability up to another critical value at which no reallocation of factors takes place and the welfare cost reaches its maximum level. Third, the social cost of deferral of investment depends on the rate of return and the level of planned investment in physical plant. At low probabilities, and given the level of tariffs, the social cost would be zero since private investors will act according to the policy-maker's intentions and invest in exportables. A third critical value of the subjective probability can be identified at which the cost jumps up since investment is deferred by accumulating stocks of imports which yield a zero social return.

Empirically, one method of identifying trade liberalization episodes is to examine when actual policy changes, such as shifts in import licensing practices, tariffs, or export incentives, were initiated and when they were stopped or reversed. When introductions and reversals of policy changes are frequent, this approach alone is not sufficient to determine whether or not a given trade regime has become more liberal. Changes in trade policy instruments do not necessarily surface at the aggregate level as they may be in opposing directions, influenced by other policies, and variations in economic conditions. A quantitative index of trade policy is therefore required to establish the net effect of changes in policy instruments, for example, on relative prices.

How can we diagnose the less than perfectly credible episodes from a narrative of changes in trade policy instruments? In principal, a candidate for such an episode should pass a three-faceted test. The first part of this test is to examine whether or not we can identify it as an episode by using a quantitative measure of trade policy.³ Second, we have to ascertain that at least one of the sufficient conditions for incredibility is being met, i.e. the reform is perceived to be either macro incompatible or time-inconsistent. As pointed out earlier, the two conditions are not likely to be either on or off but the perceived probability of reversal lies somewhere between zero and one. The third test is to make

³ For a discussion on measures of trade policy see Reinikka (1994).

sure that sufficiently little else was simultaneously going on in the macroeconomic front so that we can attribute the event in question to trade policy.

Finding reliable quantitative criteria of trade policy is not an easy task. Yet, an objective criterion is needed if we wish to study the investment response to liberalization, or the effects of trade policy on exports over time, or across countries. For such studies we do have to know what type of orientation the country's trade policy had during the period in question. However, when we want to assess the social cost of incredible trade reforms, the information requirement is likely to be less than when investigating other types of private responses. This is because we are actually assessing the relatively immediate effects of changes in policy instruments on private behaviour, regardless of whether they will ever surface at the aggregate level. In other words, we are looking at how the private sector reacted at the government's attempt to influence relative prices, i.e. trade policy, regardless of how successful it was in this attempt. Moreover, an annual quantitative index of trade policy could even be misleading in some cases as an episode may begin and end within a year, averaging out in the index, but still inducing speculative action and a social cost.

For our empirical analysis of the credibility problem and speculation in Kenya during 1975–91, it is therefore justified to define liberalization episodes based on the narrative of changes in trade policy instruments rather than on a quantitative measure, such as the implicit tariff index. The following episodes will be studied in this paper: (i) endogenous import liberalization during the coffee boom in 1976–78, (ii) exogenous import liberalization in 1980, (iii) systematic licensing introduced in 1982, and (iv) relaxation of import controls and subsequent emphasis on export promotion, effective since 1989.⁴ The nature of the third episode is ambiguous *ex ante*. Although access to imports of intermediate and capital goods was improved, it was carried out at the expense of imports of consumer goods so that this reform may have to be classified as tightening of import controls rather than liberalization.

What can we say about the speed of liberalization during these episodes? The speed of the first episode, which was essentially a temporary reform under the endogenous trade policy rule, was adjusted to the speed of relaxation of the foreign exchange constraint. Bevan *et al.* (1990) have, however, shown in a computable general equilibrium model that the extent of relaxation of import restrictions was not sufficient as there was a considerable shift of resources to domestic manufacturing at the expense of exportables. The 1980 liberalization can be labelled as a big bang as the removal of non-tariff restrictions was fast and extensive, although there were also gradual elements to it, such as a preannounced timetable for shifting import items to less restrictive categories. The speed of the 1982 reform is somewhat ambiguous as, on the one hand, various schedules were reformed one by one, i.e. gradually, but, on the other hand, once the revision of a schedule was completed, it was put into use at once. The last episode had a much more gradual approach to import liberalization than the 1980 reform. Cautiousness did not, however, make it credible to the public, although authorities seem to have been more effective in prevention of private speculation.

Before attempting to quantify the welfare cost caused by speculative private action in Kenya in response to trade liberalization episodes, we will assess the credibility of the reforms identified above by examining data on external reserves. Thereafter, three hypotheses will be tested. First, we will examine how uncertainty concerning the permanence of a more liberal trade policy affects inventories of imports held by private agents. The null is that stocks of imported consumer durables and storable intermediate goods go up shortly before private agents anticipate that the reform will be reversed. This is because the expected gain from holding stocks goes up when it is anticipated that the reform can not be sustained and that the future price of importables will increase. In practice, stockpiling can take various forms, such as holding excess import and foreign exchange licenses, placing imports in bonded warehouses, or storing actual imports which have been declared through the Customs. According to our second hypothesis uncertainty about the future policy makes investors wait and accumulate inventories of importables - in the absence of (legal) access to foreign savings - rather than invest in

⁴ The 1973 liberalization is left out as the data prior to 1973 are not comparable to subsequent years.

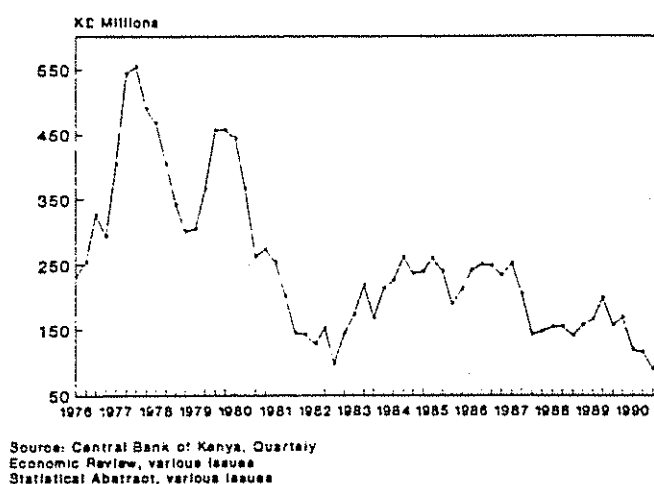
physical plant (or low-yielding domestic financial assets). Policy-makers expect that the new liberal trade regime (or a promise of it) will induce investment in the export sector instead of importables. The shift may not, however, take place due to waiting and temporary preference for more liquid assets until uncertainty has been resolved. Finally, potential links between the two hypotheses will be investigated. Accumulation of stocks can be expected to create an increase in the demand for credit, whereas waiting in investment is likely to cause an increase in the supply of loanable funds.⁵

The rest of the paper is organized as follows. Section 2 will assess the credibility of the four liberalization episodes, identified from the narrative of changes in trade policy. Section 3 will present a taxonomy of the range of choices available to the private sector to hedge against anticipated reversal of the reform, including relevant data to test the above three hypotheses. Section 4 will discuss how private agents can finance speculative inventory accumulation, while Section 5 contains a detailed analysis of private responses to each of the four liberalization episodes. Finally, a summary and conclusions can be found in Section 6.

2. Credibility of Kenyan Reforms

The external reserve position is an important indicator of sustainability of trade reforms both to the private sector and to the government. Figure 1 depicts quarterly data on external reserves at the Central Bank of Kenya in 1976–1990, deflated by the import price index (1982/IV=100). As the latter is based on the cif prices of imports in Kenyan shillings, it captures changes both in the world price of imports and those in the exchange rate. We can see that in 1978 external reserves fell sharply, indicating that the coffee boom was coming to an end, and that the private sector correctly anticipated reversal of liberalization and took advantage of the last opportunities of an easier access to licenses. Tightening of import controls in 1979 considerably improved the reserve position.

Figure 1:
External Reserves 1976–1990 at 1982 Prices
Deflator Import Price Index (82IV=100)



⁵ In the absence of waiting, an alternative assumption would be that the demand for funds to finance inventories of imports drives the interest rate up, causing investment to fall.

Another steep fall occurred almost immediately following the 1980 exogenous liberalization which, in the absence of any exchange rate adjustment, was incompatible and hence incredible. Reserves fell by almost K£ (Kenyan pounds) 100 million per quarter during the second and third quarter of 1980. At that rate of decline, and without a reversal of the reform, reserves would have been completely ran down during the next six months. It can be said that the objective probability of collapse of this reform was very close to one, and that the subjective probability perceived by private agents was very close to the objective one. A reform of this scale, which was implemented without devaluation, would have required a large improvement in the terms of trade in order to be sustainable. In addition, the presence of external aid made it difficult for private agents to be certain about the intentions of the government which was new and lacked reputation. It is therefore plausible that the 1980 reform was also perceived as time-inconsistent so that both sufficient conditions for incredibility may have been present. A time-consistency problem implies a subjective probability somewhere between zero and one, although we cannot say anything more accurate about it.

A two-month halt (October–November 1980) in the issuance of licenses stopped the decline in reserves only temporarily, and they continued to fall in 1981–82, although not as dramatically as in 1980. It is possible that the latter fall reflects the fact that import schedules were being reformed gradually so that import-competing and consumer goods were the last schedule to be revised. Hence, there was a short period when access to inputs was freer but licensing of import-competing and consumer goods was not yet tightened. By 1983, however, the schedules were established and succeeded in stabilizing the reserve position reasonably well, although they remained at a low level.

There was another fall in reserves in 1987 after the mini coffee boom of 1986. Despite import liberalization, the level of reserves was sustained quite well in 1989 thanks to large inflows of policy-based lending. In 1990 reserves fell again, reaching an all-time low (at least since 1976) during the third quarter. This reflects the fact that import liberalization was perceived to be macro incompatible as aid flows contracted, compensating devaluation was delayed, and introduction of a sales tax was also slow relative to the speed of relaxation of import controls. In 1990 reserves were equivalent only to six weeks' imports. This led to a reversal, and the reform was subsequently reoriented towards export incentives rather than import liberalization.

Summarizing, the coffee boom liberalization in 1976–78 and the exogenous trade policy experiment in 1980 were clearly not fully credible to the public. The former reform was a direct consequence of the endogenous trade policy rule as was its reversal when the windfall was over. The second reform was carried out as a big bang despite the adverse terms of trade that prevailed at the time but was not accompanied by compensating devaluation. Reserves fell dramatically soon after the reform was initiated at an unprecedented rate. Support from the international financial institutions did not suffice to restore compatibility, and hence, credibility of the reform. The two subsequent reforms, revision of import schedules in 1982, and the one which effectively began in 1989, had a much more cautious approach to relaxation of import restrictions than the 1980 one. Revised import schedules, which liberalized imported inputs but simultaneously became stricter on import-competing and consumer goods, seem to have suffered from an initial lack of credibility which was soon regained. Moreover, there were two exchange rate adjustments in 1981, and one in 1982 to support the reform. Again, the latest import liberalization was not macro compatible which resulted in its abandonment in late 1990 when the external aid injection was over, and devaluation and introduction of a sales tax were carried out too slowly relative to removing import controls.

3. Choices Available for Private Speculation

Theoretical models focus either on consumer or investor behaviour in the face of uncertainty concerning the permanence of trade liberalization. Consumers who anticipate that the reform will be short-lived because of its macro incompatibility, time-inconsistency, or for some other reasons, increase purchases of importables to substitute consumption intertemporally, or to accumulate excess stocks of durable goods for future consumption. In African economies intertemporal optimization by consumers is constrained by unavailability of credit so that in order to accumulate stocks they have to forego current consumption of other goods.

For consumers it does not matter whether compatibility is subsequently restored by reimposing the previous trade restrictions, or by devaluation. In the meantime they have an incentive to hoard temporarily cheap importables. For investors instead the future policy choice is an important consideration as it will determine the return to their investment. Return of import restrictions favours import-substitution, while devaluation increases the relative prices of exportables. In Sub-Saharan Africa firms do not usually have (legal) access to foreign exchange as a way of deferring investment but they can instead accumulate stocks of importables as foreign exchange availability for imports typically improves during trade liberalization. In addition, domestic industries tend to have priority over importers of consumer goods in foreign exchange allocation.

In practice the range of choices for speculative action is much wider than that of stylized theoretical models. Apart from stockpiling of imported durables, both consumer goods and intermediates, private agents may also hold excess import and foreign exchange licenses, or use bonded warehouses for their inventories. In this section we will explore the gains and costs of these choices as well as the risks involved. In each case relevant time series data will be presented in a graphic form. Private response to each of the four reforms will be analyzed in detail in Section 5.

Despite its private profitability, speculative behaviour has a social cost. Excess licensing as such does not necessarily incur a welfare cost as the license is just a promise to deliver foreign exchange. The actual cost arises when licenses are used to accumulate stocks of imports. The only direct costs related to excess licensing arise in case there is a balance of payments crisis which has to be managed. Excess imports, either in bond or declared through the Customs, yield a zero social return but tie up scarce foreign exchange, or investment funds, and therefore have a social cost. In Africa, their opportunity cost can be very high indeed. Hoarding may also deplete external reserves and endanger the entire process of improving resource allocation by liberalization.

Table 1 depicts the range of choices for speculative action as a function of expected exchange rate and trade policies. Assuming that a lack of credibility is due to inconsistent macroeconomic policy, private agents anticipate a reversal of current liberalization. Compatibility would require either devaluation, return to tighter import licensing, tariff increases, or a combination of these measures. Table 1 lists examples of action rational agents would take in each instance. It is important to note, however, that these are not necessarily the only rational choices as there is at least a third dimension to the table, i.e. the cost of finance required by various means of speculation.

In anticipation of devaluation and tariff increases, private agents are more likely to accumulate actual imports, and decumulate excess licenses and stocks in bonded warehouses. When no devaluation, or changes in tariffs are expected, excess licenses are the most cost-effective means of hoarding, to be followed by accumulation of imports in bond.

Table 1:
*Range of Choices for Private Speculation
as Function of Expected Exchange Rate and Trade Policies*

EXPECTED EXCHANGE RATE POLICY	EXPECTED TRADE POLICY	
	QRs returned Same tariffs	Tariff Increases
Devaluation	Declared imports	Declared imports
	Bond decumulation*	Bond decumulation
No Devaluation	Forex licenses	Bond decumulation
	Bond accumulation	

Notes

* Expected devaluation alone, i.e. without any change in QRs or tariffs, could produce a similar speculative outcome.

3.1 Stockpiling of foreign exchange licenses

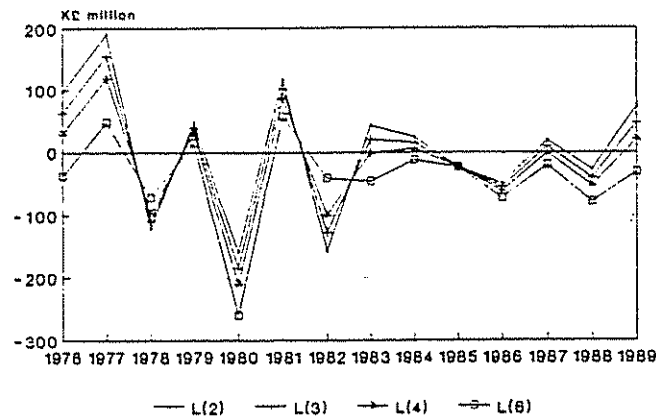
One way of assessing the magnitude of excess licensing is to compare annual foreign exchange allocations to actual private imports. In order to obtain a foreign exchange license, importers must hold a valid import license. Actual imports are derived by deducting re-exports and government imports (which do not require a license) from direct imports.⁶ As the level of imports varies from year to year, and as there is a time lag between allocation of foreign exchange and payment for imports, a genuine deviation between annual allocations and actual imports can be expected. In order to determine the magnitude of excess licensing, we have first to derive hypothetical imports based on annual foreign exchange allocations and the average time lag. The residual between the hypothetical and actual imports, i.e. the speculative component, can then be calculated.

Unfortunately, no systematic information is available concerning the average lag between allocation of foreign exchange and payment for imports. Interviews with Kenyan importers indicate, however, that it is likely to be around three months. Figure 2 (a) depicts the residual derived for various lags, i.e. two, three, four and six months. The residual is deflated by the import price index (1982=100) to account for changes in import prices and the exchange rate. Figure 2 (b) depicts the stock of licenses for 1976-89 for the lags of three and four months.

One can think of at least two different reasons why importers acquire excess licenses. First, multiple applications are submitted when controls are tight to make sure that at least one license will be approved. Such a practice can easily produce considerable excess allocation of foreign exchange over import requirements. Second, licenses may be stockpiled instead of imported goods during a more liberal trade regime to be used either shortly before the reform is expected to be reversed, or when QRs have been tightened again. Until recently, stockpiling of licenses used to be a cheap way of hedging against tighter import controls. In order to curtail multiple applications a computerized information system and a charge of two percent of the amount of the invoice were introduced during the latest trade reform. Furthermore, import licenses and foreign exchange allocations could no longer be applied for more than three or six months in advance initially. Thereafter they could be extended by another three months.

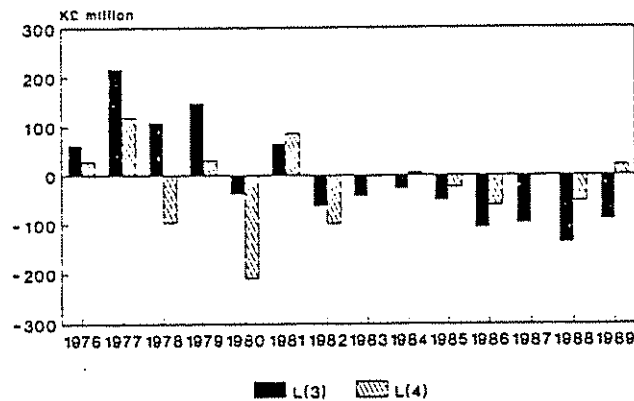
⁶ Direct imports include goods placed in bonded warehouses.

Figure 2 (a):
Foreign Exchange Allocation
Versus Actual Imports at 1982 Prices



Source: Central Bank of Kenya;
Statistics Abstract, various issues

Figure 2 (b):
Stock of Excess Foreign Exchange Licenses at 1982 Prices



Source: Central Bank of Kenya;
Statistics Abstract, various issues;
Initial stock zero by assumption.

As a choice of speculative action stockpiling of licenses is associated with considerable risks, particularly devaluation and an increase in tariffs between the time of obtaining the license and using it for acquiring the foreign exchange for the payment of imports. In other words, excess licenses are the most cost-effective means of hedging against the return of import controls when the exchange rate and tariff policies can be expected to remain constant. To determine the dominant motive amongst Kenyan importers to acquire excess licenses, one has to compare the four liberalization episodes against the excess allocations of foreign exchange. A more detailed analysis can be found in Section 5 where speculative private behaviour during each liberalization episode will be assessed separately. One obvious conclusion is, however, that the variability between allocations and actual imports was extensive in the 1970s and early-1980s but it has been reduced considerably since 1983. If we assume that three months is the most likely lag, we can see from Figure 2 (b) that importers constantly held an excess stock of foreign exchange licenses in 1976-81, except for year 1980. Since 1982 the stock

of licenses appears to be negative. In other words, importers increasingly used other sources of foreign exchange than the Central Bank to pay for their imports.

3.2 Bonded warehouses

Another option available for private speculation is to place imported goods in bonded warehouses instead of declaring them through the Customs. This is probably the best data set to capture speculative responses to trade reforms suffering from a credibility problem as they are inventories of imports waiting to be declared through Customs for home use. There are currently 118 common bonded warehouses in operation in Kenya. They are either private or run by the government. Until recently, importers were able to store their imports in these warehouses for at least two years before declaring them through the Customs. To reduce speculation the length of time imported goods can be kept in bond has recently been limited to a maximum of one year.

In order to verify whether or not firms accumulated stocks of bonded importables in response to trade reforms we will examine the unpublished record of entries to and removals from the warehouses collected by the Department of Customs and Excise. As data on bonded imports are not generally available, raw data on individual entries into and removals from bonded warehouses were extracted from the mainframe computer at the Government Computer Services in their original form as recorded by the Customs. Only years 1980–89 could be obtained, while 1983 and 1989 include data for six months only. The raw data was then processed by using SPSS software in order to obtain monthly totals for durable and semi-durable consumer goods and durable intermediate imports. Figure 3 (a) depicts the annual change (removals and re-exports deducted from entries) in the total value of durable consumer imports⁷ and imported non-food, non-oil intermediate goods⁸ held in the bonded warehouses. Figure 3 (b) shows the stock of bonded imports, i.e. the bonded stock, except for data on the initial level of stock, which is not available, and assumed to be zero.

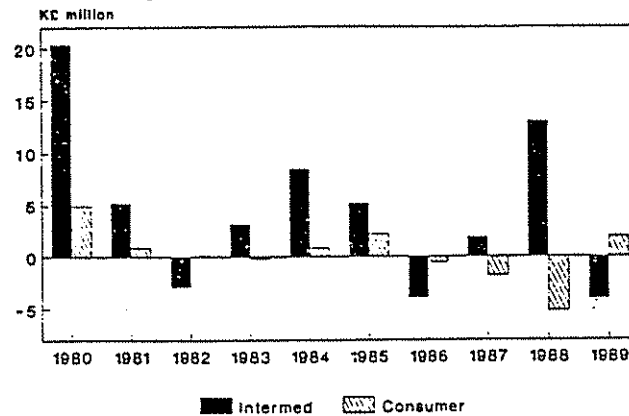
The two series are deflated by the appropriate decomposed import prices indices.⁹ During the period for which data are available there has been an increase in the level of bonded stock of intermediate goods, whereas the net effect on that of consumer goods has remained more or less unchanged, except for a fall in 1988–89. The peak year of stock accumulation in bond was 1980 for both intermediate and consumer durables. Another substantial peak for intermediate goods occurred in 1988, while the bonded stock of consumer goods was heavily decumulated. Figures 4 and 5 depict monthly changes in the bonded stocks of imported consumer durables and intermediate goods from 1980 to mid-1989, again with the exception of the first half of 1983. A more detailed discussion of the changes in bond and lack of credibility in trade reforms can be found in the next section.

⁷ Consumer durables include passenger motor cars (51), other non-industrial transport equipment (522), consumer durables (61) and consumer semi-durables (62) as defined by the Broad Economic Categories, BEC (United Nations 1989).

⁸ Includes primary industrial supplies (21), processed industrial supplies (22), parts and accessories of capital goods (42) and transport equipment (53) as defined by the Broad Economic Categories, BEC (United Nations 1989).

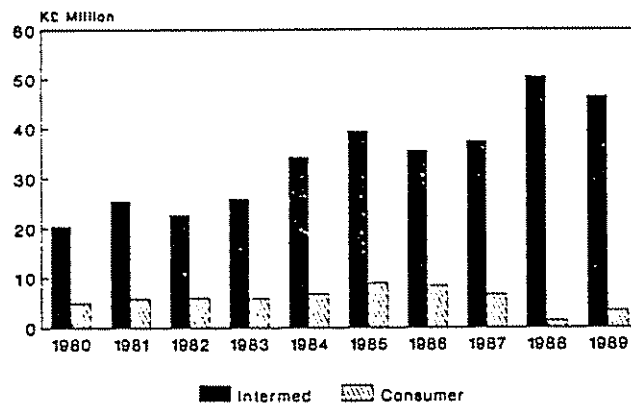
⁹ As to consumer goods, passenger motor cars (51), other non-industrial transport equipment (522) and consumer durables (61) are deflated by the import index for machinery and transport equipment. Consumer semi-durables (62) are deflated by the import index for miscellaneous manufactures. Intermediate imports are deflated as follows: Primary industrial supplies (21) by the import price index for crude materials, inedible; Processed industrial supplies (22) by the weighted average of the import price index for animal and vegetable oils and fats, chemicals and manufactured goods; and Parts and accessories for capital goods (42) and transport equipment (53) by the import price index for machinery and transport equipment.

Figure 3 (a):
Annual Change in Bonded Warehouses at 1982 Prices



Source: Department of Customs and Excise
1983 and 1989 show half-year data.

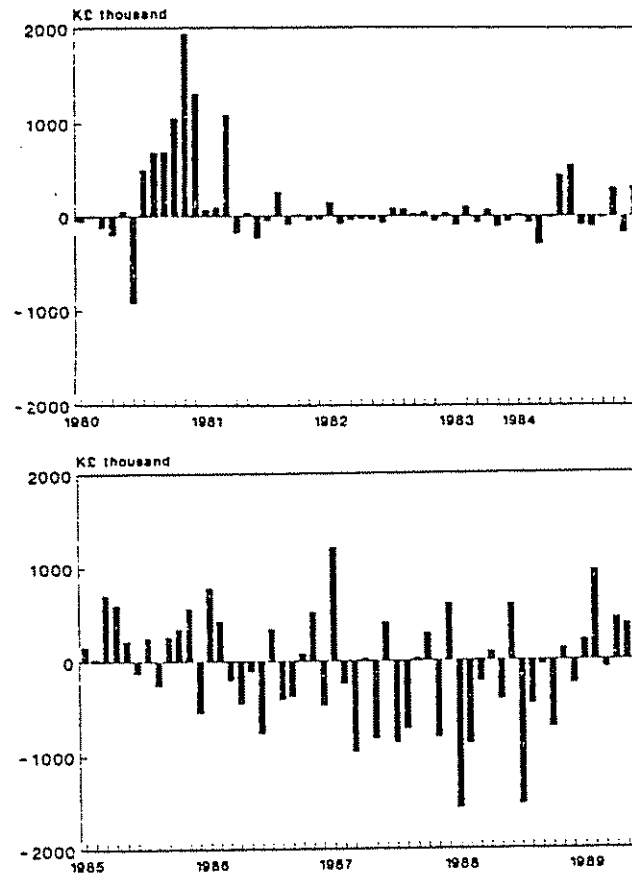
Figure 3 (b):
Stock of Bonded Imports at 1982 Prices



Source: Department of Customs and Excise
1983 & 1989 include only half-year data
Initial stock assumed to be zero.

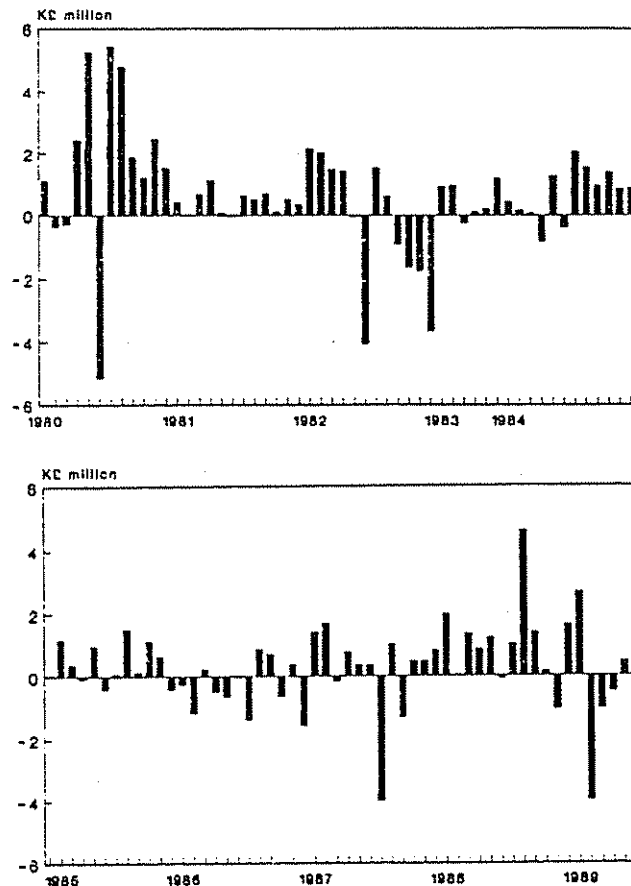
As in the case of licenses, fees charged for the use of bonded warehouses have gone up during the latest trade reform. Before that they used to be fairly cheap to operate. As a means of taking advantage of temporarily relaxed import controls, bonded warehouses carry a risk of tariff increase and devaluation. This is because tariffs charged when declaring goods through the Customs are based on the current value of the Kenya shilling as well as on the current tariff rate. The exchange rate risk is obviously of a smaller magnitude as the imports themselves must have been paid for before placing them in bond. In addition, warehousing in bond involves the cost of capital tied up in the stocks.

Figure 4:
Net Change in Bonded Consumer Durables at 1982 Prices



Source: Department of Customs and Excise
 1983 and 1989 show half-year data.

Figure 5:
Net Changes in Bonded Intermediate Goods at 1982 Prices

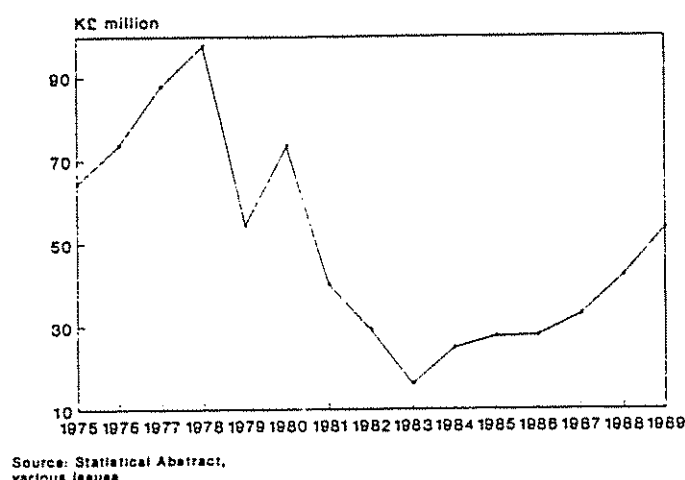


Source: Department of Customs and Excise
 1983 and 1989 show half-year data

3.3 Excess importation of durable goods

In addition to excess licenses and bonded imports, private agents can accumulate actual imports in order to take advantage of temporarily lower prices. Actual imports for home use are those declared through the Customs either upon arrival in Kenya, or from bonded warehouses. In other words, imports entered in bond are not included in home consumption but removals from bond are. From the importer's point of view, actual imports involve the highest cost of holding speculative inventories: in addition to the storage costs, goods and tariffs have to be paid for before stocking. But at the same time the risks of adverse changes in tariffs or in the exchange rate are eliminated. As to consumer goods, importing firms are usually able to shift part of the cost (as well as part of the gain) to consumers who have an incentive to accumulate stocks of temporarily cheaper durable imports, or substitute consumption intertemporally.

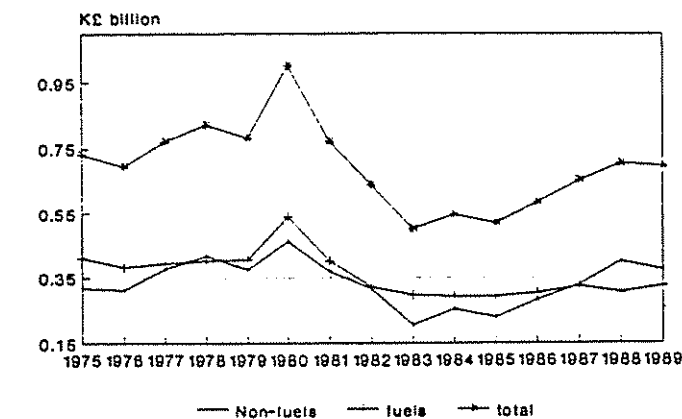
Figure 6:
Imports of Consumer Durables at 1982 Prices



Unfortunately, import data is available only on the annual basis so that we cannot determine, for example, whether there was a peak in imports shortly after October 1980 (allowing some time for shipment) when foreign reserves fell considerably and the reform came to a virtual halt and was subsequently abandoned. It is only possible to assess whether or not annual imports were significantly higher during 1980 compared to other years before and after the reform. Figure 6 depicts imports of consumer durables for home use at constant price in 1975–89. The highest peaks were indeed in 1978 and 1980, whereas the lowest level of consumer imports occurred in 1983.

Incredible import liberalization can create an incentive for firms to accumulate stocks of importables as an alternative asset if their expected future yield is higher than that of physical plant or available financial assets. Figure 7 depicts the total value of non-food intermediate goods as well their non-fuel and fuel components at 1982 prices imported for home consumption. By far the highest peak occurred in 1980, reflecting the credibility problem of the exogenous liberalization episode. The low levels of 1983–85 may well be explained both by decumulation of previously acquired stocks and a recession.

Figure 7:
Imports of Non-Food Intermediate Goods at 1982 Prices



Source: Statistical Abstract, various issues

Finally, by looking at the changes in stocks held by firms we can determine whether or not additional imports really were for speculative purposes instead of increased current consumption. Data on inventories can be obtained from the Kenya Business Expectations Enquiry (BEE) maintained since 1973 by the Central Bureau of Statistics. From the viewpoint of inventories the two most important sectors are manufacturing and commerce (retail) which hold 90 percent of the total reported stocks. The stocks reported by the BEE include "finished goods, work-in-progress, materials, fuels, components, spare parts etc."

A priori, stocks are likely to go up both in manufacturing and commerce during a trade reform which is not credible to the private sector. Consumers demand more for cheaper imported goods and less for domestic products (since consumer credit is not available), causing a fall in sales and an increase in stocks of the manufacturing sector. This can be reinforced by increased imports of intermediate goods, spares and alike due to their temporarily improved availability. In the commercial sector, they are also likely to go up as businessmen fill up their stocks with imports in anticipation of tightening of the controls at a later date and a higher future price.

Manufacturers do not hold stocks entirely as an alternative asset to physical plant or financial assets but also for other reasons, such as production smoothing or avoidance of stock-outs. In order to extract the import component, which may be subject to speculation, it is useful to divide the total stocks into work-in-progress and finished goods, on one hand, and materials, fuels, components, spares etc. on the other. It turns out that inputs dominate the total manufacturing stocks, being on average three times the value of finished goods and work-in-progress. From the viewpoint of accumulating inventories of imports, the stocks of inputs are obviously more interesting, bearing in mind the high import dependence of the Kenyan manufacturing sector.

Figure 8 depicts the value of materials, fuels, components, spare parts etc. held by manufacturing firms in 1978-90 at constant prices. Stocks are deflated by the manufacturing input deflator (derived from the value of non-labour inputs and the quantity index for manufacturing). There are two pronounced peaks which occurred during the first quarter of 1981 and the last quarter of 1982. Stocks were at their lowest level at the end of 1986. More systematic licensing since 1982 seems to have made it possible for the manufacturing sector to reduce the level of materials stocks in the 1980s.

Figure 9 depicts quarterly data on the total commercial stocks in 1975-90 at constant prices. As most of the stored goods, both imported and domestic, are for household consumption as industries import and stock their input requirements themselves, the series are deflated by the tradable components (the weighted average of clothing, footwear and furniture, furnishings, household equipment and household operation) of the consumer price index (CPI) for the low-income group (Nairobi).

Figure 8:
Stocks of Manufacturing Inputs at 1982 Prices

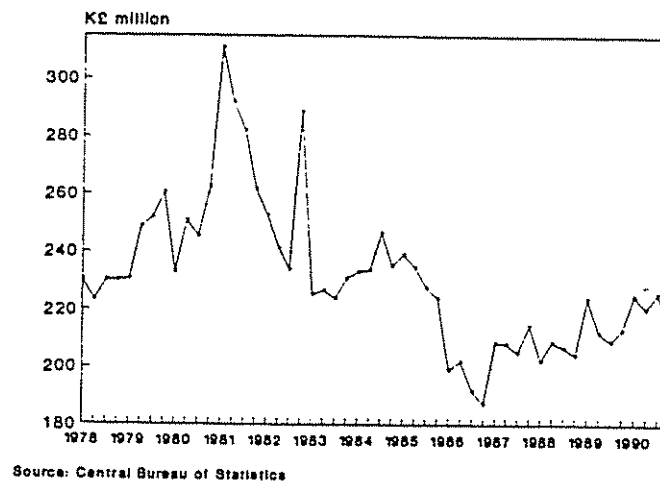
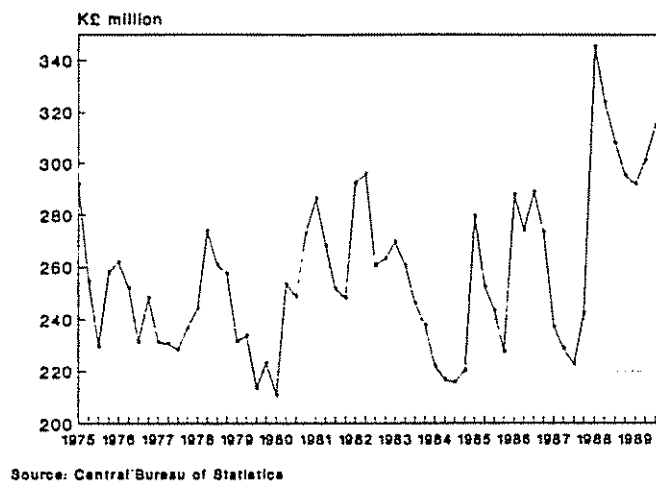


Figure 9:
Commerce, Value of Total Stocks at 1982 Prices



The trend in commercial stocks is positive but variations around the trend are highly volatile. Accumulation of inventories are followed by decumulation over and over again. As can be expected, the positive trend seems to coincide with the tightening of import restrictions on consumer goods since 1982. A more restricted access to import licenses calls for larger stocks in order to avoid stock-outs. The largest single accumulation took place during the first quarter of 1988.

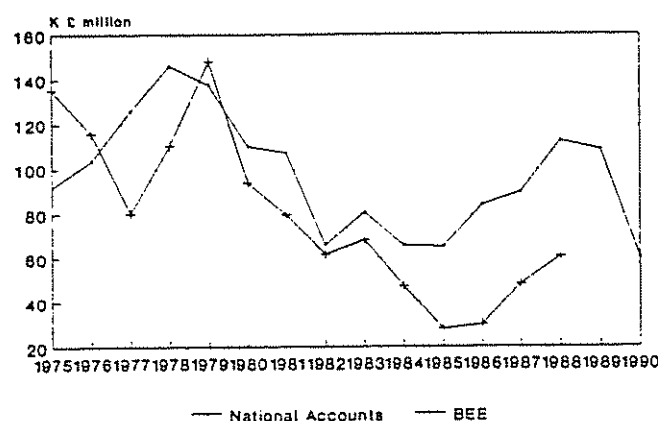
4. Financing of Speculative Inventory Accumulation

In principle, there are two possibilities of how a firm (consumer) can finance speculative stocks: (i) diverting investment funds (savings) for inventory accumulation, or (ii) increasing borrowing (foregoing other consumption). The first option of finance refers to our hypothesis of waiting (instead of investing in physical plant), while the second option confers with the hypothesis of increased

liquidity in the economy. If the importer cannot obtain the required foreign exchange from the Central Bank, he can resort to the parallel market.¹⁰

In order to determine whether investment in physical plant was deferred due to uncertainty concerning the future trade policy, we will study the gross fixed capital formation in the manufacturing sector (Figure 10). There are two sources that are based on different methods of data collection. The Business Expectations Enquiry (BEE) collects information on annual investment in fixed assets at factor cost during the last quarter of each year. In the National Accounts estimates of capital formation of the private sector are undertaken, by and large, on a commodity flow basis. Statistics from the end-use analysis of imports and on buildings completed are the main sources of information, supplemented by data collected in agricultural and industrial surveys. The public sector data are obtained directly from their accounting records. The manufacturing gross fixed capital formation deflator, derived from the National Accounts, is used to transform both series into constant prices. Note that the BEE seems systematically to give lower levels of investment than the National Accounts.

Figure 10:
Manufacturing, Capital Formation at 1982 Prices



Source: Central Bureau of Statistics;
Statistical Abstract, various issues

The BEE data shows that a surge in demand due to coffee boom — in the absence of sufficient relaxation of import controls — encouraged investment in import-substituting manufacturing in 1978–79. Thereafter, it fell sharply in 1980–82, while the single largest fall occurred in 1980. There was a modest recovery in 1983, only to be followed by another slump in 1984–86. During the three subsequent years investment went up but, as the National Accounts data indicate, there was steep decline again in 1990.

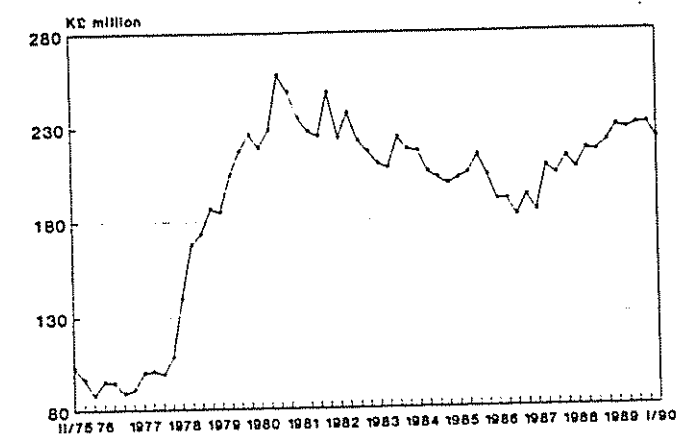
The Central Bank of Kenya publishes monthly information on commercial bank and non-bank financial institution (NBFI) lending. Figure 11 depicts lending to the manufacturing sector at constant prices in from the second quarter of 1975 to the first quarter of 1990. The series is deflated by the manufacturing input deflator.

There was a phenomenal expansion of lending to manufacturing towards the end and after the coffee boom. The highest point was, however, reached during the last quarter of 1980, reflecting the abortive trade reform. Thereafter the trend was declining but picked up again since 1987. Figure 12

¹⁰ An inter-bank market for foreign exchange became fully operative in 1993 when the Central Bank of Kenya ceased to provide foreign exchange for commercial imports.

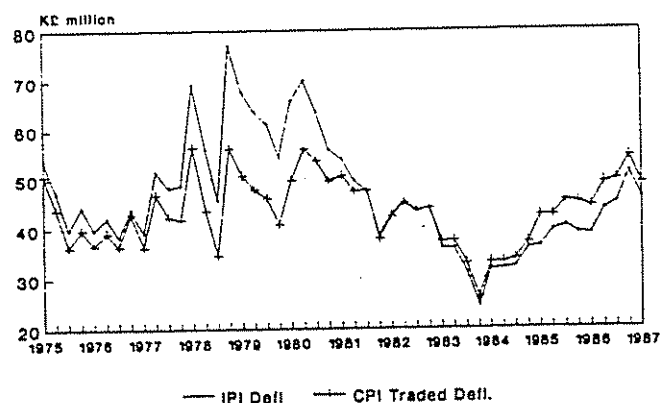
depicts lending to import trade in 1975–1987.¹¹ Lending is deflated by the import price index for all imports, and by a decomposed index consisting of traded goods in the CPI. The negative trend after the three obvious peaks in 1978–80 is likely to be due to either tightening of controls of consumer imports since 1982, or a recession, or both. Subsequently, the negative trend reverses slightly which, at least since 1986, could be interpreted as a reflection of economic recovery.

Figure 11:
Lending to Manufacturing at 1982 Prices



Source: Central Bank of Kenya.
Quarterly Economic Review, various issues

Figure 12:
*Commercial Bank and NBF1 Lending to
Import Trade, 1982/IV Prices*



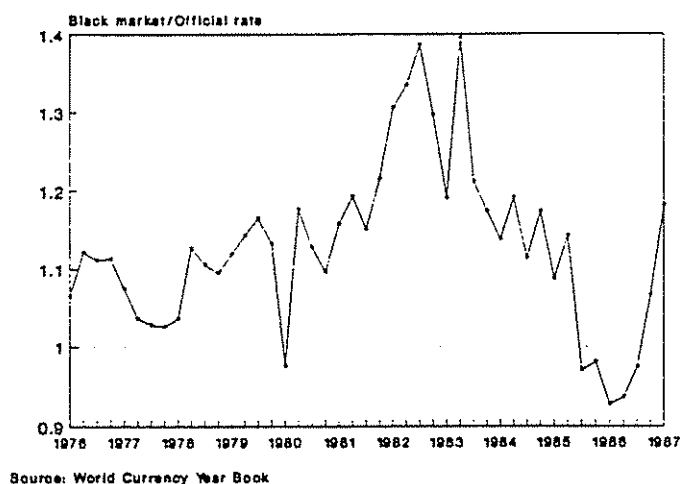
Source: Central Bank of Kenya, Quarterly
Economic Review, various issues;
Statistical Abstracts, various issues

¹¹ Classification of credit to the private sector was changed so that series for import trade is available only up to the first quarter of 1987.

The total commercial bank and NBFIs lending at constant prices (deflated by the GDP deflator) has a strong and fairly smooth positive trend throughout the period under study. The fact that most of the above peaks in lending to manufacturing and import trade are associated with a simultaneous increase in the total lending supports our hypothesis of increased liquidity in the economy when trade policy is in flux.

Finally, it is plausible to assume that, in addition to capital flight, the parallel market premium over the official foreign exchange rate measures the severity of trade restrictions. Illegally acquired foreign currency is used to finance either legal¹² or illegal imports. When import controls are relaxed, and it is credible to private agents, one can expect the parallel market premium to fall but if the reform lacks credibility the premium is likely to rise. Figure 13 depicts the premium in 1976–1987. The highest levels of premia coincide with the attempted coup d'état in 1982. Some years indicate a negative premium which is likely to reflect a data collection problem rather than trading below the official exchange rate. Note that the parallel market premium can be also used as an indicator of trade policy, provided illegal imports can be assumed to be a dominant factor in determining the premium. We will come back to this issue in Section 5.

Figure 13:
Parallel Market Premium



5. Private Response to Trade Liberalization in Kenya

This section will be devoted to a detailed analysis of private speculation during each of the four liberalization episodes identified earlier. We will also make an effort to quantify the social costs created by private action in response to a lack of credibility.

¹² For a long time, private agents have been entitled to apply for import licenses under the no foreign exchange (NFE) system. Until recently, applicants had to declare their source of currency, although these regulations were not always effectively enforced.

5.1 Coffee boom liberalization in 1976–78

During the coffee windfall in 1976–78 Kenyan import regime was relaxed, particularly in 1978, as foreign exchange earnings soared but tightened again in 1979 when the boom was over. This was a typical response to a positive shock under the endogenous trade policy rule. As Bevan *et al.* (1990) show, private agents recognized the temporary nature of the boom (revealed by increased saving of the transient income), and were therefore likely to be able to anticipate a reversal of trade liberalization at the end of the boom.

Did private agents in Kenya engage in speculation in anticipation of a higher future import price? Let us first look at excess foreign exchange allocation (Figures 2a,b). In 1976–77 excess licensing in the range of 120–220 million Kenyan pounds (K£) at 1982 prices took place, assuming that the average lag between the allocation of foreign exchange and actual imports entering Kenya is three or four months. It was a rational way to hedge against a reversal of the reform, as the exchange rate policy was maintained constant, and no major tariff reforms were under way. Holding a foreign exchange license was equivalent to holding an option to buy foreign exchange in case it would begin to look like that the liberal period was coming to an end.

To get an idea of the magnitude of excess licensing, we may compare it to manufacturing investment which was approximately K£ 200–230 at 1982 prices during 1976–77. In other words, excess licensing was at least half of the size of total manufacturing investment, and possibly almost as high as investment. In 1978, when it became obvious that the boom was soon to be over, imports were roughly K£ 100 million in excess of allocations by the Central Bank, assuming a lag of three or four months. Excess licenses in stock allowed firms to increase imports quickly, without a lengthy application process, or refusal of a license as export earnings began to dwindle. Note that it is the actual excess imports that create the welfare cost, and that there will be no such cost as long as excess licenses have not been used.

As indicated in Table 1, accumulation of durable imports in bonded warehouses would have been another rational choice of speculative action in 1978. Unfortunately, data on bonded warehouses prior to 1980 are not obtainable from the Government Computer Services data base so that we do not know whether there was an increase in bonded imports towards the end of the boom as one would expect.

Although actual imports of consumer durables (i.e. imports declared through the Customs) were not necessarily the optimal choice of hoarding from the importer's viewpoint, they nevertheless increased considerably throughout the coffee boom, reaching their by far highest peak in 1978 (Figure 6). This may be explained by increased consumer demand for durables as a form of saving the transient income, or by the fact that consumers, unlike firms, are not able to take advantage of any other means of hoarding than the actual purchase of imports. The 1978 peak compared to 1976–77 is a clear indication that consumers (and traders) correctly anticipated the imminent reversal of liberalization and took advantage of temporarily cheaper imports. Imports of consumer durables were K£ 10 million higher in 1978 than the year before, and K£ 43 million higher than in 1979. The jump in the actual imports of consumer durables is also reflected in commercial stocks (Figure 9). The stocks held by commerce peaked during the second quarter of 1978, roughly by K£ 30 million from the previous quarter, and were gradually decumulated thereafter.

Similarly, intermediate imports increased in 1977–78 (Figure 7) but the 1978 peak was much less pronounced in relative terms than that of consumer durables. This is perfectly rational as users of intermediate inputs, who are also their importers, had access to more cost-effective means of hoarding, particularly bonded warehouses. In absolute terms, however, intermediate imports were K£ 50 million higher in 1978 than during the previous and subsequent year. The peak observed in intermediate imports in 1978 was not translated into manufacturing stocks of materials (Figure 8), which hints to increased demand and confirms our assumption that firms preferred other means of hedging to accumulation of declared imports. An increase was, however, recorded in manufacturing stocks of materials during the last three quarters of 1979. As import controls had been tightened by then, the increase is likely to be a reflection of falling incomes.

Recall that K£ 100 million worth of excess foreign exchange allocations (at 1982 prices) were used up in 1978. Assuming that they were all used for inventory accumulation, the increase in bonded imports should have been around K£ 20 million, provided our estimate of K£ 30 million of excess imports of consumer durables and K£ 50 million of intermediate goods (declared through the Customs) is correct. The peak in intermediate imports may have been non-speculative instead, as it does not appear in the stocks of materials of the manufacturing sector. In that case the increase in bond should have been K£ 70 million. In the light of available data on subsequent accumulation of bonded stocks this estimate seems to be too high. Therefore we have reason to believe that the value of speculative inventory accumulation by firms is likely to have been less than K£ 100 million.

Let us now examine how speculation was financed. As can be seen from Figure 10, there seems to have been no waiting in investment during the coffee boom. Quite the contrary, investment in import-substitution grew substantially. Private agents were confident that protection would not be removed, despite a temporary relaxation of import controls, and continued to invest in import-substituting industries.

Lending to manufacturing soared in 1978 and continued to grow fast also in 1979 and 1980 (Figure 11). As stock accumulation was shown to have been minimal in manufacturing, the bulk of this increase must reflect other financial needs than inventories. Further, as investment in physical plant is financed mainly from retained earnings (Mayer 1990), the jump is likely to indicate increased finance of working capital as manufacturing output was expanding substantially. Figure 12 reveals that there were two peaks in private lending to import trade: the first during the first quarter of 1978 (an increase of K£ 15–20 million), and the second during the last quarter of 1978 (an increase of K£ 20–30 million). They seem to coincide with the end-of-coffee-boom hoarding of imports as consumers and traders anticipated that endogenous liberalization was coming to an end. Finally, there was a small peak in the parallel market premium in 1978, indicating that it was used as an alternative source of foreign exchange for imports (Figure 13).

5.2 Exogenous liberalization in 1980

Unlike in the 1970s, the 1980 reform was not an endogenous policy response to a favourable external shock (as there was no such shock in the Kenyan economy then) but an exogenous change in trade policy, with the objective to bring about structural changes in the economy. Liberalization was part of conditionality attached to stabilization and structural adjustment loans from the IMF and the World Bank, making it a candidate for a time-consistency problem. In addition, in the absence of compensating exchange rate adjustment, the other necessary condition for credibility, macro compatibility, was not being met. As was shown in Figure 1, external reserves began to fall sharply almost immediately after the reform was initiated. This led to a foreign exchange crisis in September 1980, to be followed by a nearly complete halt in foreign exchange allocations, and a reversal of many reform measures introduced earlier in the year.

In 1980 imports exceeded the foreign exchange allocations by approximately K£ 180–210 million (Figure 2 a). For the most plausible lags of three and four months, the stock of foreign exchange licenses was negative by K£ 40–210 million (Figure 2 b), which indicates that other sources of foreign exchange were also used. The range of the stock of licenses is wide, emphasizing the importance of the chosen lag. Manufacturing investment was roughly K£ 100 million during that year (Figure 10).

As can be seen from Figure 3, inventories in bonded warehouses experienced the highest increase in 1980 than in any other year. The net increase in bond was K£ 20 million worth of intermediate goods, and K£ 5 million worth of consumer durables. Monthly data (Figures 4 and 5) show that accumulation occurred soon after the reform was reversed. In November alone bonded consumer durables went up by K£ 2 million. Note also that both categories show a steep decumulation peak in June, which may reflect anticipated changes in tariffs which were to be announced in the Budget Speech during that month.

From the viewpoint of testing our first hypothesis of accumulation of actual imports, a potential bias associated with the available data on imports is that the entire observable increase is usually not attributable to speculation alone. As imports of consumer goods, for example, have been suppressed by quantitative restrictions, there will be a substitution effect away from domestic goods and in favour of importables when they become available. Clear peaks in the data are, however, likely to indicate accumulation of inventories in anticipation of a higher future price. Bevan *et al.* (1990) argue that the surge in imports during the coffee boom liberalization was due to private agents' willingness to save the transient income (consumer durables are seen as a form of saving) as well as an indication of suppressed import demand. In 1980 there was no increase in transient income and at least part of the suppressed demand had been taken care of during the coffee boom liberalization. Hence, we have all reason to believe that any surge in durable imports following the reform in the 1980s can be, to a large extent, attributed to speculation.

As it appears from Figure 6, the 1980 exogenous liberalization, when shrinking foreign exchange earnings would have called for tighter licensing under the endogenous trade policy rule, created in a peak of approximately K£ 20 million in the imports of consumer durables during that year. Consumers and traders correctly perceived macro incompatibility of the reform. Somewhat unexpectedly there is a much steeper increase in durable intermediate imports in 1980 than during the coffee boom liberalization (Figure 7). As foreign exchange earnings were falling in 1980, importers of intermediate goods made use of what was perceived as a temporary relaxation of licensing. Compared to the year before and after the reform, the jump in intermediate goods was around K£ 200 million, i.e. 10 times the jump observed in consumer durables.

Investment in manufacturing experienced the steepest single fall in 1980, i.e. close to K£ 55 million relative to the previous year. Although it is not possible to say how much of this fall in gross fixed capital formation was due to waiting, it does lend some support to our hypothesis of deferral of investment during incredible reforms. Similarly, credit to both import trade and manufacturing peaked during the second and third quarter of 1980, respectively, indicating that both options of financing stock accumulation were being used. The magnitudes involved were a peak of credit of K£ 15 million to import trade, and K£ 40 million to manufacturing compared to 6 months earlier. The parallel market premium (Figure 13) fell sharply during the first quarter of 1980, following relaxation of the import deposit scheme, but shot up again during the next quarter, indicating a lack of confidence in the permanence of the reform, and an increased demand for foreign exchange by importers.

Summarizing, the 1980 import liberalization was macro incompatible from the start as no compensating policies, most importantly devaluation, were implemented. Private agents correctly anticipated the reversal of the reform and took advantage of what was perceived to be a temporary relaxation of import and foreign exchange controls. The lack of credibility is demonstrated by a sharp fall in reserves. The consequences are evident in each and every data set presented above in order to account for the entire range of choices for speculative action, i.e. excess licenses, bonded imports and durable imports declared through Customs. Both sources of finance, investment funds and bank borrowing, were also heavily used to pay for excess imports. Investment in manufacturing experienced its steepest single fall, while credit to manufacturing and commerce peaked.

The increase in bonded imports and the estimates for excess imports of durable goods yield a total of K£ 245 million (the high scenario). This is two and half times the total capital formation in manufacturing in 1980, and 9.1 percent of GDP (at constant factor prices). Assuming a rate of return of 10 percent in an alternative use, and that imports are held in stock for a year, the welfare cost created by speculative inventories is 0.91 percent of GDP.¹³

¹³ Harberger (1959), for example, estimated that the welfare costs of protection in Chile was 2.5 percent of GNP. Smith and Venables (1988) show that a reduction in intra-EC trade barriers would increase welfare, defined as the sum of profits and consumer surplus, by 0.64 percent of base year (1982) consumption. Trade liberalization is assumed to take the form of equiproportionate reductions in intra-EC tariff equivalent trade barriers. The size

(continued...)

Finally, we have to ask whether the estimated excess imports can be traced in the stocks reported by firms. From Figures 8 and 9 we can see that commercial stocks increased by more than the estimated value of excess imports of consumer durables, whereas only a third of the peak in intermediates seems to have ended up in manufacturing stocks. As these two sectors account for 90 percent of the reported inventories, we have to conclude that the welfare cost may be smaller than estimated on the basis of peaks in bonded warehouses and declared imports. Alternatively, the Business Expectations Enquiry may suffer from data collection problems in its reporting of stocks. The latter view is supported by the fact that the increase in incomes and hence in non-speculative demand for importables was modest in 1980.

5.3 Introduction of systematic licensing in 1982

As it became obvious that relaxation of the existing import controls without compensating devaluation was not going to be sustainable, Kenyan policy-makers decided to undertake a comprehensive reform of import schedules instead. Previously a large number of imported items was not included in any of the schedules, making it very difficult for the licensing authorities to keep the amount of imports in control when quotas were relaxed. One of the objectives of reforming the schedules was to make them comprehensive. The other was to give input and capital imports for the domestic industries a preferential access to foreign exchange, while import-competing and consumer goods became more restricted than before. Relaxation of licensing was, to an extent, compensated by tariff increases. As indicated by a fall in external reserves (Figure 1), the reform seems to have suffered from a lack of credibility initially, as it was implemented gradually so that the schedule for import-competing and consumer goods were the last one to be revised. After the schedules were fully established, and supporting devaluations carried out in 1981 and 1982, credibility of the reform was restored.

As can be seen from Figures 2(a) and 2(b), annual deviations between foreign exchange allocations and actual imports were reduced substantially after 1982. The exchange rate and tariff policies were no longer constant so that excess licensing became riskier. Imports in bonded warehouses were also decumulated in 1982. As in the case of excess licensing, devaluations and tariff increases made them less attractive from the importer's point of view. After a fall in 1983, tariffs remained relatively constant as did the exchange rate (except for small adjustments). As can be expected, bonded imports increased since 1983. Consumer and intermediate imports for home use do not indicate any speculative accumulation in response to the new import schedules as both fell in 1982. However, the stocks of inputs held by the manufacturing sector increased by almost K£ 55 million during the last quarter of 1982, to be followed by an even sharper decumulation during the next quarter. Despite the fall in actual imports, this hints to a brief speculative episode. The value of commercial stocks also rose temporarily by almost K£ 50 million during the first and second quarter of 1982.

After 1982 the level and volatility of material stocks in manufacturing was reduced, reflecting the more systematic nature of licensing and preference given to imported inputs. On the one hand, manufacturers were assured that foreign exchange for the required inputs will be made available for them at the expense of consumers. On the other, the authorities responsible for issuing licenses were now more in control and could prevent speculative peaks effectively. Investment fell in 1982, increased modestly in 1983, and fell again in 1984–85 (Figure 10). It is quite difficult to say whether any of the decline in investment was due to waiting induced by uncertain trade policies, as there was a simultaneous recession in the economy. Lending to manufacturing (Figure 11) remained at quite a high level in 1982, whereas credit to import trade (Figure 12) fell compared to 1978–80.

¹³ (...continued)

of these reductions is chosen so that the direct cost saving achieved by the policy is equal to 2.5 percent of the value of base level intra-EC trade.

A simultaneous economic downturn makes it difficult to isolate the magnitude of speculative cost of the 1982 reform as stocks are likely to have increased also due to reduced demand. Nevertheless, both manufacturing and commercial stocks experienced sharp but short-lived peaks. Even if the entire K£ 100 million of excess importation over approved licenses (Figure 2 a) would have been used for speculation, the social cost remains much smaller than during the two previous episodes as the stocks were decumulated very quickly.

5.4 A shift to export promotion in the late-1980s

As depicted in Figure 1, external reserves declined in 1990 in the absence of a substantial aid inflow which had improved the external position during 1989. During the third quarter of 1990, reserves fell to their lowest point since 1976, indicating that import liberalization under way was suffering from a lack of credibility. Figure 2(a) shows that the value of imports exceeded that of licenses issued in 1988 approximately by K£ 40–50 million (for the lags of three and four months), while in 1989 licenses were again stockpiled.

The value of intermediate imports in bonded warehouses increased by K£ 13 million in 1988. The tariff reform, which was under way, may have encouraged importers to place their imports in bond in anticipation of lower rates. The opposite development took place in the case of consumer durables for which higher tariffs were expected as temporary surcharges were to be imposed to compensate for the planned removal of non-tariff restrictions. Bonded stocks of consumer goods were decumulated by K£ 5 million in 1988. Traders stockpiled actual imports instead of bonded goods. As can be seen from Figure 9, there was a large peak, worth more than K£ 100 million, in commercial stocks during the first quarter of 1988. It is somewhat unclear what can have prompted this huge increase in commercial stock. Compared to the total of durable consumer imports, for example, the peak alone is double their value, hinting to a possible data problem. Although there was a small peak in the first quarter of 1989, manufacturing stocks increased only modestly in 1989–90.

Investment plummeted in 1990. According to the National Accounts data, the fall was in the range of K£ 50 million compared to the previous year. This fall was almost equivalent to the fall in 1980, and support the hypothesis of waiting during uncertainty about trade policy. However, it is again difficult to say much about the magnitude of deferral. Lending to manufacturing increased during 1989 (data were not available beyond the first quarter of 1990), but not by much. Data on lending to import trade were not available after the first quarter of 1987 so that we do not know whether the huge increase in stocks in 1988 was accompanied by credit expansion to import trade.

Despite a more cautious approach to import liberalization during the latest episode, there were three indications of speculation in the data. First, stocks of bonded intermediate imports had a substantial increase, while consumer goods in bond were decumulated. As argued earlier, this must have been a reaction to expected changes in tariffs. Second, commercial stocks soared in 1988, to be followed by a smaller peak at the end of 1989. The former hike was close to K£ 100 million alone, while only K£ 5 million came from declaring imports from bond. As the stocks remain at a high level for some time, implying a high social cost (provided, of course, that there was a genuine increase instead of a data problem). Third, investment in manufacturing fell sharply (close to K£ 50 million), supporting the view that investment in physical plant is deferred during uncertainty about the future trade policy.

6. Summary and Conclusions

Trade policy in Kenya has been used both for protection of domestic industries and for macroeconomic adjustment. Since the early-1970s, availability of foreign exchange has determined the tightness and extent of imports controls at any given time, while industrial policy considerations have determined the incidence of restrictions. The endogenous trade policy rule has also been revealed to private agents. Policy-makers in Kenya realized fairly early on that the inevitable result of managing balance of payments by adjusting import controls is inefficient industries and high consumer prices. Nevertheless, liberalization of imports has been less successful, despite the fact that it has been attempted several times since the early-1970s.

The coffee boom liberalization was never meant to be anything else but temporary, and the private sector was able to perceive this correctly. In the 1980s trade liberalization was imposed on Kenya as a condition for external financial assistance and, as a consequence, less willingly implemented by the government. Moreover, aid packages have often failed to coordinate trade policy measures with exchange rate management, resulting in macro incompatibility of the reform, a situation which the Kenyan private sector has been able to observe correctly. The most obvious case in point is the 1980 exogenous liberalization which was not prompted by improved foreign exchange earnings but by an attempt to make the export sector more profitable relative to import-substitution by relaxing non-tariff restrictions. As the two necessary conditions for credibility were not being met, particularly as there was no compensating devaluation, the reform was not perceived sustainable. For the same reason, the subjective probability was likely to be equal to the objective probability of default, which was close to unity. The lack of credibility is confirmed by respective declines in external reserves.

Thereafter, import policy became more selective, i.e. an easier access to imported inputs which was carried out at the expense of consumer and import-competing goods. However, it became increasingly clear over time that import-substitution was able to offer less and less growth potential. Therefore, the most recent episode (from 1989 up to the present) has emphasized direct incentives to the export sector rather than import liberalization as the latter proved to be difficult to implement on its own. A stricter administrative grip has been able to limit speculation compared to the episodes in 1976-78 and 1980.

Although one has to be cautious when using the available data for quantification of the social cost, it seems clear that despite its short duration the 1980 reform was the most costly attempt to reduce protection of domestic industries in Kenya. A lack of credibility of the 1980 reform induced a substantial and fast speculative private response which led to a reversal of the reform during the same year. External aid or simultaneous stabilization attempts could not prevent this from happening. All means of hoarding, i.e. excess licenses, bonded warehouses and accumulation of actual imports, were used. Bank borrowing increased, while investment fell, indicating that both means of financing speculation were in use. We estimated that speculative inventory accumulation was at most K£ 245 million in 1980 (and at least K£ 130 million), which is equivalent to 9.1 percent of GDP (4.8 percent at its minimum), and two and half times the total capital formation in manufacturing. Assuming a return of 10 percent in an alternative use, the direct welfare cost can be as high as 0.91 percent of GDP. In addition, it is conceivable that the overall trade policy became tighter after the 1980 episode which creates an indirect welfare cost due to reduced efficiency.

The data analysis confirms our first hypothesis that private agents were able correctly to detect episodes which were not sustainable, particularly the ones in 1976-78 and 1980, inducing accumulation of stocks of importables before the reform was reversed. This is most obvious from the data for bonded warehouses which had their all time peak in 1980. Bonded imports are the most suitable data set to test our first hypothesis as they, by definition, are stocks of imports waiting to be declared through the Customs. The duration of hoarding was very brief in 1982. In the late-1980s private speculative response was more limited, and cannot be observed across the data as in the case of the 1980 reform.

In 1980 the private response undoubtedly forced the government to abandon the reform. Other studies, such as Michaely *et al.* (1991), show that past failures lead to a higher subjective probability of reversal perceived by the private sector. Therefore, the cost of the next attempt is likely to increase, even if it could be maintained. The World Bank advice for the economies suffering from past failures is to reform with a big bang in order to achieve a more efficient resource allocation. On the basis of this study on Kenyan episodes, we have to conclude that a big bang, or an overshoot, when the necessary and sufficient conditions for credibility are not being met, involves a risk of adverse private response which may lead to high additional welfare costs and a swift policy reversal.

How can the adverse effects of the credibility problem be mitigated? First, a standard suggestion is that the government should build up its reputation. Building a reputation is a much more natural strategy for those policies which are permanently on the agenda, such as monetary policy, or taxation. Trade liberalization is less frequent, and therefore it is more difficult for the government to build a good reputation. Particularly, if the private response forces the government to abandon a reform, as happened in Kenya in 1980 and, to a lesser extent, in 1990, it only gains a bad reputation. Once the reform has taken off, it is very much the private response that dictates its fate. Therefore, a government willing to build a good reputation has to design the reform so that the possibility of a credibility problem is minimized. Macro incompatibility is the most obvious thing such a government should avoid.

Second, capital controls should not be removed until the trade liberalization programme is fully consolidated. As the capital account is usually restricted in African economies and yet speculative accumulation of imports occurs, the government has to look for other measures, such as quotas on durable imports. The latter should, however, be weighed against the rent-seeking costs that non-tariff restrictions may generate. Another instrument could be domestic credit restrictions. Depending on the propensity to store intermediate goods relative to consumer goods, credit policy can be targeted either to the manufacturing sector, import trade, or both. In addition, regulations and charges applied to importation can be modified to counter private speculation.

Finally, many developing countries are outside the world system of reciprocity in trade liberalization. Reforms are unilateral and undertaken under the pressure of donor conditionality. When a foreign transfer, which usually accompanies the reform, dries up and the reform becomes unsustainable, it is often given up. Policy oscillation ensues. Developed countries have quite successfully refrained from solving payments problems by import restrictions because of the fear of retaliation, whereas low-income countries have been able to impose restrictions without such fears. Their more close integration into regional and the world trading systems could make trade reforms more permanent and credible.

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