

ON SMUGGLING

by

Lawrence J. White

Research Program in Economic Development

Woodrow Wilson School
Princeton University
Princeton, New Jersey

Discussion Paper No. 14

September 1970

Note: Discussion papers of the Research Program in Economic Development are preliminary material circulated to stimulate discussion and critical comment. Please do not refer to discussion papers without permission of the author.

Lawrence J. White

September 1970

On Smuggling

"Smuggling" often brings to mind the image of tourists hiding new wristwatches in their suitcases or, perhaps, illegal drugs being covertly imported into a country from the Middle East. The consequent impression is that smuggling is not an important phenomenon except to a few customs inspectors or narcotics squad officers.

In many countries, particularly less developed countries, however, this would not be an accurate picture. In their efforts to accelerate development, many countries have seriously skewed their foreign trade sector. High tariffs, export taxes, multiple exchange rates, over-valued exchange rates, and import licenses or quotas are frequently found. These all create incentives to circumvent the system, often with a large potential profit. Both import and export flows can be involved. There is usually no shortage of entrepreneurs, traders, bankers, and farmers who are willing to try to circumvent the system if the potential gains are high enough. Police, navy, and customs officials are often poorly paid and poorly trained and are unwilling or unable to stop the smuggling. Thus, smuggling, both potential and actual, is a serious problem for a number of countries.

That smuggling can be quantitatively important has been shown by Simkin.¹ He estimates that during the early and middle 1960's, unrecorded Indonesian exports probably averaged \$200 million per year; this was about 30% of the average level of recorded exports. Indonesia may be an extreme case, but there is active smuggling in other Asian countries. A recent "back of the envelope" estimate put import smuggling in India at \$370 million a year.² Pakistan reputedly loses sizable quantities of foreign exchange from under-invoicing of exports and over-invoicing of imports. A large amount of unofficial agricultural trade is said to occur across the Indian-Pakistan borders. Large amounts of smuggled goods are

supposed to enter the many islands of the Philippines. Smuggling is not unknown in the Middle East, Africa, or Latin America.

Despite the importance of the phenomenon, almost nothing has been written about it. This article will attempt to remedy this gap. Part I will describe the various forms and varieties of smuggling. Part II will describe the means by which smuggling can be detected. Part III will analyze the welfare costs and other costs of smuggling. Part IV will discuss some of the measures that governments might take to combat smuggling.

For the sake of terminological ease, I shall refer in this article to all types of unrecorded trade as "smuggling."

Section I: Methods of Smuggling

A motorboat delivering goods to a small cove in the middle of the night represents perhaps the most frequently thought of form of smuggling. By this, I mean essentially goods that move through unofficial channels and avoid any contact with customs posts. Over land borders, this form would be a truck traveling on back roads or even individual travelers on foot with low weight, precious cargoes. This form of smuggling is usually aimed at avoiding import duties. But if export taxes are high enough or the exchange rate applied to exports unfavorable enough, the motorboats will also begin to carry out exports. This seems to have been the case in Indonesia in the early 1960's.

A form of smuggling somewhat similar to the method mentioned above is the diversion of imports that are originally intended for re-export. Here, goods usually have to pass through one customs inspection and are sealed and/or bonded until they leave the country again. They may be put in a bonded warehouse, for re-shipment out of the same port. Or they may have to be trucked or taken by railroad across the country to another border. If the goods can be diverted to

domestic use, duties can be avoided. Customs officials will expect the goods to be re-exported. The smuggler will either have to hope that the papers on his goods never reach the second customs post or he will have to bribe either the first or the second set of customs officials. The town of Landi Kotal, on the Pakistan side of the Pakistan-Afghanistan border, is a well-known site of this type of smuggling. Goods entering Karachi port and "destined for Afghanistan" by truck frequently never complete the journey and instead unload at Landi Kotal.

The other forms of smuggling involve goods traveling through the customs ports and a mis-representation about their nature being made, either with or without the connivance of the customs officials. The most obvious form of mis-representation is about price. If an importer wishes to reduce his tariff burden, he can claim that the items cost less per unit than is actually the case. On the other hand, if he is operating within the context of a controlled currency or multiple exchange rates, he can over-invoice in order to obtain foreign exchange for personal capital export or for sale at a higher rate (black market or otherwise).³ In this case, he tells the foreign exchange selling authority that the goods cost more than they actually do. The extra foreign exchange, over the actual cost of the goods, is then available for sale to the black market. Similarly, an exporter can under-invoice on price to reduce his export tax liability or to obtain foreign exchange that would otherwise have to be surrendered at an unfavorable rate.

A closely related form of smuggling is the mis-representation of quantity. Again, for the same reasons as above, importers would wish to under- or over-state the quantities of goods they are importing, and exporters would wish to under-state quantities of exports.

Mis-representation of quality is yet another way of achieving the same ends. Lower quality goods will not only be assumed to carry lower prices but will often carry a lower import duty rate or lower export tax rate.

Further, complete mis-representation of the goods can achieve these same ends. If an importer can convince the customs officials that the vehicle inside the crate is a tractor, whereas it is really a Mercedes-Benz, he will of course pay a lower duty.

Finally, though this does not strictly fit with the definition of smuggling given above, there is the possibility of straight-forward nonpayment of duties. In this case, a customs official would record the entry of a good but not record any duty being paid. On the surface it would appear that their last form would be readily detectable and infrequently used. But if the administrative structure and information transmitting procedures were poor enough, a customs official might well be able to indulge in the practice.⁴ Also, if there are a number of legal ways by which importers could avoid paying duty (e.g., imports on government account, imports for special purposes, imports under tax exemption schemes, etc.), then fairly large amounts of illegal non-payment might be able to be masked by these other legal non-payments.

With the exception of the "motorboat in the dark of night" method, the smuggler's task will usually be made easier by a set of incorrect invoices to support the smuggler's claim. For imports, this can be done with the connivance of the foreign exporter. Or, in some cases, importers have been known to forge the necessary invoices.

Section II: Methods of Detection

In principle, there are always statistical means for detecting and measuring smuggling. In practice, it may be very difficult to detect smuggling and even more difficult to measure it.

One might try to compare a country's recorded trade with that of its trading partners and look for discrepancies. This trail is full of pitfalls, however, as

Richter has shown.⁵ Some illegal trade may have escaped the records of the trading partners, some of the trading partners may not publish trade statistics (e.g., Singapore does not publish statistics on its trade with Indonesia, and Communist China does not publish any statistics at all), these may be leads and lags in shipments and recording, trade flows may be recorded on different classification systems, trade in goods destined for the military may be recorded at one end but not at the other, or the existence of re-exports may cause recording inconsistencies as to the origin and destination of goods.

Next, one might try to look at the domestic market place. If imports are being smuggled into a country, the competition from these illegal imports should drive the domestic price of these goods below the legally-entered price (i.e., the CIF price plus duties plus taxes plus sellers' markups). Armed with a set of CIF (or FOB) prices of imports, their local prices (preferably wholesale prices, to minimize the variability of markups), and the schedules of duties and taxes, an investigator might be able to detect the existence of smuggling. A similar procedure might be used to detect export smuggling. But this test would only provide an indication of the existence of smuggling, not its extent. And it would be of no value for detecting smuggling in an environment of quantitative restrictions on trade.

A check of the unit values implied by the trade data would reveal the existence of under- or over-invoicing on price, provided the investigator had an accurate list of the international prices of the commodities in question. Key here is obtaining a fine enough break-down of the trade flows so that the unit values are meaningful.

Ultimately, smuggled imports have to be paid for (or payment received for smuggled exports). In an otherwise tight and accurate balance of payments accounting statement, the payment for smuggled imports would show up as an

unexplained capital outflow in the "errors and omissions" line; i.e., what appears to be an unexplained and unaccounted for outflow of funds is really going to pay for the smuggled imports. Similarly, receipts for smuggled exports would show up as an unexplained capital inflow.

But payments and receipts for smuggled goods may hide in other categories in the balance of payments, e.g., in the "services" line. Or smuggled exports and imports may roughly balance each other, so that there is no net financial flow. Or the smuggled flows may be financing (or financed by) the building up (or drawing down) of balances held abroad by local nationals. In the extreme, smuggled imports might be financed by the interest on foreign balances, with no changes in the balances themselves. In principal, the movement in balances is knowable. In practice, most countries have no idea of the size or movement of balances abroad.

Checking on straight non-payment of duties is easy--if a detailed list of imports, duties paid, and legally exempt imports are available, all classified on the same basis as the tariff schedule. This information is not always compiled in this way, so that even government officials may not be able to check on non-payment.

Finally, there may be few ways of checking on the mis-classification of goods (i.e., the Mercedes which is labeled "tractor"). In this case, payment is made through legal channels, and all import and customs data are internally consistent. For some items, like automobiles, later internal registration of the items may provide a check. If twice as many new model foreign automobiles apply for licenses than have been recorded as being imported, one might begin to suspect some smuggling. But these items are few. High quality textiles, wristwatches, cosmetics, etc., are not domestically registered. If they enter in boxes marked "cement," there is no way of further detecting the extent of this form of smuggling.

Section III: The Costs of Smuggling

In a discussion of the costs of smuggling, it is important to realize that the smuggled flows themselves are not irretrievably lost to the country concerned. Rather, the benefits from smuggling accrue to individuals of the country, just as do the benefits of legal flows. It is usually a matter of these benefits accruing to different individuals, and this is the basis on which the costs must be calculated.

Let us start with extreme assumptions that will be modified later: Let us assume that the revenue from export and import taxes, multiple exchange rate arbitrage, etc. counts for full utility value when it accrues to a government through legal trade flows and counts for zero when it accrues instead to a private individual through smuggling. Second, let us assume that the relevant domestic demand and supply elasticities for exports and imports are zero and the foreign elasticities are infinite.

With these assumptions, the costs of smuggling in some situations become straight-forward. If the foreign trade sector is otherwise open but the government imposes import and/or export taxes, the foregone taxes on the smuggled flows represent the social costs from smuggling. In algebraic form

$$(1) \quad SC = \sum_{x,i} t_{x,i} X_i + \sum_{m,i} t_{m,i} M_i$$

where SC are the social costs, the t 's are the tax rates applied to exports and imports, X_i are the flows of smuggled exports, and M_i are the flows of smuggled imports. (The price of a unit of exports or imports is set equal to one, so the x 's and m 's represent both physical and value flows).

Next, suppose the economy has multiple exchange rates in addition to taxes, but that otherwise trade is still free. Now, in addition to the welfare loss from foregone taxes, the government loses a possible arbitrage income if exporters

receive a lower exchange rate than importers have to pay.⁶ In algebraic form,

$$(2) \quad SC = \sum t_{x,i} X_i + \sum t_{m,i} M_i + a \sum X_i$$

where a is the average arbitrage spread open to the government on the particular exports and imports that are smuggled.

We can now ease some of our limiting assumptions. If we acknowledge that the government's loss is an individual's gain, we could consider that the social costs to the country were only some fraction of the foregone revenue to the government. Thus, we would want to multiply the right hand side of equation 2 by some fraction b ($1 > b > 0$) to get the "true" social costs.⁷ Or, perhaps, we would have a set of b's, depending on the worthiness of the individuals concerned in each transaction.

Thus, the social costs become:

$$(3) \quad SC = \sum b_{x,i} t_{x,i} X_i + \sum b_{m,i} t_{m,i} M_i + b_a a \sum X_i$$

Next, we can introduce some elasticity into our behavior functions. The higher costs of carrying out the transactions legally rather than illegally would discourage some of the transactions, according to the relevant elasticities of demand supply. Let e be the relevant elasticity of demand for a particular import (while the foreign supply elasticity remains infinite). Then, the ex-tax value of imports, M' after a tax is levied is

$$(4) \quad M'_i = M_i \left(1 + \frac{t_i}{e_i}\right)$$

and the tax collected is

$$(5) \quad t_i M'_i = t_i M_i \left(1 + \frac{t_i}{e_i}\right)$$

A similar expression would apply to the supply of exports.

Thus, taking into account non-zero domestic elasticities, the costs become

$$(6) \quad SC = \sum b_{x,i} t_{x,i} X_i \left(1 - \frac{t_{x,i}}{e_{x,i}}\right) + \sum b_{m,i} t_{m,i} M_i \left(1 + \frac{t_{m,i}}{e_{m,i}}\right) + b_a a \sum X_i \left(1 - \frac{t_{x,i}}{e_{x,i}}\right)$$

Equation (6) should be modified somewhat to take into account the familiar dead-weight gains in consumers' and producers' surpluses from the evading of these taxes. These surpluses, properly weighted as to utility, ^{should be counted} as gains somewhat offsetting the social costs shown in (6). Finally, if the foreign elasticities are less than infinite, the reduction in smuggled flows should bring about a favorable terms of trade effect, and the absence of this effect would be a real cost of smuggling.

The analysis of equation (6), though, is really that of partial equilibrium. If imposing taxes on previously smuggled goods cuts back demand, foreign exchange is released that was previously being used. Under a fixed exchange rate system, this foreign exchange would be sold to the central bank, and the import expression in equation (6) would remain valid. But in a fluctuating exchange rate system, the released foreign exchange rate would be sold to other potential legal users, and equation (3) presents the correct picture.⁸

Similarly, the tax imposed on exports releases domestic resources. If these resources are not devoted to alternative exports and if we have fixed exchange rates, the export expression in (6) is correct. If these resources are devoted to alternative exports and/or we have flexible exchange rates, then equation (3) is correct.

Thus far, we have identified the costs of smuggling with some fraction of the revenue lost by the government on the smuggled trade. But the costs extend farther than this.

First, smuggling can have a snowballing effect, feeding on itself. Widespread smuggling puts pressure on honest sellers of goods that are in competition with the smuggled goods. To the extent that the extra costs of smuggling do not fully absorb the margin permitted by the evasion of tariffs, the seller of smuggled

goods can undercut the honest seller. Further, to the extent that customs officials are complicit in the smuggling, they may become unhappy with the honest importers whose shipments offer them no gain. The customs officials might ask for bribes, threatening to delay the clearance of the honest importers' goods. Both of these influences may put an unbearable squeeze on the honest importers and force them to begin to under-invoice like their competitors. Similarly, export smuggling can drive up the local wholesale price of export commodities and thus make it unprofitable for honest exporters to export within the constraints of a particular exchange rate or set of export taxes.⁹

The basic implication of the previous paragraph is that the existence of smuggling today carries the likelihood of larger smuggling flows tomorrow. If any costs are attributable to smuggling today, they will be greater tomorrow.

Second, in the extreme, widespread smuggling can have a debilitating effect on a country as a whole. Cynicism and a general demoralization may set in, as citizens lose faith in the ability of their government to control its affairs and enforce its laws. Under or non-payment of all taxes and general disregard for other laws may become widespread, again in a snow-balling process.

Third, there may be a real loss of resources involved in the time and effort devoted to smuggling and outwitting the customs officials. The economy would be better off if the smuggled flows could somehow be routed to legal channels and the smugglers' efforts routed to more productive pursuits. Further, to the extent that motorboats are less efficient carriers of goods than are regular ocean-going vessels, smuggling by means of the motorboat is using resources inefficiently; in the end, someone has to pay for the transport costs.

Fourth, the physical ease of smuggling certain goods relative to others may induce uneconomic distortions in domestic output. In the fuzzy world of "second-best" as applied to trade theory, one is rarely sure which distortions are going

to leave the country better off. But it is at least conceivable that the distortions induced by selective smuggling would leave the country worse off than the distortions imposed by an honestly observed tariff structure.

Fifth, a government may wish to use tariffs or other protective devices to promote a genuine infant industry. But smuggling may foil this effort and prevent the infant's development. In the long-run, the country is worse off.

Sixth, there are a class of costs involved in smuggling in a licensing situation. Suppose some imports are limited by quotas in an otherwise open trade sector. The quotas presumably exist to protect a domestic industry, particularly to protect its profits. Thus, any smuggled goods of this type offer extra competition to the domestic producers and cause a drop in their prices and profits. This is usually a transfer from producers' surpluses to consumers' surpluses, plus a net dead-weight gain in consumers' surpluses from the drop in price. But the government by its imposition of a quota, has indicated that the producers' surpluses carry more utility weight than do the consumers' surpluses. Thus, the smuggling is seen to impose a social cost.

Suppose an import is banned and domestic production is similarly banned for moral reasons (e.g., addictive drugs). Here, the enjoyment of consumers' surplus from consumption of the good is seen as a positive evil, and, again, smuggling of this item is seen to impose social costs.

Further, suppose the foreign trade sector is a tightly controlled one, in which all imports are licensed or otherwise quantitatively limited, foreign exchange earned by exporters must be surrendered, and there is no legal free exchange rate. Now smuggled imports must have as their financing source smuggled exports or some other form of smuggled capital export. The smuggled exports, whether they are used simply to obtain foreign exchange for deposit in a Swiss bank or are used to finance smuggled imports, are depriving the government of a

supply of foreign exchange which it thinks it can allocate better than can the individual. Again, the individual's utility gain must be discounted and the loss of the alternative use must be weighted more heavily.

Finally, export or import smuggling that is conducted with a country whose government is considered hostile by the smugglers' government may be seen to involve costs. "My enemy's gain is my loss," appears to be a frequent attitude by governments.

The costs discussed in this section are somewhat subjective in nature. An individual who is hostile to a particular government will welcome the demoralization created by smuggling and not count it as a social cost. An economist opposed to a tight licensing system imposed by a government might consider smuggling as an unmixed gain in increasing allocative efficiency. A businessman opposed to government spending in general will not regret the loss of revenue to government from smuggling. A supporter of a government will have the opposite view in all of these instances.

Section IV: Methods of Combatting Smuggling

There are three immediate and obvious strategies for dealing with smuggling. The first is to beef up the customs service, enforce better discipline and honesty, pay better salaries, provide more manpower. This is more easily said than done; it is not a costless process. But it is possible.

The second is to eliminate or reduce the incentives for smuggling that have been created by the high tariffs, multiple exchange rates, import licenses, etc. Again, this is not costless. A government convinced of the inherent worth of its policies may well be reluctant to change its ways, despite widespread smuggling. "Crack down on the smugglers" may well be received more receptively by government bureaucrats than the admonition "change your ways so as to reduce the incentives for smuggling."

The third is to do nothing. "Smuggling will always exist, as long as it does not get too bad, let's not rock the boat; we may have to step on too many toes to do anything about it." This will, of course, be music to the ears of smugglers.

Beyond these broad strategies, there are a range of narrower actions that governments can take to limit or reduce the scope for smuggling. One frequent method to reduce under-invoicing on price is for the customs service to equip itself with a set of "check-prices" or "indicator-prices" representing the F.O.B. prices of most of the commodities that the country imports. Any price listed on an invoice that is above these check-prices is automatically accepted. But the check-prices take precedence over prices that are below the check-prices. "But I bought it on a special deal," is likely to fall on deaf ears. Obviously, a special intelligence effort is necessary to keep the check-prices up to date. A failure to follow rising price trends means a loss of revenue. A failure to follow falling trends means a heavier burden on importers than had originally been intended. The same kind of check-pricing can be used to police export invoicing. A similar way to foil price under-invoicing is to levy duties on a specific rather than an ad valorem basis. Again, the major disadvantage is that the specific duties will fail to reflect price changes.

A uniform percentage tariff on all imports would reduce the incentives for mis-classification and greatly simplify the administration burdens of customs. But other goals, like revenue maximization or special protection, would have to be sacrificed.

Perhaps the most effective tool to combat under-invoicing would be an auction system.¹⁰ It might work as follows: For 48 hours after the importer makes his declaration to the customs official, the goods are open to inspection by the

public. At the end of this period an auction is held. Anyone is free to make a bid for the goods, subject to the condition that the minimum bid must be, say, 110% of the declaration value (so as to give the importer a margin to cover his overhead costs). The original importer is always free to put in a bid. Top bidder gets the goods and must pay the import duty on the amount he has bid. There might be some practical problems involved in the inspection procedure, especially for perishable goods, but these could probably be worked out.

In a trade system dominated by licensing, the incentives for over-invoicing of imports could be reduced if the licensing is supplemented by import duties. Importers will be less likely to over-invoice if they have to pay sizable duties on the "phantom" goods.

If a particular institution or government agency involved in foreign trade is considered weak or unreliable, it may be possible to structure the trade system so as to get around the weak party. For example, in many countries the central bank's operation of foreign exchange transactions is considered more reliable than the customs services' operation of the tariff system. This would argue for putting at least part of the incentive/disincentive structure into the central bank's hands; e.g., multiple exchange rates.

This notion of a variety of ways of structuring the trade sector leads to a further suggestion. Smuggling may be reduced if a given set of incentives/disincentives are imposed fractionally by a number of government agencies than if one agency alone has the responsibility for imposing the incentives/disincentives. The reasoning here is as follows: If a smuggler has to pass through only one legal barrier (e.g., customs), smuggling by means of under-invoicing is probably less risky and certainly less costly than smuggling by means of the motorboat in the middle of the night.¹¹ But if the smuggler has to pass through other barriers (e.g., a Central Bank multiple exchange rate, a pre-payment for import requirement,

etc.) the risks and costs of under-invoicing increase. More officials have to be bribed, more chances for something to go wrong. Thus, by setting up a series of barriers, a government might be able to impose a higher level of disincentives than could be imposed if there were only one barrier, and still not exceed the level that would cause the smuggler to resort to the motorboat. Concretely, suppose a smuggler would be willing to under-invoice only if the gain were over 40% (i.e., evading a 40% tariff or a 40% exchange rate differential) and he only had to pass one barrier; suppose further that the incentive would have to be 80% before he would try the motorboat. Then, by combining a 25% tariff, a 25% exchange rate differential, and a pre-payment requirement equivalent to a 25% cost increase, a government could impose a 75% cost disincentive and still not lose the import to the motorboat. There is the danger that the multiplication of barriers could add to many bureaucratic procedures and make legitimate importing appreciably more difficult. But in principle, a multi-barrier system could be simple and non-bureaucratic, yet effective.

The concept of effective protection on value added indicates that a system of low but graduated tariffs may be able to give quite high levels of effective protection to domestic infant industries, yet provide little incentives for smuggling.

Further, a production subsidy to an infant industry will allow it to compete, despite smuggling. Economists have long argued that production subsidies were the proper and most equitable way to encourage infant industries. An environment of smuggling would seem to offer a good opportunity for that advice to be acted upon.

In principle, a domestic sales tax could capture some of the revenue lost from smuggling. In practice, a government whose administrative structure cannot control smuggling is unlikely to be much more successful collecting a sales tax on the same items. Many of the same forms of evasion are likely to occur.

Finally, banning an imported good may prove effective against some forms of smuggling. Ordinarily, banning is an unwise procedure. It provides infinite tariff protection to a domestic industry. The only restraints left on the industry are those of internal competition. But, if the consumption of an imported item is to be discouraged on sumptuary grounds and smuggling is prevalent, banning may be worth considering. If luxury cars are banned, the appearance of a Mercedes-Benz on a street creates a presumption of smuggling that even a 500% import duty does not. The more obvious is the article, the more effective will be the ban as a discouraging device.

None of these remedies (except perhaps banning luxury cars) is foolproof. It is unlikely that a smuggling trade that has been brisk will disappear immediately, regardless of what measures are tried. But the measures described reduce the incentives and/or increase the costs and risks of smuggling and thereby should diminish smuggling flows.

These measures are not costless either. They require increases in resources devoted to controlling smuggling, changes in procedures, and often the political costs of infringing on important economic interests. Only after making a judgment as to the real costs involved in smuggling can a government decide which measures to employ and how far to push them.

Notes

1. C. G. F. Simkin, "Indonesia's Unrecorded Trade," Bulletin of Indonesian Economic Studies, VI (March, 1970).
2. See B. R. Shenoy, "A Close Look at Foreign Aid," The Times of India (August 28, 1970), p. 10. The annual report of the Indian Ministry of Finance claims that \$28 million (Rs 210.6 ^{million}) in smuggled goods were confiscated in 1968-69, and Shenoy argues, correctly in my opinion, that the confiscated goods are just the top of the iceberg.
3. In a licensing situation, whether an importer chooses to under-invoice or over-invoice depends on the height of the tariff and the scarcity premium on black-market foreign exchange.
4. He might wish to report the imports themselves, rather than let the entire transaction go unrecorded, because there frequently are easy ways to obtain a cross-check on the flow of imports through a particular post (e.g., from Central Bank data). But it will usually be harder to obtain a cross-check on tariff revenue due.
5. H. V. Richter, "Problems of Assessing Unrecorded Trade," Bulletin of Indonesian Economic Studies, VI (March, 1970).
6. The same principle applies to exporters of capital.
7. Note that (1-b) is the "worthiness index" of the individual involved in the transaction. The smaller is b, the more worthy is the individual, and the less social cost is being imposed on society.
8. There might be some revenue effects different from those shown in equation (3) if the import duties are levied on the local currency cost of the goods or if there is a terms of trade effect from the devaluation.

9. This seems to have occurred in Indonesia in the early 1960's, when the local wholesale price of rubber was frequently above the foreign exchange conversion value of the same quantity of rubber valued at the particular unfavorable exchange rate at which rubber was supposed to be reported. See "Price Disparity in Export Trade," Bulletin of Indonesian Economic Studies, No. 4 (June, 1966).
10. This suggestion was made by Richard N. Cooper.
11. This may be less true for trade over land borders than it is for ocean trade.