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Volume Author/Editor: Jagdish N. Bhagwati

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Chapter Author: Jagdish N. Bhagwati

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PART III
The Consequences of Exchange Control Regimes

Chapter 4

Illegal Transactions and Exchange Control

Among the significant economic effects attendant upon the working of exchange control regimes are those that relate to illegal transactions. Since we have defined exchange control regimes comprehensively to include those foreign trade regimes that have a large complement of price instruments as well as quantitative restrictions, we need to distinguish between the price and quantitative instruments in discussing the emergence of illegal transactions.

The use of QRs is not, of course, a necessary condition for such illegal transactions since tariffs can equally create an incentive for smuggling and faked invoicing. In the analysis that follows we therefore plan to note also the *distinctive* aspects of QRs in regard to the growth of illegal transactions.

These illegal phenomena can be divided into three broad classes: (1) those that relate to abuses in awarding, claiming, and disposing of licenses; (2) those pertaining to illegal trade transactions such as smuggling and faked invoicing; and (3) those relating to capital flows, including both capital flight abroad and inward flows seeking better exchange rates in the black market. We consider these now in turn. Finally, we turn to examining reverse links between illegal transactions and exchange control rules and methods.

I. ILLEGALITY IN AWARDING, CLAIMING, AND DISPOSING OF LICENSES

The most notable instances of illegality in awarding licenses have naturally appeared in regard to import control.

1. We have noted in Chapter 2 how, in several import regimes, the bu-

reaucrats generally sought to follow fair-share rules in their choice of criteria for awarding licenses among competing claimants and that this phenomenon was partly attributable to their desire to protect themselves against allegations of corruption and favoritism. However, breakdowns in the actual honesty and integrity of the bureaucracy dealing with the award of licenses were not uncommon.[1] Perhaps the most notable and extreme example of illegal manipulation of allocational criteria in import licensing is provided by Ghanaian experience. Leith notes that the extensive, personalized routing of import licenses by Mr. Djin, Minister of Trade in the Nkrumah cabinet from late 1963, resulted in "fraudulent exploitation, corruption and malpractices" according to the investigative commission after the overthrow of the Nkrumah regime. The displacement of Mr. Djin by President Nkrumah was to be ironic. As Leith writes.[2]

> In the first half of 1965 a number of steps were taken in an attempt to reverse the situation created by Mr. Djin. President Nkrumah replaced Mr. Djin by Mr. Kwesi Armah as Minister of Foreign Trade. . . . In addition, a foreign-exchange budget was published for the first time. The only significant result of these moves was a more systematic form of corruption. Mr. Armah, rather than restricting himself to profiting on some licenses, proceeded to develop a system that would permit him to share in the profit on all licenses. As the post-Nkrumah commission reported: "He [Mr. Armah] introduced the system whereby all applications for import licenses had to be addressed to him personally under registered cover and he alone was responsible for processing the said applications. . .[T]here was open corruption and malpractices in the matter of grant of import licenses during this period. Import licenses were issued on the basis of a commission corruptly demanded and payable by importers on the face value of the import licenses issued. The commission was fixed at 10%, but was in special cases reduced to 7½ or 5%."

Political scientists have observed that the Ghanaian political system had been characterized by subordination to the goal of economic profit to its participants as distinct from any general ideology. Hence, even when we have allowed for the customary postcoup exaggerations, it remains basically plausible that the import control regime was subject to serious abuse during the ministries of Messrs. Djin and Armah.

2. There was illegality also in the claiming of import licenses, *given* the criteria. Thus, in India, the Estimates Committee of the Indian Parliament cited as an abuse of the import control system the following (among several) practices:

> (i) applying for licenses on the basis of forged essentiality certificates of the Director of Industries or certificates obtained by misrepresentation;

(ii) applying for licenses on the basis of forged quota certificates or such certificates obtained by false or forged documents of past imports;

(iii) applying for licenses on the basis of false turnover by producing certificates from a Chartered Accountant obtained by misrepresentation or in collusion with the Chartered Accountant; and

(iv) applying for licenses on the basis of imports or exports which do not qualify for establishment of quota.[3]

In Turkey, Anne Krueger records that since new firms in an industry were to be given a quota initially on criteria rather different from established producers, there were reported to be many instances of entrepreneurs 'going into business' for the purpose of obtaining imports and reselling to larger firms.[4]

3. Finally, there was the illegality involved in the resale of the licenses or the imports themselves in the regimes that prohibited such transferability. For Turkey Anne Krueger has noted that, while industrialists could not legally resell their imports, resale occurred in many ways. As some of the smaller firms found it more profitable to sell their imports to larger firms than to produce themselves, a legal means of resale (resulting, however, in *de facto* illegal transfer of imported goods) was for a small producer to ask a large producer to place his order with the larger establishment's. The ostensible purpose of permitting this practice was to enable the small producer to get a better price on his import order than was thought possible with a very small allocation. When the consignment arrived, however, the small firm could claim that the larger house had violated their understanding. The consignment in quality, technical specifications, or other regards was not what the small firm required or could use. The larger firm would then settle the matter by paying off the smaller firm for its goods and keeping the imports for its own use, all this at the appropriate premium-inclusive price. Several other means of resale were also devised, including even reported instances where the local chambers organized resale markets.[5]

II. FAKED INVOICING AND SMUGGLING

Both QRs and tariffs set up incentives to smuggle goods through illegal channels and to fake invoices on trade through legal channels. In either case, the illegal transaction yields profit. With QRs, for example, the premium on c.i.f. value of imports may be high enough to cover both the risk on smuggling or underinvoicing of imports[6] *and* the premium on the foreign exchange with which to pay the exporter. With tariffs, the same argument applies, except that the tariff rate must be considered in place of the import premium.[7] The argument applies equally, *mutatis mutandis*, to export smuggling and to faking of invoices pertaining to exports.

Note that, while the argument is equally applicable to QRs and tariffs, a QR system is more *likely* to generate the phenomenon of illegal trade, either smuggled or *via* faking of invoices, simply because QRs tend to give rise to rather more extreme levels of "implicit" tariffs. For example, it is relatively rare to find explicit tariffs that exceed 100 percent *ad valorem* in our countries. However, it is more readily possible to find (even numerous) instances of implicit tariffs in the 100 percent range or over.

A. Faked Invoicing

There seems to be fairly impressive evidence of underinvoiced imports in the case of two countries, Turkey and the Philippines, that relates to tariffs. Evidence for underinvoiced imports in response to tariffs *and* import premiums under QRs is available for Turkey and Pakistan.

For Turkey, the tariff-related underinvoicing of imports was recorded by Bhagwati, for 1960 and 1961, using the classic partner-country trade data comparison technique.[8] Utilizing such comparisons for Turkey's trade with Italy, Germany, the United States, France, and the Netherlands, and allowing for possible *statistical* reasons for such discrepancies as were evident, he concluded that significant discrepancies were left, for which the only explanation appeared to be underinvoicing of imports.[9] The categories of goods that showed perverse discrepancies also generally had tariff rates ranging up to 30 percent and rarely below 10 percent, whereas the black market premium for foreign exchange had rarely exceeded 15 percent according to official observations, so that it seemed reasonable to conclude that the discrepancies represented underinvoicing of imports by and large. This conclusion was further reinforced by the fact that understatement of value in the field of manufactures—especially machinery, which is frequently made to order and rarely carries standard prices that the customs can readily check—is readily possible, and it was precisely in these areas that the perverse discrepancies occurred in the Turkish case.

Baldwin also records underinvoicing of Philippines imports, relying however on aggregate data on imports (as distinct from Bhagwati's more disaggregated examination of Turkish trade data to adjust for possible misallocations of specific items among different sources of origin or SITC categories). He cites Philippines' partner-country trade data, compiled by George Hicks, for 1950-1958 and concludes that there was possible underinvoicing of both exports and imports. Citing high tariffs and/or import controls as the cause of underinvoiced imports, Baldwin argues that textiles were possibly the best-known illustration of this phenomenon. Baldwin also conducted a test of the hypothesis that the degree of import undervaluation is

positively related to the height of duty levied on an item. The 1967 f.o.b. (free-on-board) import values from the Philippine Central Bank and f.o.b. export values of the same items from the U.S. Department of Commerce for a sample of sixty-two commodities were compared. The regression equation relating to this comparison was as follows:

$$y = 1.65 + 14.70x$$

where $y = \dfrac{\text{U.S. data on U.S. exports to the Philippines}}{\text{Philippine data on Philippine imports from the U.S.}}$

and x = 1969 *ad valorem* tariff rates in the Philippines (in percent)

The t-value on the coefficient of x was 4.27, which is significant at the 1 percent level, and the coefficient of correlation was .48. Thus Baldwin concluded that the hypothesis that the higher the tariff the greater the degree of undervaluation was supported by the statistical analysis. Moreover, the degree of undervaluation increased very sharply as the duty rose.[10]

In regard to the effects of import premiums, as distinct from those of tariffs, there is evidence in the country studies from Turkey and outside the Project studies from Pakistan (as we shall presently discuss). Thus, for Turkey, Anne Krueger cites a study by Cahid Kayra for the period 1963 to 1969, which undertook a detailed reconciliation of Turkish and partner-country trade statistics, including adjustment for transport costs, differences in the timing of imports, and other factors, and turned up substantial evidence of underinvoicing of imports and shifted classifications in categories where sizeable savings in import duties or gains in premiums were possible.[11]

There is little such systematic evidence on faked invoicing in the other country studies in the Project. A notable exception is the Chilean study where some evidence on faked invoicing is available by a comparison of trade statistics for operating partners; but the argument is not carried far enough to make the evidence reasonably compelling.[12] The only other evidence on faked invoicing in the Project is based on interviews. Thus, for India, Bhagwati and Srinivasan record overinvoicing of several non-traditional exports carrying high rates of import entitlements and high premiums thereon in turn, as with art-silk fabrics. They also note that the elimination of these extreme incentives with the June 1966 devaluation may have resulted in a seemingly less satisfactory showing of export performance than was actually the case, merely because the degree of overinvoicing had been seriously reduced.

Going outside the country studies, however, we can mention here the excellent analysis by Munir Sheikh of faked invoicing in Pakistan during 1965-1968.[13] Using the partner-country comparison technique, Sheikh worked

with thirty-six different commodities and with partner countries that supplied over 80 percent of Pakistan's imports. He then divided the commodities into two broad groups, "restricted" and "liberal," based on a careful examination of the incidence of import licensing thereon. The results showed a very strong tendency for commodities in the restricted category to have the Pakistani import values fall significantly below the partner-country export values, indicating underinvoicing of imports for each of the four years considered. Sheikh further managed to establish a relationship between underinvoicing and the classification of a commodity in a high-tariff category or a low-tariff category. The former category meant that the goods therein were more prone to underinvoicing.[14]

Finally, for Ghana, we also have a careful analysis by David Scheffman of trade data discrepancies in Ghanaian cocoa trade, suggesting underinvoicing of exports in this instance.[15] Choosing S.I.T.C. classification 072-100 (cocoa beans, raw or roasted), which constitutes the major portion of the Ghanaian cocoa exports, and considering 1964-1969, Scheffman shows that substantial underinvoicing of cocoa exports is apparent with Canada, Norway, and the United Kingdom.

B. Smuggling

The detection of smuggling has also exercized the ingenuity of economists. An obvious approach is to infer the volume of smuggling from the data on confiscations. This is however problematic unless one knows the expected risk of confiscation with which smugglers are working. Much of the evidence on smuggling is therefore impressionistic. Thus, Anne Krueger notes for Turkey that she herself encountered "an incredible variety" of imported goods not eligible for importation on the shelves of local groceries and in the windows of various shops and that smuggling was sufficiently widespread so that its existence was officially acknowledged at the end of the First Five Year Plan.[16]

Similarly, Baldwin, records an estimate of smuggling into Philippines as follows:[17]

> An estimate from the government's Anti-Smuggling Action Center places the annual value of smuggled cigarettes at about $37 million in the 1962-65 period and $9 million from 1966 to 1968. Although estimates of the influx of other smuggled goods are not available, the Anti-Smuggling Action Center does report the value of confiscations of these other goods. If the ratio of the total volume of cigarettes smuggled to the volume of cigarettes confiscated holds for these other goods, the total value of smuggled goods, including cigarettes, comes to about $19 million in both 1966 and 1969, or around 2 percent of total imports.

Finally, it is worth recording here a technique, used independently by Timothy King for Mexico and by Richard Cooper for Indonesia, to detect smuggling. It works for tariffs but not for QRs because it compares the tariff-inclusive price of imported goods in domestic markets with the actual prices at which they sell. Both King and Cooper, using this technique, were able to show that smuggling had managed to drive the actual prices below the tariff-inclusive prices and that this discrepancy tended to increase with the tariff rate.[18]

III. CAPITAL FLIGHT

The faked invoicing that we considered in the preceding section, as also smuggling for that matter, was regarded strictly from the viewpoint of the incentive to undertake such illegal transactions without focusing on whether its effect was to create a supply of or demand for illegal foreign exchange. The latter question becomes relevant, however, when we try to detect capital flight. This phenomenon represents a demand for illegal foreign exchange that is fed by the supply created by phenomena such as "leaked" inward remittances and capital flows and primarily by underinvoicing exports and overinvoicing imports.

Note that the incentives to underinvoicing exports and overinvoicing imports as a vehicle for capital flight are the opposite of those discussed in the preceding section as leading to overinvoicing exports and underinvoicing imports for tax or other benefits. Both sets of phenomena may exist side by side, complicating the task of empirical verification.

A. A Statistical Analysis

One important impact of exchange control in LDCs is indeed that capital flight would occur in illegal fashion.[19] Whether, of course, such flight is still below the level that would occur in the absence of exchange control is an issue that is difficult to settle empirically. We would be inclined to assume that the extra costs of illegal methods of capital outflow tend to reduce its level. However, to the extent that exchange controls may generate expectations of devaluation, this may induce capital outflow as a hedge.

We decided therefore to explore the possibility of making partner-country trade data comparison to see whether the phenomena of overinvoicing imports and underinvoicing exports can be detected to infer such capital flight from the LDCs. Note, of course, that the illegal outflow of foreign exchange, so detected, may not fully represent capital flight in the strict sense and may be

financing partly the underinvoicing of imports (as detected for Turkey in the preceding section) and related phenomena that require the illegal use of foreign exchange. Also, the analysis leaves out of consideration possible capital flight *via* smuggling.

We confined our analysis to comparisons of the trade data of LDCs with the Organization for Economic Development and Co-operation (OECD) countries, examining altogether twenty-eight LDCs for 1966. This, of course, means that capital flight that occurs *among* LDCs would not be shown up, even in principle, by our methods. There is "word-of-mouth" evidence of such flight occurring from some of the African countries to India by the Indian settlers, and from Indonesia, Malaysia, and Philippines to Hong Kong and Taiwan by the overseas Chinese communities.

Our method is subject to considerable "noise." There are a number of purely statistical reasons why partner-country data may not match. Nonetheless, it is interesting to see whether, on comparison, OECD imports from each LDC are sufficiently above that LDC's exports to OECD countries to indicate underinvoicing of that LDC's exports and consequent presumption of capital flight. It is also interesting to see whether each LDC's imports from OECD exceed the OECD exports to that LDC by a sufficient amount to indicate overinvoicing of imports and hence capital flight again from the LDC.

B. Analysis of Findings

Table 4-1 summarizes for each of the twenty-eight LDCs the percentage difference between imports and exports as a proportion of exports, the export figures being those recorded by the LDCs and the import figures being those recorded by the OECD countries. It is really quite remarkable that, in the total OECD columns, we find that for all but two countries there is an excess of import figures over the corresponding export figures. However, note that the exports are f.o.b. and imports are generally c.i.f., so that the excess is actually smaller than it looks. But even if we estimate average insurance and freight at a crude 10 percent on f.o.b. value, it would still leave twenty LDCs as export-underinvoicers.

Noting that the United States and Canada record their imports by f.o.b. values, we also calculated separately the trade flow from each LDC to the two countries combined. Column 2 of Table 4-1 shows the discrepancy between the combined imports of the United States and Canada and the corresponding exports by LDCs as a percentage of the import figures. The excess of import figures over the corresponding export figures in this case would be presumptive evidence for export underinvoicing practices in LDCs. Of the twenty countries noted earlier, such positive excess shows up for all but one (Pakistan).

Table 4-1. Exports of LDCs to OECD Countries Compared with Corresponding Imports by OECD Countries from LDCs, and Black Market Premium of U.S. Dollars, for 28 LDCs: 1966

Country (by region)	*Total OECD* $100 \cdot (M - X)/X$ *(1)*	*U.S.A. and Canada* $100 \cdot (M - Xj/M$ *(2)*	*Black Market Premium of US$ (%) (3)*
South America			
Argentina	24.2	17.5	23
Brazil[a]	14.0	4.1	10
Chile	4.5	4.4	49
Colombia[a]	14.2	9.3	n.a.
Mexico	37.0	14.0	0
Central America			
Costa Rica	6.8	6.6	17
El Salvador	0.1	−5.3	13
Guatemala	24.2	16.3	15
Honduras	27.3	3.8	0
Nicaragua	14.7	3.2	19
Africa			
Ethiopia[a]	14.6	15.1	24
Ivory Coast	26.9	19.2	n.a.
Libya	11.1	5.2	20
Nigeria	9.9	1.1	n.a.
Tunisia	47.2	34.7	67
Far East			
Hong Kong	13.7	9.6	1
Korea	−4.6	−16.7	0
Philippines	16.1	16.5	2
Taiwan	7.0	−2.1	3
Thailand[a]	6.4	3.6	0.6
South Asia and Mid East			
Ceylon[b]	20.1	12.9	94
Egypt	30.7	13.9	111
India	23.7	5.3	74
Iran	35.2	21.4	4
Pakistan	14.3	−3.5	75
Europe			
Greece	27.9	16.1	4
Turkey[a]	15.4	9.6	40
Yugoslavia	−1.0	−1.0	17

Notes: 1. OECD countries in Tables 4-1 and 4-2 include only EFTA, EEC, USA, Canada and Japan. 2. *M, X* represent imports and exports, respectively.

[a]1967 data.

[b]1968 data.

Sources: United Nations, Statistical Papers, Series D (Commodity Trade Statistics). OECD, Statistics of Foreign Trade, Series C (Commodity Trade). Pick, Franz, *Pick's Currency Yearbook*, Pick Publ. Co., N.Y. Also printed in J. Bhagwati, ed., *Illegal Transactions* . . . , op. cit.; page 151.

Moreover, the magnitudes of the discrepancies are quite significant. They are larger than 10 percent in eleven cases, and between 5 to 10 percent in five others. These sixteen countries may therefore be classified as "plausible" export-underinvoicers.

We would further argue that, unlike the imports of LDCs that we shortly analyze, a significant part of the export sector is usually free from very large subsidies and taxes and the export duties on traditional exports are usually well balanced by subsidies on non-traditional exports. Hence, no pronounced effect of trade tax and subsidy policies need be expected to affect the trade declarations in the direction of either net overinvoicing or net underinvoicing of exports.

We would thus presume that the above results strongly signify capital flight from LDCs, especially in light of the supplementary evidence concerning the black market premium of U.S. dollars in each LDC, averaging for the year corresponding to the trade figure calculations, presented in the last column of Table 4-1. In view of its "black" nature, the estimates of a premium on foreign exchange presented here may not be very reliable. They nevertheless substantiate our result quite well. Among the nineteen export-underinvoicers, eleven show black market premiums exceeding 10 percent (some as high as 100 percent) and four others smaller but still positive premiums. In the cases of Colombia, Nigeria, and the Ivory Coast, information on black markets is not available.

A breakdown of the nineteen countries by the degree of underinvoicing of exports to the United States and Canada and the height of black market premiums, based on columns 2 and 3, can be shown as follows:

Trade Data Discrepancy (%)	*Black Market Premium (%)*				
	>20	*10-19*	*1-9*	*0*	*No Data*
>10	5	1	3	1	1
5-10	3	–	1	–	1
1-4	–	2	–	1	–

Using the height of black market premium as an indication of the profit from the illegal sales of foreign exchange in the black market,[20] we may then deduce that in more than half of the nineteen countries under consideration, the incentives for export underinvoicing are quite clearly evident.

The data in Table 4-2, on the other hand, relate to LDC imports. We try to see if the same conclusion can be drawn from these statistics, with overinvoicing of imports being the instrument whereby capital flight occurs from LDCs.

Table 4-2. Imports of LDCs from OECD Countries Compared with Corresponding Exports by OECD Countries to LDCs for 28 LDCs: 1966

Country (by region)	*100 · (Imports − Exports)/Exports*		*Percentage share of SITC 5-8 in total LDCs imports*
	Total trade	*SITC 5-8*	
South America			
Argentina	0.6	−0.4	91.8
Brazil[a]	1.3	−4.7	75.5
Chile	16.6	17.1	82.8
Colombia[a]	12.1	−12.1	68.8
Mexico[a]	−7.7	−4.4	85.7
Central America			
Costa Rica	19.0	17.9	86.6
El Salvador	8.1	10.5	87.9
Guatemala	−0.6	2.4	87.6
Honduras	14.5	17.8	89.2
Nicaragua	7.8	8.5	88.4
Africa			
Ethiopia[a]	−1.2	−0.1	84.2
Ivory Coast	13.0	7.0	80.9
Libya	−9.9	−10.9	83.4
Nigeria	14.9	15.2	85.4
Tunisia	0.1	1.4	75.2
Far East			
Hong Kong	−11.6	−11.4	84.1
Korea	−0.4	−10.0	67.4
Philippines	−7.6	−8.3	80.1
Taiwan	−3.3	−3.4	75.4
Thailand[a]	14.0	11.0	88.5
South Asia and Mid East			
Ceylon[b]	−5.7	−11.0	71.2
Egypt	8.3	6.4	60.6
India	−1.0	−15.7	55.0
Iran	−1.3	0.8	90.7
Pakistan	−1.3	−7.6	77.4
Europe			
Greece	−0.2	−0.2	81.7
Turkey[a]	−13.4	−10.2	91.1
Yugoslavia	−1.3	6.2	72.6

Notes and Sources: Same as Table 4-1.

We did not expect to see, on the LDC-import side, a clear demonstration of capital flight for two reasons. First, the customs authorities are more vigilant about faking of transactions on the import side than on the export side because traditionally duties have been levied on a much wider range of imports than of exports in LDCs. Hence the faking of import invoices is likely to be confined to essentially manufactured (Standard International Trade Classification [SITC] 5-8) imports where product differentiation, and so on,

make it generally possible to "get past the customs" with faked invoices. Second, since imports are almost never subsidized at the customs point, there is always a net tariff on imports into any country (resulting from the gross tariffs which exist in practice) that acts *ceteris paribus* to reduce overinvoicing of imports (for overinvoicing implies paying more tariff duty). Thus, depending on the relationship of the tariff structure to the import structure (since the same duty on different types of products can create different effects just because different products are differently susceptible to the possibility of faking trade declarations, as we have just argued), one may find the incentive to overinvoice imports, to facilitate capital flight, overcome in various degrees and result, in some cases, even in a net incentive to underinvoice imports.[21]

Our expectation that the import side would show mixed results was borne out in fact, as Table 4-2 shows. Altogether seven LDCs show a percentage excess of imports over exports, on exports, of over 10 percent for total trade, with six more LDCs having a positive (but less than 10 percent) excess and fifteen LDCs having a negative excess figure. This would suggest, once we take into account the fact that imports are c.i.f. and exports are f.o.b. value, that seven LDCs with excess on top of 10 percent in Table 4-2 are clearly overinvoicers whereas all the rest are not, while those having negative figures are probably clearly underinvoicers. The same exercise, repeated for only SITC categories 5-8, shows that these conclusions roughly carry over, except that only five LDCs became clearly overinvoicers: Chile, Costa Rica, Honduras, Nigeria, and Thailand.[22] If we could show that the average tariff level on SITC group 5-8 in these five LDCs is lower than in the remaining LDCs in our sample, we would have a reasonable presumption that these five LDCs are experiencing capital flight through overinvoicing whereas in the other LDCs, the higher tariff level is tending to create a counter-incentive to underinvoice imports. However, neat as this would be, a failure to find a lower average tariff level in the five LDCs would still not rule out the presumption of capital flight for two reasons: (1) as argued above, it is not the usual average tariff level that is really relevant for our analysis but the tariffs weighted in such a way as to reflect the "invoice-fakeability" of the importable commodities, and there is really no feasible way in which this could be done with available information; and (2) what matters in determining whether imports will be overinvoiced or underinvoiced is not just the tariff level but also the premium on black market foreign exchange.[23] This premium is not uniform across the LDCs in our sample, as is evident in Table 4-1, column 3. Hence, we have little choice except to infer from Table 4-2 merely that the phenomenon of overinvoicing of imports, as a vehicle of capital flight, seems to be much more restricted than the phenomenon of underinvoicing of exports. This asymmetry of conduit behavior for capital flight in the exports and imports of LDCs is, on the other hand, a conclusion of some interest to policy-makers in these countries.[24]

IV. REVERSE LINKS BETWEEN QRs AND ILLEGAL TRANSACTIONS

Next, we should note that, while the trade and payments regime affected the incidence of illegal transactions, the reverse link was also evident in some of the countries in the Project. Three instances of interest should suffice to illustrate this phenomenon.

First, some of the QR regimes (e.g., Chile, Colombia, and Turkey) ruled out the importation of used goods because it was difficult to determine their market price and hence any associated faking of invoices. Thus an obvious and apparently advantageous segment of the world market was ruled out merely because it may lend itself to abuse.

Second, since smuggling would be difficult to pin down if legally and illegally imported commodities were simultaneously entering the domestic market, it was occasionally the practice in some of the countries in the Project to shift such items as were "easy" to smuggle into "prohibited lists." If then these items turned up in the market, they would have a very high probability of having been smuggled and hence of being detected as such, thus deterring the smuggling.

Third, the Colombian INCOMEX had an interesting argument on the blend of tariffs and QRs to deter smuggling. Thus, Carlos Díaz-Alejandro writes:[25]

> Apart from the smuggling of spare parts and some consumer goods, such as furs, perfumes, jewelry, and cigarettes, INCOMEX feels that the system is relatively free of leaks and well organized, in the sense that importers know what to expect. Its officials argue, not without reason, that the combination of moderate tariffs plus import controls forms a more powerful barrier to smuggling than a situation with higher tariffs and no import controls. A key element in their reasoning is that, as more items are shifted from the prohibited list to the prior license list, more uncertainty will be planted in the minds of would-be smugglers, whose profit margins could be reduced or wiped out if INCOMEX suddenly permits imports of moderately taxed goods.

This argument is not fully spelled out as given because it is theoretically possible to vary tariffs as one varies QRs. However, it acquires cogency in light of the difficulty in varying tariffs as frequently as QRs did change in nearly all the countries in the Project.

APPPENDIX V: NOTES ON THE WELFARE-THEORETIC ANALYSIS OF ILLEGAL ACTIVITIES INDUCED BY INTERFERENCES WITH THE FOREIGN TRADE REGIME

The text of this chapter has been confined to analyzing the empirical and statistical aspects of illegal transactions induced by interferences with the

foreign trade regime. Almost nothing was said, however, about the welfare effects of these phenomena.

As it happens, a great deal of literature has recently grown up on this precise theme. Bhagwati and Hansen initiated the analysis by modifying the traditional 2 × 2 model of trade theory to include a foreign reciprocal demand curve for illegal trade. In this model, the illegal trade transformation possibility was less favorable than for legal trade, this feature being the analytical device (earlier used by Paul Samuelson to deal with transport costs in the 2 × 2 model) to reflect the *incremental* resource costs used up in undertaking the illegal trade.[26] Using essentially the same approach, Johnson as also Bhagwati and Srinivasan later analyzed the relative rankings of optimal and maximal revenue tariffs in the presence of smuggling.[27]

Sheikh made an important modification in the analysis to allow primary factors to be used in producing an intermediate non-traded good that would be used in fixed coefficients for undertaking illegal (but *not* legal) imports.[28] While therefore the Bhagwati-Hansen-Johnson-Srinivasan technique of building incremental social costs of illegal trade was in keeping with the 2 × 2 model's technique of subsuming such costs into the transformation function itself (traditionally for legal and now also for illegal trade), the Sheikh model was a step in the direction of modeling the primary factor costs of trade directly—albeit, however, by the artificial device of the non-traded input into illegal trade. Needless to say, as should be obvious to trade theorists, this difference in the production cum trade structure of the model led to certain differences in the conclusions regarding the conditions under which illegal trade may or may not improve welfare.[29]

Finally, attention has been focused recently on the possible asymmetries between the welfare effects of QRs and tariffs in the presence of illegal transactions. As already noted in Chapter 2 above, Falvey has extended the Bhagwati-Hansen type of analysis to the case where QRs, rather than tariffs are in place. The outcomes can be different because QRs provide an upper limit to legal imports whereas tariffs do not.[30]

Of equal interest and potentially complementary to the theoretical analysis of Bhagwati-Hansen is the forceful argument of Anne Krueger that QRs, even when otherwise equivalent in the Bhagwati-sense to tariffs, have one *additional*, asymmetrical effect, namely, that they lead to competitive rent-seeking that uses up real resources and hence entails a greater loss of welfare than a Bhagwati-equivalent tariff would.[31] Whereas the Bhagwati-Hansen-Johnson-Srinivasan-Sheikh type of illegal trade analysis focuses on the welfare effects of trade restrictions, brought about by attempts of *illegal importers* to profit from the discrepancy between foreign and domestic prices that QRs and tariffs equally imply, Krueger's elegant analysis eschews this and focuses instead on the notion that QRs, which carry premiums, attract the use

of resources in order to earn them. While this analysis of what are presumably legal resource costs incurred in securing import premiums—though illegal activity such as bribing, as noted in Section I of this chapter, may attend also on competitive rent-seeking—would appear endemic to QRs, it would appear that a complete comparison of tariffs and QRs should, in this case, include also the "revenue-seeking" that would follow from the tariff revenues earned instead in the case where tariffs are used. Needless to say, the real resource costs of revenue-seeking (by lobbies seeking preferential allocation of tariff revenues for their own benefit) may be less than the real resource costs of rent-seeking in the QR case. But then, the asymmetry arises from the possible differences in the nature of these "quasi-economic" activities in the two cases rather than from the fact that only QRs, and not tariffs, attract such activities.

NOTES

1. Thus, see the discussion in Bhagwati and Desai, op.cit., pp. 308-311, for Indian examples and evidence.

2. Ghana, op.cit., pp. 25-26. Footnotes in the quotation have been eliminated.

3. *Fortyeighth Report* (1963-1964), Lok Sabha Secretariat, Government of India, New Delhi, pp. 104-105; cited in Bhagwati and Desai, ibid., pp. 308-309.

4. *Turkey*, op.cit., Chapter VI, pp. 140-152 and 168-169.

5. Ibid., Chapter VI, pp. 168-169.

6. With import licenses generally specified in value terms, underinvoicing would permit the importation of greater quantities than otherwise.

7. For a more detailed discussion, see J. Bhagwati, "Fiscal Policies, the Faking of Foreign Trade Declarations, and the Balance of Payments," *Bulletin of the Oxford University Institute of Economics and Statistics*, 29, 1 (February 1967). Also see J. Bhagwati, ed., *Illegal Transactions and International Trade: Theory and Measurement*, Studies in International Economics, vol. 1 (Amsterdam: North Holland Publishing Co., 1974).

8. Cf. "On the Undervoicing of Imports," *Bulletin of the Oxford University Institute of Economics and Statistics,* 26 (November 1964): 389-397, reprinted in Bhagwati, ed., ibid., 1974.

9. J. Bhagwati, ed., ibid., 1974, pp. 145-146.

10. *Philippines*, op.cit., pp. 109-110.

11. *Turkey*, op.cit., Chapter VI, pp. 169-170.

12. See *Chile*, op.cit., Table A-1, variable 1.25.1-2, p. 314.

13. Munir Ahmed Sheikh, *Economics of Smuggling: Theory and Application*, Ph.D. dissertation submitted to the University of Western Ontario, Canada, August 1973, Chapter IV; published in *Bulletin of the Oxford University Institute of Statistics*, 36 (November 1974): 287-296.

14. For details of the statistical analysis, refer to Sheikh, ibid., pp. 148-159. Sheikh could *not* establish any relationship between the degree of tariff protection (i.e., the tariff rates themselves) and underinvoicing; only the two-group analysis yielded results.

15. D.T. Scheffman, "An Analysis of Trade Data Discrepancies: The Case of the Ghanaian Cocoa Trade Data," University of Western Ontario, *mimeo*, (no date).

16. *Turkey*, op.cit., Chapter VI, p. 171.

17. *Philippines*, op.cit., p. 109.

18. For detailed discussion, see T. King, *Mexico: Industrialization and Trade Policies Since 1940*. (London: Oxford University Press, for OECD Development Center: Paris, 1970); R. Cooper, "Tariffs and Smuggling in Indonesia," Chapter 13 in Bhagwati, ed., *Illegal Transactions . . .*, op.cit., and J. Bhagwati, "Introduction," in Bhagwati, ed., ibid. The papers by C.G.F. Simkin and Helen Richter in this volume also discuss alternative ways in which the existence of smuggling may be pinned down, essentially involving the construction of "outflow" data based on domestic production *minus* domestic absorption and subtracting the recorded exports therefrom.

19. The following analysis was undertaken with Anne Krueger and Chaiyawat Wibulswasdi and has also been printed as Chapter 10 in Bhagwati, ed., *Illegal Transactions . . .*, op.cit., 1974. The reader should refer to this volume, particularly to Chapters 7, 9, and 12 for many of the purely statistical reasons that can often cause discrepancies in partner-country trade and data comparisons. Thus, to illustrate, in Table 1, the South Korean negative discrepancy is certainly attributable in part, and perhaps entirely, to the extremely rapid growth of Korean exports and the fact that Korean export records would lead the importing countries' import records.

20. The "net" profit is, strictly speaking, relevant here, netting out for any incremental costs that may be incurred in undertaking illegal activity.

21. This, in effect, was observed in Bhagwati's study of Turkish trade data and Baldwin's study of Philippines data where (as we noted in the preceding section) imports carrying high tariff duties were observed to be underinvoiced. In some countries another motive for underinvoicing imports is that import licenses are issued for a dollar value. Thus, by understating price, the importer can buy more.

22. It is interesting to note that Honduras is the only case where the "faking" presumably occurs on both import and export sides. In all four other countries, export underinvoicing may be practiced to only a limited scale as evidence shows up only in the export-trade with United States and Canada but not with total OECD countries. The Honduras case may seem peculiar since its liberal exchange control regime allows capital to be transferred rather freely. There is, however, a requirement (for statistical purpose) that buyers of exchange must file the applications stating how the exchange will be used (IMF, 19th Annual Report on Exchange Restrictions, p. 185); this may provide an incentive to "fake" the invoices so that illegal uses of exchange can be concealed.

23. For, if imports are overinvoiced (underinvoiced), the importer must sell (buy) in the black market an amount of foreign exchange equal to the difference between the correct and the faked price on the invoice. Hence, two critical variables in the importer's decision will clearly be the duty and the black market premium on foreign exchange. See Bhagwati, *Illegal Transactions . . .*, op.cit., Chapter 9.

24. One should stress again, however, the relatively weak efficacy of the partner-country data comparison technique in view of possible "noise" from complicating factors.

25. *Colombia*, op.cit., Chapter 5, p. 148.

26. J. Bhagwati and B. Hansen, "A Theoretical Analysis of Smuggling," *Quarterly Journal of Economics*, 88 (May 1973): 172-187; reprinted in Bhagwati, ed., *Illegal Transactions . . .*, op.cit., 9-22.

27. Harry G. Johnson, "Notes on the Economic Theory of Smuggling," *Malaysian Economic Review* (May 1972); and J. Bhagwati and T.N. Srinivasan, "Smuggling and Trade Policy," *Journal of Public Economics* (August 1973); both reprinted in Bhagwati, ed., *Illegal Transactions . . .*, op.cit., 27-38.

28. M. Sheikh, "Smuggling, Production and Welfare," *Journal of International Economics* 4 (November 1974): 355-386.

29. These differences stem primarily from the fact that, in modeling the incremental real costs of illegal trade *via* explicit use of primary factors so utilized, the analyst is directly affecting the production possibility set for the traded goods in this model (these goods entering the social utility function in the usual manner), whereas in the Bhagwati-Hansen-Johnson-Srinivasan model the production possibility set is unaffected and only the foreign transformation possibilities incorporate the effects of illegal and legal trade. Cf. the extended discussion in Bhagwati, ed., *Illegal Transactions* . . . , op.cit., page 3.

30. Rodney Falvey, 1978, op.cit.

31. Cf. A.O. Krueger, "The Political Economy of a Rent-Seeking Society," *American Economic Review*, 64 (June 1974): 291-303. Her model is Harris-Todaro type and closer to the Sheikh model than the Bhagwati-Hansen-Johnson-Srinivasan model in its treatment of the real costs incurred in smuggling (in their case) and in rent-seeking (in her case).