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**Black Markets, Openness,
and Central Bank Autonomy**

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Black markets for foreign currencies open up the financial markets of a country to international forces and among other effects raise the costs and lower the benefits of overvalued exchange rates and restrictive commercial policies. Such black markets have increased in size and sophistication in recent years, mainly because of a combination of institutional, technological, and economic changes. The higher level of integration of domestic financial sectors with the international financial markets, greater amount of trade and travel between countries, and the emergence of large discretionary flows, mainly remittances, are some of the major factors. Other factors include the improvements in electronic communications systems has further facilitated these flows. Largely as a result of these factors,[1] many developing country governments have shifted towards relatively less restrictive trade and exchange regimes in the last decade.[2]

In this paper we argue that the key reason for this change in regime is that various economic and technological factors greatly expanded the size of the black market for foreign currency; this expansion weakened the effectiveness of capital controls imposed by central banks; and the resultant increase in capital mobility made exchange rate defense more

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[1] There are, of course, other reasons for the shift mentioned here, such as: IMF pressure, change in intellectual climate, the example of high-growth countries (Korea, Taiwan), and the increase in international levels of inflation. The argument is that the emergence of black markets made it more difficult for the countries concerned to ignore this pressure.

[2] For example, as we shall demonstrate below, countries like Pakistan, Turkey, and Egypt, all shifted to different regimes of quasi-flexible exchange rates in the 1970s, in the face of mounting balance of payments problems due to unpredictability of financial flows These countries were particularly renowned for their restrictive commercial policies (cf. Bhagwati (1978). We argue that the shift was primarily designed to reduce the instability in resource inflows, on which these countries had become too dependent.

costly (in terms of balance of payments problems) at the same time that it erodes the

effectiveness of restrictive trade policy (by lowering the private cost of circumventing trade

restrictions). This means that financial openness present countries with a veritable

Hobson's choice: if they wish to use the additional resource made possible by the openness,

they are forced to forgo some control over the allocation of these resources; while if they

wish to maintain their allocative control, they have to eschew the use of at least a subs-

tantial fraction of the resource inflow.[3] Every country faced with this choice appears to

have opted for the former course, though not without a struggle. To analyse this issue, we

shall look at the case of Pakistan, where the rapid expansion of the black market was due

to the sudden influx of worker remittances from the Middle East, beginning in 1975. Brief

descriptions of the remittance receiving countries (Turkey, Egypt, Yugoslavia) bear out the

central thesis of the paper.

The organization of this essay is as follows: in section 1, we describe the history of

the evolution of the black market for foreign currencies in Pakistan; this is followed,

in section 2, by a theoretical analysis of the effect of a black market on capital flows

and policy effectiveness; section 3 examines policy behavior in Pakistan, Egypt, Turkey

and Yugoslavia to demonstrate the central thesis of the paper; and lastly, in section 4, we

present the conclusions and suggestions for further research.

1. Black Markets for Foreign Currencies

Black markets for foreign currencies (particularly US dollars and pound sterling) are

endemic in third world countries.[4] However, various pieces of evidence indicate that

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[3] The frustration over this loss of control is expressed in government as well as
non-government circles. See also Lieberman and Gitmez (1974: 216-9). Serageldin,
et. al. (1983: 90).

[4] According to Cowitt(1985), such black markets existed in every third world country,
except the high income oil exporters.

recent years have witnessed a rapid and dramatic increase in the size of these markets in many developing countries. In order to examine this connection, we need to give a brief description of the history and internal structures of such markets.

Black markets develop in conditions of excess demand for a commodity subject to legal restrictions on sale, or to official price ceilings, or both. Foreign exchange transactions in almost all third world countries are usually subject to both kinds of restrictions.[5] Legally, only a small network of closely monitored exchange dealers (with small capital provisions) are permitted to engage in this trade; sale of foreign currencies is allowed only for specified purposes; and the exchange rate is pegged by the central bank. Consequently, as in the case of any other commodity, some of the supply is siphoned off to satisfy the excess demand, and sold at a black market price higher than the official price as well as the theoretical equilibrium price.[6]

1.1 Currency Black Markets in Pakistan

For reasons which may be obvious, information on the functioning of black markets is neither readily available, nor very reliable. As such, the specific magnitudes mentioned in the following description will have to be treated with a certain amount of caution. For our purposes, however, since it is the direction and not the magnitude of changes in black markets, the absence of precise data is not an insurmountable problem. We shall discuss

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[5] See, e.g., Cowitt (op. cit.). Also, see Black (1976), Bhagwati (1978: chapter 2), Morgenstern (1974). George and Giddy (1983: Section 2.2) summarise the information on capital controls in various countries in the Appendix on pages 56-63. This situation is changing rapidly.

[6] As such, it is common to speak of the "black market premium", i.e., the proportion by which the black market price exceeds the official price, rather than of the black market price itself.

below, the evolution and growth of currency black markets in Pakistan. However, as we argue

later, many of the insights appear to be applicable to other countries in a similar situation.

Illegal exchange trading in Pakistan[7] dates literally from independence in 1947, and,

as in all of South Asia, is linked directly to gold smuggling.[8] Gold demand (for the 1-1.5

million weddings each year) has been increasing at a stable rate with increases in population

and incomes; but since there is no domestic production or legal imports, the fresh demand can

only be met with gold smuggling. Given the high level of organization of the domestic gold

market, it is not surprising that gold smuggling took on an organized character very early

in Pakistan's history, and helped influence the evolution of organized currency black

markets.[9] Since the gold "imports" have to be paid for in hard currency (or, initially, in

Indian Rupees), this also created a demand for illegal foreign exchange. Thus, the demand

for illegally imported gold had an important institutional effect in Pakistan: it generated

a demand for illegal currency, which, in turn, stimulated its supply, and led to the creation

and establishment of a currency black market.

There is now an active black market for foreign exchange in almost every major city

in Pakistan, run mainly by goldsmiths. The main centers of activity are the port city

of Karachi, the northern city of Peshawar (close to Kabul through where the currency is

smuggled to Dubai to pay for the gold), and the "tribal areas" adjoining the border with

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[7] The description which follows relies mainly on Cowitt(ed.), (1985), World Currency
Yearbook, earlier editions of Pick's Currency Yearbook, and George and Giddy (eds.),
International Finance Handbook, except where stated otherwise.

[8] This indicates, as in most other instances, that the black market is directly linked
to the assets market, since the demand for gold is really an asset demand in an economy
where capital markets are weak.

[9] According to Cowitt (1985: 878-9), the entire gold smuggling operation is controlled
by a syndicate centered in Karachi, with close links to the two (formerly three) groups
who control the illegal trade in India. Gold is shipped mostly from Dubai, where 3 Swiss
banks maintain a depository of gold bars. Payments to the banks have to be made in advance
in US dollars or Swiss francs, but there are local intermediaries who accept "Handpayments
Karachi" (or "Hundi", in local parlance).

Afghanistan (where currency trading is semi-legal, as also is trade in smuggled goods). As in the case of most developing countries, the black market for foreign currencies, though illegal, appears to be surprisingly well tolerated by the authorities.[10] Although the exchange dealers (except in the tribal areas) do not advertise their services, the market is substantially unified and the prevailing price is common knowledge among all those with an interest in it.[11] Here is the classic case of demand stimulating supply helping to establish a market, albeit illegal.

1.2 Demand for Illegal Currencies

While the currency black market may have come into existence (and have been unified) because of the substantial illegal imports of gold, it did not restrict itself to this task. High tariffs and quotas on consumer goods (luxury goods, durables, electronic goods, textiles, and alcohol) created strong incentives for smuggling, and thus a high demand for black market currencies.[12] Similarly, shifts in investment climate (or expectations) induced capital flight, as also did the desire of public officials as well as businessmen to maintain foreign assets (mainly, but not exclusively Swiss bank accounts) as a hedge against adverse political changes;[13] the low allowance for foreign travel caused potential tourists to

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[10] This seems to be the case in most countries. See, e.g., Dornbusch et. al. (1983) for the case of Brazil, Krueger (1974) for Turkey. In Pakistan, one never reads about an official crackdown on currency black markets, unlike, say, on black markets for commodities, or on merchandise smuggling.

[11] Most people who use the market appear to go through personal intermediaries, which may be a reason why the market seems so uniform. Nevertheless, given the minimal arbitrage possibilities in a clandestine arrangement, the level of uniformity is quite surprising. In August 1981, while travelling in Pakistan, I happened to observe someone who contacted 7 different exchange dealers over a period of three days, and got only one quotation out of line with the others, by about 1%.

[12] For a general description of illegal transactions, see Bhagwati (1978: 64-81). Other descriptions can be found in Cooper (1974), Sheikh (1973), Winston (1974), Bhagwati, Krueger, and Wibulswasdi (1974).

[13] See, e.g., Winston (1974).

finance their trips partly with illegally purchased dollars;[14] parents wishing to remit money to their children studying abroad were often to resort to the same method.

In Pakistan, it was easy for the smuggling operation to finance its needs from the already established black market, and this is indeed what happened. With the ending of the Korean War boom, the country suffered a decline in foreign exchange earnings, clamped on strict trade controls, and thus created incentives for smuggling operations. While this situation would have itself resulted in the establishment of a foreign currency black market, the fact that a well organized market already existed, no doubt facilitated the task of the smugglers. The smuggling operations developed somewhat slowly, in Karachi as well as in the tribal areas in the north. By 1970, the latter market was fairly well organized, and had a large inventory of consumer goods and textiles, as well as a reliable delivery system in collusion with customs officials.

1.3 Supply of Illegal Currencies

Generally, the supply of black market dollars comes from four possible sources: under--invoicing or smuggling of exports, over-invoicing of imports, foreign tourists, and worker remittances sent through non-official channels.[15] Although all four sources are likely to have been utilized in some degree, it turns out that in the case of Pakistan, the most significant source before 1975 was the first mentioned one, namely the smuggling of exports. Foreign tourism has never been a phenomenon of significance in Pakistan relative to the size of her economy[16] (unlike, say, in the case of Caribbean countries), and so it is

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[14] The legal allowance for foreign travel, $1000 every two years, is substantially unchanged in real terms for about twenty years.

[15] See Dornbusch et. al., (1983). In addition to the ususal fare, there are various sophisticated currency swap schemes used by multinationals to bypass official capital controls. See George and Giddy, (1983: 2.2.49-55).

[16] Tourist spending in Pakistan is estimated to be of the order of $ 60 million in 1978 and $140 million in 1985, compared to a GNP of $30 billion.

unlikely to have been a determining factor in the working of the black market. Nor was the magnitude of remittances before 1975 of any significance,[17] and the same observations would apply to them.

Similarly, with the possible exception of capital goods imports, over-invoicing of imports is not likely to be a major source of illegal foreign exchange in a country like Pakistan. The reasons are that this would be competitive only where the tariff rate on imported goods was sufficiently lower than the black market premium. Since Pakistan has always had high tariff barriers on most privately imported goods, the price incentive is for under-invoicing (or smuggling in) of imports rather than for over-invoicing. The only exception, of course, would be in the case of capital goods imports, where tariffs were generally lower than average, or even zero,[18] but such imports are generally quite strictly controlled by the government. Bhagwati, Krueger, and Wibulswadi (1974), using partner country comparison, found Pakistan to be a net under-invoicer of imports in the 1960s,[19] despite large black market premia, and low tariffs on capital goods. Since then, however, the differentials between tariff rates and black market premia have shrunk, if anything.

Since most of the above observations would apply with equal force to a large majority of developing countries, it seems reasonable to assert that in most of these countries the major source of black market dollars is the under-invoicing of exports, with the over-invoicing of (a subset) of imports running a distant second. The major exceptions to this are

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[17] Remittances were below $150 million annually until 1973.

[18] Winston (1974) discusses this case for 1966, when the import tariff on capital goods imports to Pakistan was 34%, while the black market premium was about 110%. He mentions a generally accepted figure of 10% over-invoicing of such imports, which would have been quite significant in comparison with the size of the black market.

[19] See discussion in Section 1.4, particularly Table 3.1.

countries which receive a high influx of tourists,[20] or those which receive large amount of remittances. We shall argue that the circumstances of such countries are unique and interesting.

Remittances and tourism differ from the conventional sources of black market currencies (exports and imports) in a very important respect, in that they do not necessitate an additional illegal transaction. In general, neither the currency, nor any goods have to be transported across a country's borders to generate the supply, with the result that real costs (in terms of clandestine transportation, payoffs to officials, risk of confiscation and of other legal penalties) are enormously reduced. Under-invoicing or smuggling of exports requires that the export good be illegally transported across the country's borders. Similarly, over-invoicing of imports requires that the actual amount of imports not correspond to the import license.[21] This means that the costs of procuring the supply of black market dollars in this manner will have to be high enough to compensate the supplier for the higher risk as well as for higher real costs.[22]

1.4 Expansion of Black Markets

Available evidence suggests that the size of the black market for foreign currencies has expanded considerably since the early 1970s, because of an increase in supply. While it has also been associated with a reduction in the black market premium, that issue does not lend itself to a mono-causal interpretation.

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[20] Such as Caribbean countries. Note that this means high influx relative to the size of the economy, or the size of the black market. Thus, countries like India or Turkey may receive large numbers of tourists, but these may still be small relative to the economy.

[21] As mentioned earlier, over-invoiced imports will also be subject to the legal tariff payments, raising the costs of procurement even more.

[22] Some questions regarding economies of scale and learning by doing in goods smuggling are relevant here. We shall return to these questions in Section 2.1.

Two independent sources of evidence, one pertaining to the supply and the other to the demand for illegal dollars, indicate an expansion in the size of the black market. These are data on unrecorded remittances which presumably end up in the black market; and partner country data comparison of trade flows.

1.4.1 Unrecorded Remittances

Most observers of remittance receiving countries remark that a substantial fraction of these flows utilize what are called "informal", "illegal", or "non-banking" channels, thus providing foreign exchange to the currency black market rather than to the central bank,[23] attempts by the latter to offset this tendency notwithstanding. The problems of central bank control over these flows is compounded when (as in the case of Egypt) the home and host countries are geographically contiguous, and the reduced cost of transportation and frequent travel across the border further facilitate the flow of unofficial remittances.[24]

However, such impotence is not restricted to geographically contiguous countries. Financial intermediaries, linked to the network of currency black markets in the home countries, arise to provide a service to those wishing to remit their money home at a slightly higher rate. Pakistani migrants in the Middle East can buy an instrument called "hundi" (or "handpayment")[25] from informal exchange dealers who generally set up shop outside the post office, the Pakistani embassy, or Pakistani banks, and advertise their rates quite openly. The customer often has a choice between getting a check drawn on a Pakistani bank, or simply giving the name and address of his family members to the dealer,

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[23] See, e.g., Serageldin (1983: 90), Chandavarkar (1980), Bhagwati (1978: 71), Birks and Sinclair (1980: 39,103), Ali (1981: 94-6), Gilani (1981: 110-13), Tsakok(1982: 321), among many others.

[24] See, e.g., Bruton (1983). Also, for a similar discussion on the Sudan, see Serageldin (1983: 89).

[25] See Gilani (1981: 110-13).

whose partner (in Pakistan) will then send them a check or money order in the right amount. The credibility of these exchange dealers is quite good, and they seem to get a fair amount of business. In any event, since migrant workers form a community away from home, the exchange dealers used by various people tend to be those somehow connected to their personal network of friends and relations.

Gilani (1981) notes that, in 1979, as many as 14% of the Pakistani migrant workers in the Middle East remitted their savings to their families through non-banking channels, most commonly a "hundi" (or handpayment). Furthermore, 25% of the remaining remittances were stated to have been brought home by the worker himself on one of his visits; it is not entirely clear whether these workers surrendered their dollars at the airport or exchanged them at a premium in the black market, but the general presumption is that it was the latter. While this does not yield any firm estimates of the volume of illegal remittances, a figure anywhere between 15% to 35% of the recorded amount seems reasonable. This means an annual infusion (in 1983) of between $450 million to over $1 billion into the illegal market from remittances alone. This exceeds by far, Cowitt's figure of Rupees 10-15 million of turnover per month (approximately $1 million, which presumably relates to the size of the black market connected with the traditional gold smuggling operation) and indicates the enormous expansion which must have taken place. To give an idea of the size of this infusion relative to the economy, it suffices to mention that in the same year Pakistan had a money supply of Rs. 90 billion, equivalent to approximately $5.6 billion when converted at the black market exchange rate. Thus, the annual infusion of black market dollars from remit-tances alone, amounted to between 8 and 20% of the total money supply, not an insigni-ficant increase in liquidity. This, of course, does not give any indication of the actual size of holdings of foreign currency in private hands, but it seems likely that the figure would be of the same order of magnitude.

A similar conclusion in the case of Bangladesh is yielded by Ali et. al. (1981). They discovered that only 50% of the migrants relied exclusively on banks for remitting their savings, while 35% used private channels, and another 9% used both. Those using private channels were predominantly from rural areas. They also found that non-bank channels were relatively more efficient and that, on average, the money reached the recipients more quickly than through banking channels.[26]

Studies on other countries also show that a large volume of remittances is channeled into the black market, and that the government is forever trying to provide incentives to remitters to use official channels. Swamy (1981: 58) reports a steadily rising volume of foreign currency accounts held by Greek residents throughout the 1970s, with annual increases matching the inflow of recorded remittances. Similarly, Paine (1974: 207) shows that 65% of Turkish migrants remitted their money home through secret means or in person. Other examples of similar observations are found in Birks and Sinclair (1980: 39, 103), Bhagwati (1978: 71), Bruton (1983: 686,698-9), Serageldin (1983: 89), and Granier and Marciano (1975: 163). Thus Pakistan or Bangladesh are not exceptional in this regard.

1.4.2 Partner Country Data

On the demand side the primary source of information is partner country data on trade flows. Bhagwati (1978) used an innovative technique to demonstrate the existence of smuggling and capital flight in developing countries. He compared partner country data on exports and imports to and from each other respectively, to find extensive evidence of under-invoicing of exports (to earn foreign exchange) as well as underinvoicing of imports (smuggling), with some cases of overinvoicing of imports thrown in.

Table 1 reproduced directly from Bhagwati (1978: 73,75) underscores this observation. The first column gives the percentage by which recorded values of various countries' imports

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[26] Ali (1981: 94-5).

Table 1
Comparison of LDC and OECD Trade Data: 1966

Country	LDC Exports 100.(M-X)/X	Premium percent	L D C Imports Total SITC5-8		100(M-X)/X pct. Share
H. Kong	13.7	1	-11.6	-11.4	84.1
S Korea	-4.6	0	- 0.4	-10.0	67.4
Philipp	16.1	2	- 7.6	- 8.3	80.1
Tai wan	7.0	3	- 3.3	- 3.4	5.4
Thailan	6.4	0.6	+14.0	+11.0	88.5
S Lanka	20.1	94	- 5.7	-11.0	71.2
E g y pt	30.7	111	+ 8.3	+ 6.4	60.6
In d i a	23.7	74	- 1.0	-15.7	55.0
I r a n	35.2	4	- 1.3	+ 0.8	90.7
Pakista	14.3	74	- 1.3	- 7.6	77.4
Gre ece	27.9	4	- 0.2	- 0.2	81.7
Tur key	15.4	40	-13.4	-10.2	91.1
Yugosla	-1.0	17	- 1.3	+ 6.2	72.6

Source: Bhagwati (1978): Table 4-1 (p. 73), Table 4-2 (p. 75)

from OECD countries exceeds the recorded values of corresponding exports from OECD countries to the LDCs. Column 2 gives the value of the black market premium in 1966. Column 3 gives the percentage by which recorded OECD imports from each LDC exceeds the recorded value of exports from the sending country. Column 4 gives the same information for a subset of these exports, namely those in SITC 5-8 (primary goods), and column 5 gives the share of primary goods in total exports of each country.

(Table 1 goes about here)

An important correction to be borne in mind is that the export figures are f.o.b, while the import figures are c.i.f. Hence, imports will generally exceed exports by about 10 percent. If imports exceed exports by more than this amount, it indicates the existence of under-invoicing of exports. Similarly, if imports are less than exports (or exceed them by less than 10%), it indicates under-invoicing or smuggling of imports.

Notice that the black market premia for Pakistan, Turkey, and Egypt were among the highest in the world in 1966, and all 3 showed evidence of underinvoicing of exports and Pakistan and Turkey (though not Egypt) showed some underinvoicing of imports.

These data can be contrasted with Table 2, where in all cases the proportion of under-invoiced exports seems to be stable (or slightly reduced), while the underinvoicing of imports seems to have risen.[27] This is at the same time that the black market premium has declined in all three countries. With all the caveats about the weakness of the data, it is nevertheless difficult to reject the assertion that there must have been an expansion of supply. This is especially significant because average tariff rates have declined in all three countries during this period, thus reducing the profitability of smuggling.[28]

(Table 2 goes about here)

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[27] In Pakistan's case, some of the smuggling takes place through Afghanistan, which may not figure in either country's statistics.

[28] Average tariff rates, i.e., tariff revenues divided by the value of imports, declined from a level of 26% in Pakistan in 1973, to 20% in 1980.

Table 2
Comparison of LDC and OECD Trade Data: 1982

Country country	LDC Exports 100.(M-X)/X	Premium percent	LDC Imports 100.(M-X)/X
Eg y pt	+9.9	7.5	-32.0
In d ia	+9.9	11.1	+10.0
Pakista	+5.3	24.6	-23.2
Turkey	-5.0	15.1	+ 3.2
Yugosla	-4.1	18.4	- 0.8

Source: <u>Direction of Trade Statistics</u>; Cowitt (1985).

Table 3
Pakistan and U.S. Trade Data

Year	Pak Exports 100(M-X)/X	Premium percent	Pak Imports 100(M-X)/X
1978	- 6.0	37.5	- 0.3
1979	+10.8	23.5	- 2.3
1980	+ 0.5	27.0	+17.1
1981	- 4.2	40.9	- 4.5
1982	+ 7.5	24.6	-23.2
1983	- 4.8	30.6	-37.7
1984	+ 2.1	20.2	-41.8

Source: <u>Direction of Trade Statistics</u>.

These observations can also be supplemented by looking at Table 3, which gives annual data on the black market premium and Pakistani-U.S. trade. Notice that in this instance the underinvoicing of exports as a source of supply to the black market seems almost to have dried up; however, the underinvoicing or smuggling of imports is much larger in the 1980s than in the 1960s. Once again, while partner-country comparisons are subject to various caveats, there is a presumption created here that the demand for the foreign currency for the financing of smuggled goods has increased at the same time that conventional sources of supply of currencies have become less active. It is our argument that the new supplies of unrecorded remittances create a cheap source of black market currency, which not only obviates the need for more expensive sources (such as export smuggling), but also erode the effectiveness of capital controls and commercial policy.

(Table 3 goes about here)

1.4.3 Expansion in Black Markets

The above assertions pertaining to the demand for illegal currencies are also supported by other available evidence on the issue. Cowitt (1985: 592) observed a sudden expansion in the size of the smuggling operations and in the related markets in the mid-1970s in Pakistan. While his explanation, that the rise in international price of gold shifted gold smugglers into other enterprises, may be partially correct, it was also at this time that the expanded black market began providing a cheap source of illegal currency. Both of these effects may have combined to create a tremendous boom in the tribal areas, with an entire new market town[29] being created to handle the expanded trade. Despite the subsequent reduction in tariff levels, and quota restrictions, this semi-clandestine market has continued

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[29] The town of Bara existed as a sleepy village, and a military fort. However, since the mid 1970s, it has become a bustling market center, attracting thousands of customers in search of relatively cheap imported goods.

to enjoy a sustained boom, and its offshoots have penetrated the "settled" districts, where this trade is ostensibly illegal but now increasingly tolerated.

Similarly, there has been a tremendous expansion in the number of Pakistanis travelling abroad every year. In part, of course, this expansion is the result of the increase in labor migration. But it is also true that a significantly higher number of Pakistanis travel abroad for pleasure or business today, than, say in the early 1970s. Given the fact that the allowance for foreign travel has not risen in real terms since the 1960s, it seems reasonable to assert that Pakistanis are taking advantage of the easier availability of black market foreign exchange for this purpose.

Since the late 1970s the major Pakistani business houses have become fairly active investors in various other countries, most particularly in the Persian Gulf. Thus, while capital flight has been endemic in Pakistan, it has increased in overall volume in recent years. However, due to the paucity of data, not much can be said about short run capital movements beyond the fact that they also appear to have increased somewhat in the last decade.

This concludes our description of currency black markets. We have argued that the size of these markets in Pakistan has expanded dramatically in recent years, mainly because unrecorded remittance inflows reduce the cost of procuring illegal funds. This assertion, commonly accepted by most observers, is supported by available data. We shall now turn to an analysis of the effect of such markets on the exchange rate.

2. Black Markets and Capital Flows

In this section, we shall argue that a large black market for foreign currency effectively undermines capital controls, and facilitates discretionary capital flows of a significant magnitude. Since capital controls seem to be necessary for maintaining any kind of restrictive trade policy, their erosion tends to decrease the effectiveness of such restrictions.

The effect of illegal transactions, including black markets of foreign exchange, has been explored by several authors. Those adopting a monetary approach view the black market as a financial phenomenon, emerging out of a disequilibrium exchange rate in the macroeconomic sense. Thus, Blejer (1978) assumes that the black market is simply a means of adjusting private portfolios in the face of capital controls. Similarly, Gupta (1980) sees illegal foreign currency as an alternate asset, whose relative price (the black market premium) is determined by domestic money supply, real income, interest rate, the world price level, and the price of precious metals.

In contrast, there are partial equilibrium models of the real economy, which see the black market simply a sideshow. These include: Sheikh (1974, 1976), who attempts to estimate the welfare consequences of smuggling and its connections to capital flight and the black market; Culbertson (1975) who examines the link between purchasing power parity and the black market exchange rate. In this class are also the various welfare analyses of foreign trade regimes by Bhagwati and collaborators.[30]

Lastly, there are general equilibrium models, which attempt to incorporate the black market into a framework that includes real as well as financial considerations. De Franco (1985) attempts to construct a computable general equilibrium model of the Nicaraguan economy in which the financial sector includes illegal currency markets. Dornbusch et. al.- (1983), while presenting a partial equilibrium model of Brazil, use an underlying general equilibrium framework: they abstract from consequences for the real sector because of the belief that in case of Brazil the black market is too small to have significant feedback effects. De Macedo (1981) has a more elaborate general equilibrium model of the Egyptian economy, where the real and financial sectors are integrated. This paper uses many of the insights in the last two models. We see the interesting issues with regard to the black

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[30] e.g., Bhagwati (1978), various Chapters, including Bhagwati and Hansen (1973), Bhagwati and Srinivasan (1973).

market for dollars as the following: 1) how do shocks in the real economy influence conditions in the black market; 2) how is adjustment to these shocks helped or hindered by the existence and size of the black markets; and 3) how do the black market constrain policy responses to shocks. In section 1, we argued that the black market for foreign exchange emerged primarily out of the restrictions on foreign trade in gold, and that with the establishment of the market, there arose a supply (mainly underinvoicing of exports), and an even larger demand (smuggling of other restricted imports). In the present section, we turn to a theoretical analysis of the effects of such an arrangement. But first, a few preliminary comments are in order.

2.1 Efficiency in Illegal Transactions

The existence of a black market for foreign exchange does not necessarily mean that the domestic currency is overvalued in a macroeconomic sense.[31]   An excess demand for foreign currencies can be created by microeconomic reasons, namely selective restrictions on the importation of a particular good, service, or asset,[32] if the sale of legal foreign exchange is restricted to those buying for legitimate purposes.[33]   This fact is important because it is easier for an existing black market to respond to additional excess demand generated by a temporary overvaluation (due to inflation, terms of trade shocks, or fluctuation in relative demand for prohibited foreign assets), than if the market were to be

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[31] This point has been made by many writers. See, e.g., Gupta (1980: 237). See also, Culbertson (1975), Bhagwati (1978).

[32] The good/asset mentioned in the text is gold.   However, restrictions on foreign travel, contraband or luxury goods (consumer goods, electronic gadgets, textiles and clothing), or foreign assets may all lead to the establishment of a black market. This is the reason why the black market rate is often unconnected with purchasing power considerations.

[33] Thus, many countries have restrictions on importation of certain goods (e.g., narcotics), but since they do not link these restrictions to the sale of foreign currencies, they will not generate a black market for foreign exchange. On the other hand, developing countries tend to use foreign exchange dealings to enforce import restrictions, thus inducing the establishments of black markets even in "normal" times.

created anew with each disturbance. As a result, the black market can endure and grow, even when the official exchange rate is in line with overall balance of payments considerations. An interesting corollary of this fact is the common observation that despite repeated devaluations, the black market is consistently able to undersell the central bank.[34]

Related to the first point is the fact that there appear to be significant economies of scale, and learning by doing in these illegal institutions. Economies of scale are indicated by the sophistication of arrangements made for migrant workers in the Middle East. Such elaborate arrangements would not be possible unless the scale of operations was large enough to justify them. Similarly, the credibility of the exchange dealers is also connected to their size relative to the market, and the amount of time they have been in business.

Apart from considerations of credibility, learning by doing is relevant in forming contacts with officials, acquiring knowledge of clandestine routes, etc. These considerations indicate that there are likely to be significant barriers to entry into these businesses. This is borne out by Cowitt's (1985) observation that the illegal gold trade is handled by one group in Pakistan, and by a syndicate of two groups in India.

What is relevant for our purposes here is that the increase in size and age of the market will tend to make it more sophisticated and efficient. A larger market will be in a better position to take advantage of temporary disturbances in the foreign trade situation. This will be the case, particularly if the larger market has remained in existence for a significant amount of time.

This observation can be approached through the traditional framework of the supply and demand for illegal foreign exchange. An increase in the size of the market will generally

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[34] Of course, this result is caused by the fact that the central banks are always willing to buy foreign exchange at the stipulated price, but sell only under restrictive conditions. Dornbusch (1983), and Bhagwati (1978) mention instances where the black market rate dropped below the official rate when the central banks (temporarily) refused to buy foreign exchange unless it was shown to be legitimate.

increase the short run elasticity of the supply and demand for currency flowing into it.
To see this point, note that the elasticity of supply depends on the willingness of exporters
to smuggle out rather than to legally export their produce. Similarly, the elasticity of
demand depends on the ability of smugglers to expand their operations to take advantage of
a new source of disequilibrium. Both of these will depend on the response time of illegal
traders in taking advantage of market conditions, which will, in turn depend on the size of
the market and the time it has been in operation.

Any fresh source of supply to the black market will expand the size of this market,
and therefore of smuggling operations, leading indirectly to improvements in the efficiency
of these operations. Furthermore, the longer the market has been in existence, the higher
should we expect the efficiency to be. In other words, resource inflows through the black
market (such as unrecorded remittances) increase the elasticity of supply and demand for
illegal dollars from other sources as well. The obverse of this argument, noted by various
authors, is that black markets increase the elasticity of legal exports and imports with
respect to the exchange rate and restrictive policy as well.

The above argument, in a nutshell, is as follows: Black markets will exist in developing
countries in "normal" as well as in "abnormal" times, with the turnover becoming larger in
the latter occasions. The responsiveness of the turnover to shocks depends on the elasticity
of demand and supply of foreign exchange in the black market. Any economic or technological
change which reduces the cost of supplying currencies to the black market will directly
increase the supply elasticity. However, by increasing the size of the black market during
normal times, this will also increase the elasticity of supply of illegal foreign exchange
from other sources, as well as the demand for such currencies. By the same token, it will
increase the elasticity of supply and demand of legal foreign exchange by inducing it to shift
into the illegal market.

2.2 A Model of Currency Black Markets

The above considerations can be incorporated into a simple model of currency black markets. We shall focus on the effect of remittances, not only because they are important in Pakistan, but also since they are an example of economic institutional or technological factors which increase the supply of currency to the black market.

Consider a country which has two markets for foreign currency: an official market, with turnover generated by exports X^*, remittances (or elastic foreign resource inflows) R^*, and imports M^*;[35] and an unofficial (black) market with (smuggled) exports X, illegal remittances R, and smuggled imports M. There are capital controls in effect in the official market, with the result that the entire demand for foreign assets F, operates through the unofficial market. The official balance of payments B^* equals $X^*+R^*-M^*$, while the black market, which is assumed to be always in equilibrium, has a zero balance B (=$X+R-M-dF$).

To simplify the analysis, we shall assume that the total (official plus unofficial) supply of foreign exchange (exports and remittances) is exogenous, and that the switching between the two markets depends only on p, the black market premium.[36] Total imports are assumed to respond to changes in the terms of trade v,[37] and in the level of trade restrictions modeled as a uniform (equivalent) tariff t; switching between the two markets is dependent only on the difference between the black market premium p and the tariff rate t. The (illegal) demand for foreign assets F is assumed to consist of exogenous and endogenous elements, the latter depending on the black market premium p and expectations of future movements of the official exchange rate e*; these expectations, in turn, are assumed to

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[35] Throughout the model, terms with an asterisk denote a variable or parameter in the official market while those without the prime denote the black market.

[36] In case of the price variables, p, t, v, lower case letters represent logarithmic changes, i.e., p=dlog(P).

[37] This is equal to the exchange rate multiplied by the ratio of the domestic and foreign price levels.

depend on the official current account balance, B, the black market premium p, and on expected domestic inflation predicted by using the budget deficit, g.

2.2.1 The Model

(1) $dB = 0 = dX + dR - dM - dF$		black market equilibrium
(1a) $dB^* = dX^* + dR^* - dM^*$		official BOP
(2) $dM = -n_m.M.p + n_t.M.t - n_v.M.v$		smuggled imports
(2a) $dM^* = n_m^*.M^*.p - n_t^*.M^*.t - n_v^*.M.v + \underline{dM}^*$		official imports
(3) $dX = -dX^* = n_x.X.p$		exports
(4) $dR = -dR^* = n_r.R.p$		remittances
(5) $dF = \underline{dF} - f_p.p - f_B.dB^* + f_g.dg$		foreign asset demand
(5a) $dg = -k.t.[M^*.t + dM^*]$		change in gov revenues

Equations (1-4) give the determinants of the overall changes in the components of the current account. Exports and remittances are assumed to be exogenous, while imports depend on the terms of trade v and the effective tariff rate t. Equations (5-5a) are reduced-form relationships between the (illegal) demand for foreign assets and its underlying determinants. Exogenous shocks are represented in the shift term $\underline{dF}$, while endogenous effects are captured in three parameters: f_p reflects the direct (negative) effect of the black market premium, as well as the indirect (positive) effect through its influence on exchange rate expectations; f_B captures the effect of official payments deficits and their impact on exchange rate expectations; f_g reflects the effect of higher exchange rate expectations generated by government budget deficits. We assume that major fluctuations in government budgets are caused by changes in tariff revenues; thus f_g changes in response to changes in the effective tariff t, the quantity of legal imports M^*, or in the fraction k which parametrizes the proportion of revenue yielding import restrictions.

2.2.2 Definition of Parameters

The parameters of the model are mostly positive elasticities, defined below. Equation (6a) says that the illegal market cannot take over more than a fraction of the total flows. Equations (7-7c) impose restrictions on the various import elasticities. Equation (7) says that a change in the black market premium only influences the fractions going to each market; equation (7a) says that a devaluation reduces legal and illegal imports in proportion to their magnitudes;[38] equations (7b-7c) say that raising the tariff rate and the black market premium is equivalent to a straight devaluation for both markets. Equations (8-8a) also impose restrictions that an increase in illegal exports (remittances) is exactly offset by a decrease in official exports (remittances).

(6) $\quad a_i = i_j^* \, [i=X,R,M]$ $\qquad\qquad$ ratio: illegal/legal flows

(6a) $\quad 0 < a_i < a_i << 1$ $\qquad\qquad$ bounds on illegal flows

(7) $\quad n_m^* = (P/M^*).(dM^*/dP) = n_m \cdot a_m$ $\qquad$ premium elasticity (M,M*)

(7a) $\quad n_v^* = (V/M^*).(dM^*/dV) = n_v$ $\qquad$ exchange rate elasticity

(7b) $\quad n_t^* = (T/M^*).(dM^*/dT) = n_m^* + n_v^*$ $\qquad$ tariff elasticity (M*)

(7c) $\quad n_t = (T/M).(dM/dT) = n_m - n_v$ $\qquad$ tariff elasticity (M)

(8) $\quad n_x = (P/X).(dX/dP) = -n_x^*$ $\qquad$ premium elasticity (X,X*)

(8a) $\quad n_r = (P/R).(dR/dP) = -n_r^*$ $\qquad$ premium elasticity (R,R*)

(9) $\quad f_B = -(dF/dE^\theta).(dE^\theta/dB^*)$

(9a) $\quad f_p = -P[(dF/dP)+(dF/dE^\theta).(dE^\theta/dP)]$

(9b) $\quad f_g = (dF/dE^\theta).(dE^\theta/dg)$

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[38] Of course, this is because the black market premium is held constant. Generally, a devaluation is expected to bring down the black market premium, thus raising the level of smuggled imports.

We can now turn to the examination of the results of this model. We can solve this
model for its reduced form equations for the supply and demand of currencies to the two
markets, and for the value of the balance of payments in each. Since the black market is
assumed to be in balance by assumption, its solution will yield the value of the equilibrium
black market premium.

2.2.3 Solution of the Model

(10) $dS = -dS^* = (n_x X + n_r R).p$

(11) $dD^* = dM - (n_v/a_m).M.v - [n_m+(n_v/a_m)].M.t + n_m M.p$

(12) $dD = -n_v.M.v + [n_m-n_v].M.t - n_m M.p + dF$

(13) $dB^* = -dM + (n_v/a_m).M.v + [n_m+(n_v/a_m)].M.t - s_1.p$

(14) $dB = -s_2 dM + [(s_2+a_m).(n_v/a_m)]M.v + [(1-f_B).s_1+s_3+f_p].p$

$\qquad + [(s_2-1).n_m+(s_2+a_m).(n_v/a_m)+(k.f_g.t/a_m)].M.t + \underline{dF}$

(14a) $dB = n_v.M.v-[n_m-n_v].M.t+s_1.p-dF$

Where,

(15) $s_1 = n_m M+n_x X+n_r R$

(16) $s_2 = f_B-k.f_g t$

(17) $s_3 = k.f_g.t.n_m M$

2.3 Capital Flows and the Black Market

To interpret the solution, recall that the institution of capital controls is intended
to insulate the economy from short run changes in external conditions or market expecta-
tions.[39] In our model, this insulation is represented by the fact that capital flows, F,
are only a part of the black market and play no direct role in the official balance of

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[39]See George and Giddy (1983: Section 2.2.4-6).

payments.[40] The first result from the above exercise is that elastic foreign resource inflows, by expanding the black market help re-introduce capital flows into balance of payments considerations. Equation (13) shows that B*, the official balance of payments, responds to four different factors: a) macroeconomic shocks, dM;[41] b) terms of trade movements v;[42] c) changes in trade restrictions, t; or d) movements in the black market premium, p. Of these four, only the last mentioned variable, p, is responsive to short run changes in economic conditions. This is so, because p is determined in the black market for foreign currency, which includes the effect of the (illegal) demand for foreign assets. Hence, the economy could be reasonably insulated from these short run changes if the influence of p on the official balance of payments was small or insignificant. With this introduction, we can state the first proposition derived from the above analysis.

Proposition 1: An increase in remittance flows strengthens the connection between the black market for foreign currency and the real economy.

To demonstrate this, we refer to equation (13), where the influence of the black market on the official balance of payments is represented by the parameter s_1 $(=n_m \cdot M + n_x X + n_r R)$. A few things can be noted with regard to this coefficient: first, it is always non-negative, since all its components are non-negative; second, the size of the coefficient depends on the black market premium, going down to zero when p is too low or too high. The conditions determining precisely when s_1 is zero are important, because when this is so, the connection between official and unofficial markets is completely severed. This will happen if and only if each of the three components of s_1 are independently zero.

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[40] Equations (1,2).

[41] The term dM is intended to represent an increase in import demand as well as a supply shock in the face of inelastic demand.

[42] Changes in terms of trade can be occasioned by a devaluation, or a movement in relative prices.

In other words, the connection between the two markets is severed if, either each illegal flow ceases or it becomes totally unresponsive to changes in the premium rate.

To examine when the illegal flows themselves go to zero, we can look at figure 1, which represents the information presented in equations (6-6a). Smuggled exports X, and illegal remittances R, are zero at their lower bounds, i.e., when the black market premium is too low to elicit any flow into the illegal market. Smuggling of imports, M, is zero when the black market premium is higher than the tariff rate, at the margin. If there are quotas or prohibitions on certain items, the black market rate required to accomplish this feat may be very high indeed; however, if there is a uniform tariff restriction only, then M will go to zero when this tariff rate falls below the black market premium. In any event, it is clear from figure 1 that when any of the illegal flow is zero, its responsiveness to changes in the black market premium (at least on one side) is also zero. Thus the key to this issue is the responsiveness of these flows, and not necessarily their actual magnitude.
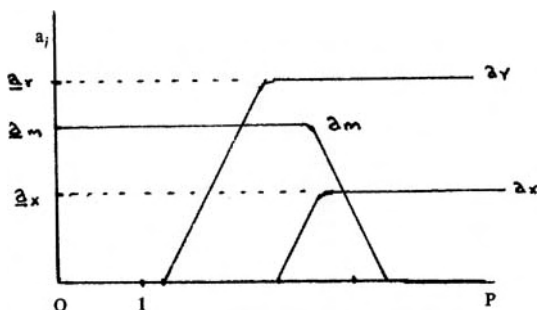
Figure 1

Share of remittances, imports, and exports flowing through the black market and their relation to the black market premium.

The elasticities n_p of X, R, and M with respect to the black market premium are zero when the relevant illegal flow hits one of its (upper or lower) bounds.[43] Hence, the coefficient s_f will become zero precisely when all three fractions hit one of their boundaries. Clearly, this can happen either if the premium falls to a very low level (close to unity), or when it reaches a very high level. In the first case, the supply of currency to the black market will shrink to zero, and further declines in the premium will not have any influence on the official market because the black market will be closed for all practical purposes. In the second case, the supply of currencies to the black market will reach a maximum, and any further increase in the premium will not be able to pull more resources out of the official sector.[44] In between these two extreme cases, a change in the black market premium, in either direction, will give rise to a switching of flows from the official market to the black market, or vice' versa. This can be described by an inverted U relation between the level of the black market premium, p, and the value of the coefficient s_f, as in figure 2.

Given this background, we can define the strength of the connection between the official and black markets in two different ways. First, the connection can be said to have become stronger if under "normal" circumstances a small change in the black market premium produces a large change in the official balance of payments (i.e., the coefficient s_f is larger, or, that each point on the curve BPB' in figure 2 shifts upwards to AQA'). Second, the connection will be stronger if the maximum amount of resources which can be switched from one market to the other by an unrestricted movement of the premium (up to the point that s_f becomes zero) is larger. This means that the area under the curve BPB' in figure 2 is larger, or that the ends B and B' move outwards to the positions A and A' respectively.

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[43] See equation (6a) above.

[44] The black market premium can indeed keep rising above this level on a speculative spiral. The only point is that these increases will not attract further resources out of the official market.
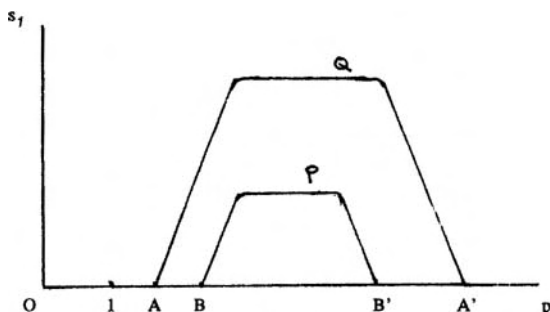
Figure 2

The parameter s_f and the black market premium

Remittance inflows bring about both of the above type of changes in the economy. Remittances increase the size of the coefficient s_f under normal times, because of three different reasons. First, the higher are total remittances the higher will be unofficial remittances, since there is no reason to believe that new remitters have a greater propensity to remit through official channels. Second, increase in the magnitude of remittance inflows improves the efficiency of the black market because of economies of scale and learning by doing. This can be interpreted as saying that at any level of the premium, a greater proportion of remittances will flow through the black market (i.e., R will increase more than in proportion to R*). Furthermore, an improvement in efficiency will generally lead to an increase in n_f, the elasticity of this fraction to changes in the black market premium. Both of these effects will help increase the value of parameter s_f.

Third, with the increase in the size of the black market, we will also find an increase

in the size and sophistication of the smuggling operations.[45] This will help increase a_m, the fraction of imports (as well as a_x, the fraction of exports) going through the illegal channels at any level of the black market premium, and also make these fractions more responsive to variations in the premium, i.e., bring about an increase in the parameters n_m and n_x. The net result of these influences will be to indirectly raise the parameter s_1, thus shifting the curve BPB' upwards at all points.

In addition to the above effects, remittance inflows also increase the total quantity of resources which can be diverted to unofficial channels. Since the cost of diverting these resources is much lower than the cost of diverting, say, exports, the lower bound of zero on the diversion will be reached at a lower level of the black market premium. Similarly, since export flows are subject to direct surveillance, the upper bound on the divertable exports is likely to be much lower than on remittances (i.e., $a_r >> a_x$). The first effect shifts the point B leftwards, while the second effect shifts B' rightwards in figure 2. Thus, with remittance flows, it becomes possible to divert much larger flows from the official to the black market and vice versa.

To summarize, an increase in remittance flows will, in addition to their direct positive impact on the coefficient s_1, also increase it indirectly through increases in the level of smuggled imports, M, and in the values of the parameters n_m, n_x, and n_r. The increase in s_1 will make the official balance of payments more responsive to small changes in the black market premium on foreign currencies. Also, remittances will expand the total volume of discretionary resources which can be switched between the two markets, and hence create larger fluctuations in the official balance of payments.

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[45] With the expansion of contacts, channels of operation, inclusion of new goods and services into the smuggling operations. An important aspect may be the utilisation of special dispensations of import licenses for remitters abroad. On the demand side, foreign travel may become more responsive to the black market conditions. Table 3 is instructive in this regard, since it shows an increase in estimated smuggling operations in Pakistan in the 1980s.

Proposition 2: A stronger link between currency black markets and the real economy erodes the effectiveness of capital controls.

Note that by disallowing capital flows (in order to insulate the economy from short run changes in external economic conditions), the central bank effectively relegates these flows to the black market. To see the connection between capital flows and the official market under these conditions, we can look at equations (13) and (14), the equilibrium conditions in the two markets. If $v=t=dM=e^*=0$, we notice that equilibrium in the black market requires,[46] $p=\underline{dF}/(s_1+f_p)$. Substituting in (13), we get:

$$dB=s_1.((\underline{dF}/(s_1+f_p))$$

Now, when s_1 is small[47] relative to f_p, then a small increase in the exogenous demand for foreign assets will translate into a large increase in the black market premium, which will have two effects. First, since dF depends negatively on p, the increase in p will help moderate capital outflows,[48] thus limiting their effect on the official market. Second, as was shown in proposition 1, when the change in p is large the coefficient s_1 will ultimately go to zero, thus placing an upper limit on the total amount of excess demand which can be transferred to the official market, completely insulating it eventually. With remittances flowing in, however, an increase in foreign asset demand will produce only a small increase in p, leaving both F and s_1 almost unchanged, and thus shifting the entire excess demand onto the official market. Hence, remittances help erode the effectiveness of capital controls.

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[46] To simplify the discussion, we have also set the parameters f_B and k equal to zero. Relaxation of this assumption strengthens the results presented below.

[47] This is the case when there are no (or small) remittance flows. See figure 2.

[48] This assumes that the direct negative effect of p outweighs the indirect positive effect through exchange rate expectations. The inflow of remittances may reverse this situation, and add a further source of instability into the picture.

The erosion of capital controls creates a self-reinforcing spiral. The ability of foreign assets demand to influence official payments balances will feed into exchange rate expectations, and so increases in the black market premium, rather than dampening foreign assets demand, may actually increase it, since the central bank may be forced to keep the official rate in line with the black market rate to avoid excessive fluctuations in payments accounts.

2.4 Devaluation versus Trade Restriction

To introduce the next result, we can start by comparing various policies used to combat payment imbalances. A country faced with such a situation has three options: borrow abroad,[49] devalue its currency, or impose some form of trade restrictions. In terms of our model, an exogenous increase in M^* will lead to a decline in B^* (a worsening of the balance of payments), which can be either accepted (borrowing), or be combatted by raising V (devaluation), or by raising T (tariffs or quotas). Different circumstances will generally admit of the optimality of one or the other of such actions. For example, Sachs (1982) argues that if the disturbance is expected to be temporary, it may be optimal to borrow to smooth consumption over time; on the other hand, permanent or long lasting disturbances may necessitate structural adjustment including currency devaluation and consumption reducing policies. The case for trade restrictions is made on various grounds, including: the perception that devaluation is an inegalitarian policy, creates political unrest (partly for the first reason), has an inflationary bias (and may therefore be self-defeating), and may not help restrict trade in the presence of short run inelasticities of demand and supply of tradable goods (elasticity pessimism). Analysts have also noted that the latter policies are more

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[49] Or, equivalently, to run down foreign reserves.

often resorted to by "inward-oriented" governments,[50] or those with a bias towards direct interference in the economy.

Be the above as it might, governments would tend to use the latter set of policies only if their results were the same as that of a devaluation, but without the attendant costs. The argument to be made here is that black markets make trade restrictions less effective in combatting balance of payments problems than a devaluation; and among trade restrictions, to make quotas less effective than tariffs. Thus the net result is to shift the government's preference away from quotas towards tariffs, and away from tariffs towards devaluations.

Proposition 3: Remittance inflows make trade restrictions less effective than exchange rate adjustments in combatting balance of payments problems.

In order to demonstrate this proposition, we can look at equations (13-14a). Ignoring capital flows for the moment (i.e., assuming dF=0), the equilibrium condition (15) requires:

$$dp/dv = -(n_v/s_1).M < 0$$

$$dp/dt = -(n_v/s_1).M + (n_\pi/s_1).M > 0$$

It should be pointed out that we assume $n_\pi > n_v$, i.e., <u>ceteris paribus</u>, the elasticity of smuggling with respect to the black market premium is higher than that with respect to the official exchange rate.[51] This means that while a devaluation will lower the black market premium, an equivalent trade restriction will raise it. Thus, while the former will reduce illegal remittances and smuggled exports, the latter will raise these as well in order to meet the now higher demand for smuggled imports. In fact, under the assumptions

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[50] See, e.g., Balassa (1984), Sachs (1985).

[51] The reasoning is obvious: equal proportional changes in v or p mean the same proportional change in the black market exchange <u>rate</u>, so both will reduce smuggling demand; howver, the latter also implies a higher <u>relative</u> rate in the black market, and will reduce smuggling demand even more.

of our model, if the change in p is small, the two effects on the official balance of payments will cancel each other out, leaving the only difference between the two policies to be their varying impacts on the black market premium.[52]   However, the fact that the two policies will have differing effects on p becomes significant when we introduce other factors, including capital flows.

Note that when the policy actions discussed above are called for, the black market premium is likely to be high to begin with. The trade restriction policy will, then, worsen the disequilibrium situation in this market, where the devaluation will improve it.

Now, if expectations of the current exchange rate are partially based on the black market rate, then an increase in the latter may lead to a higher demand for foreign assets; this will further increase the demand for black market currency, put a greater upward pressure on the black market rate, and possibly create a speculative spiral. If the restrictions imposed are perceived as a stopgap arrangement, the expectations of the eventual devaluation may feed the spiral even more strongly, leading to even greater upward revisions in the black market rate.

In the absence of remittances, when the maximum potential size of the black market is small, the upper limit may be reached rather quickly. In this case, the higher demand for foreign assets so created may not be able to induce a significant volume of resources to shift from the official to the black market. With remittances, however, the upper limit may not be approached so readily, and substantial capital flows may have to be accomodated by the official market. Of course, this will show up in the official statistics as a sudden decline in reported remittances as well as in measured exports, worsening the balance of payments situation despite fresh trade restrictions.

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[52] This result follows directly from our assumption that a change in the black market premium will only induce a switching of flows between the two markets, but not a net increase in exports, imports, or remittances.   For a model of real overall effects of the black market, see de Macedo (1983).

Since one of the ideas behind imposing restrictions is to protect the "essential" imports, it is necessary for the success of this policy that the payments situation not deteriorate too much. With remittances, this is likely to begin to happen with an excessive reliance on trade restrictions instead of exchange rate movements.

To summarize, the use of trade restrictions to combat payments imbalances is likely to generate discretionary (illegal) capital flows, which will have to be accomodated to a much greater degree by the official market if the country receives large amounts of discretionary liquid transfers. The problem will be more acute where the trade restrictions are perceived as a temporary arrangement, or where high black market premia signal future devaluations.

Proposition 4: Currency black markets reduce the effectiveness of non-tariff barriers in comparison with import tariffs for combatting payments disequilibria.

The argument behind this proposition derives from two premises. First, that increases in government budget deficits stimulate capital flight, because they help create expectations of future adjustments in tax and exchange rates. Second, that any system of non-price rationing of imported goods will yield, in general, a larger excess demand for foreign exchange than an equivalent price rationing scheme. This is likely to be so because the non-price system may exclude some people with higher marginal utilities for imported goods than the recipients.

Tariff barriers, in addition to moderating import demand, also support the government budget, and thus dampen inflationary expectations. As a result, they may help moderate the capital flight generated by an adverse payments situation.

Moreover, demand for smuggled imports under a tariff regime is viable only up to the point where the black market premium is less than the tariff rate. Under a quota regime, the upper limit on the black market premium will be higher. Both of these problems will exacerbate the impact of induced capital flight on the official balance of payments.

3. Black Markets And Commercial Policy

In this section, we shall present some evidence from Egypt, Turkey, Yugoslavia and Pakistan in support of the propositions presented above. The main argument of this chapter is that recent changes have increased the costs of controls on trade and capital flows, and therefore induced the governments and central banks to adopt market-type policies instead. This shift includes changes from rigid and overvalued exchange rates towards more flexible ones; from non-tariff towards tariff barriers on trade; across-the-board reduction of tariff levels; and increases in domestic interest rates to attract foreign savings.

This debate has been structured in terms of a conflict between two aims of commercial policy: increased volume versus increased allocative control over foreign resources. In earlier periods, most governments chose greater control because of various reasons, including "elasticity pessimism";[53] ready availability of foreign borrowing to mitigate the urgency of foreign resource demand; and most importantly, the fact that greater control was a short-run problem with immediate political and economic consequences, while the question of volume of resources was a medium-run issue which could easily be left to the future.

The interesting point about financial openness is that it ends up reversing this prioritization. Discretionary capital flows are highly elastic with respect to policy choices; remittance flows, in particular, have been as large as or often even larger than foreign aid inflows; they have also led to increased borrowing capacity of countries; it has been very difficult to direct the allocation of remittance resources into desired channels; and most importantly, that it is the volume of resources, and not the question of allocation which is the short-run problem. As a result, it becomes more rational as well as more politic to move policy towards the pursuit of increased resource inflows, rather

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[53]i.e., the belief that the amount of resources cannot be increased in the short-run.

than to use it to control the allocation of an available level of resources.[54]   This, in a

nutshell, is the change in attitudes brought about by openness.   The awareness of this

change of attitude, however, is apparent only through hindsight.   In actual practice,

governments tried to achieve both objectives simultaneously, often with unpleasant results.

3.1 Volume Versus Control

There is a certain paradox in trying to pursue simultaneously the policies of increasing

the volume of a certain resource and of controlling its disposition.   The first requires

the government to subsidize the producers, the second somehow to tax them.   One response is

to eschew control altogether, and to give incentives (possibly through subsidies) for

increased production as well as for preferred allocative decisions.[55]   Another option,

which surfaces in many guises is to try to discriminate between sub-marginal and marginal

producers, in order to tax the former and subsidize the latter.[56]   Yet another possibility

is to ignore the question of volume altogether and simply concentrate on controlling the

allocation.[57]

Governments confronted with this question with regard to foreign exchange, were often

inclined to use the third type of policies, but before moving towards the first type, they

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[54]This point has also been made by Paine (1974: 45-6): "The smaller the contribution of [remittances], the less the emigration country's policy is constrained to acquire them; the larger the contribution, the more the government has to concentrate on obtaining the expected repatriated earnings rather than earning or saving foreign exchange by other means."

[55]This, of course is the "market-type" solution to the problem, suggested by neoclassical economists. However, where the incentives produce unwelcome fluctuations, or create destabilising uncertainty, most government, particularly in the third world prefer to seek alternative solutions.

[56]For example the various multiple exchange rate schemes fall into this category. These schemes often tax supposedly inelastic "traditional" export sectors, and subsidise the new producers. Windfall gains tax on old oil producers was another such scheme, as also is the system whereby there is a graduated tax on income, with credits for investment.

[57]This corresponds to the conventional "elasticity pessimism" argument favoring high taxes on agriculture goods.

went through an intermediate phase where various forms of the second option were tried out, only to be found wanting The succeeding paragraphs will try to document this transition.

Unlike exports, which are often subject to fairly significant forms of taxation, no government has seriously attempted to tax remittance incomes.[58] Thus the object of policy has generally been to raise the amount of remittance inflows without interfering with the ability of the government to tax or control non-remittance inflows of foreign exchange. The classic policy was the use of a preferred exchange rate for remittances, while the other sellers had to use a lower rate.[59] Other discriminatory policies included the sale of assets or privileges to emigrants at subsidized prices.[60] However, Like Serageldin (1983: 91), most writers find that, "unless general conditions in the labor exporting country are conducive to the transfer of remittances, no individual scheme can be successful in attracting more than a small proportion of migrants' earnings." In the end, the countries discovered that a realistic, unified exchange rate is the most important incentive to attract remittances, and the only one which will work consistently.[61] Given the above description, we now turn to a brief examination of the experience of some remittance receiving countries in the recent past.

3.2 Black Market Premiums

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[58]The only exception seems to be the abortive attempt made by the government of Pakistan in 1976. This proposal, which sought to impose a 10% income tax on remittances, was hastily withdrawn when the resource inflow sufferred an immediate and sudden decline.

[59]These policies were used by various countries, e.g., Turkey (1974-79), Sudan (1975-79), Bangladesh (1979-present), Algeria (1972-present), and Morocco (1972-present).

[60]These policies include the sale of subsidised urban land to emigrants (Pakistan, Bangladesh, Sudan); special high-interest rate bonds (Egypt, Jordan); joint cooperative ventures with the government in industry or services (Pakistan, Turkey, Egypt); concessionary import privileges for emigrants (Bangladesh, India, Pakistan, Turkey, and the Sudan); and even the Turkish proposal to reduce compulsory national service requirement for male migrant workers for a fee.

[61]This point has also been made by Chandavarkar (1978).

Table 4
Black Market Premiums on US Dollars
(percent: end of year)

Year	Turkey	Yugoslavia	Egypt	Pakistan
1962	43.2	195.0	..	..
1966	40.1	16.6	111.0	74.0
1970	6.0	9.4	109.1	120.6
1971	9.6	7.8	100.0	212.0
1972	4.3	4.5	75.6	29.5
1973	5.0	-2.2	10.4	13.6
1974	6.1	0.9	18.1	22.2
1975	11.2	5.6	19.7	16.7
1976	8.4	7.2	5.9	13.1
1977	35.0	1.9	0.0	33.3
1978	50.1	11.0	6.7	37.9
1979	52.8	9.1	7.5	23.7
1980	16.0	13.1	9.1	27.3
1981	19.0	11.9	5.0	40.9
1982	15.1	18.4	7.5	24.6
1983	9.4	12.8	10.5	31.3

Source: Cowitt (ed.), <u>World Currency Yearbook</u>, 1985. <u>Pick's Currency Yearbook</u>, 1982.
Bhagwati (1978: 73). Swamy (1981: 58).

Table 4 gives the figures on black market premia on the US dollar in four major remittance-receiving countries. The striking feature of these figures is the rapid decline from the high levels of the premium in the 1960s and early 1970s, to the relatively lower levels in the late 1970s.

(Table 4 goes about here)

An important reason for the above behavior of the premia is that in the 1970s the large turnovers in the black market had become more costly, and that corrective action was being instituted much sooner than in the past. Related to this is the point that reliance on partial devaluations, and various multiple exchange rate schemes may have lessened. This is certainly true of Pakistan, Turkey, and the Sudan, and in a different manner, for Egypt.[62]

3.3 Egypt

In the case of Egypt, currency developments have been interesting precisely because the government has long been aware of its impotence in controlling capital flight, and has therefore instituted various actions to overcome this impotence.[63]

One of the earliest such developments was the creation of a "Tourist Exchange Rate" in July 1971 at $1.70/LE, a substantial discount over the official rate of $2.555/LE.[64] Since then the number of different exchange rates have proliferated as the Egyptian Central Bank strove unsuccessfully to compete with the black market. Besides the direct crackdown in 1972 on the so-called "free shops", the centers of black market activity, many indirect policies were attempted to reduce the influence of these markets. These included the de

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[62]Although not for Algeria or Bangladesh.

[63]The Egyptian government's policies to combat capital flight are described in various places. Cowitt (1985: 235-43) gives an overview. Other sources for general descriptions are de Macedo (1982) and Bruton (1983).

[64]At this time Tourism was the main source of black market currencies in Egypt.

facto elimination of capital controls in 1975, as residents were increasingly permitted to import goods against their foreign currency holdings,[65] and then the formal lifting of restrictions on ownership of foreign assets in August 1976. At this time, a Free Market Rate was also established for private sector currency transactions and imports. This rate has followed the black market rate quite closely since its advent, and is quoted by observers as the exchange rate. As Pick's Currency Yearbook remarked, in its usual cavalier tone, "unable to beat the black market, the Egyptian Central Bank decided to join it."

Today, Egyptians can own foreign securities as well as foreign currencies. They can maintain foreign currency bank balances abroad or with Egyptian banks, and can use these accounts to finance foreign travel or private imports or to engage in currency transactions. However, export proceeds still need to be repatriated, and commercial imports are controlled through the rationing of foreign exchange rather than through licensing.

Because of these developments, the Central Bank has lost control over the exchange rate as well as the disposition of liquidity in the country.[66] The free market rate follows closely the interest rate on Eurocurrency deposits.[67] Similarly, the volume of foreign resources held by commercial banks have grown rapidly without any semblance of Central Bank control over it.[68] Lastly, it appears that despite these changes, a large part of remittances are not available domestically.

Bruton (1983: 700) uses the above observations to argue that the result of the economic changes of the last decade is an overvaluation of the domestic currency, reflected not in exchange rate scarcity (since there is none), but rather in the shift of investment towards

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[65]Despite the fact that these imports were technically illegal! In fact, a special exchange rate called the Own Import Rate was created for this purpose in 1975.

[66]For an excellent discussion of the rapid increase in liquid foreign exchange holdings of Egyptian banks, see Bruton (1983), particularly, pp. 698-700.

[67]See Bruton (1983: 699).

[68]ibid.

nontradables, most notably construction.

3.4 Turkey

The Turkish case is particularly interesting because in the mid-1970s, the government attempted to use conventional policies of import-restriction and partial devaluation in order to control the adverse effect on the balance of payments of two significant events, the oil shock of 1973, and the invasion of Cyprus of 1974. The result of these policies was, however, to worsen the official balance of payments by shifting remittances (as well as tourist expenditures) into the black market. Short-term credits, which were used to finance the rapidly worsening situation, also dried up by 1977, and in September of that year the Central Bank suspended official foreign exchange dealings, not to be restarted until August 1979. As a result, producers were forced to go to the black market for purchase of raw materials and supplies, and the rapid depreciation of the black currency soon led to an unprecedented bout of inflation, reaching a level of 100% before declining to more manageable levels in 1982. Remittances, which had stagnated during this period, picked up again when the Central Bank re-entered the foreign currency market with a massive devaluation. However, the payments position continued to worsen with the rise in interest payments as well as the new oil shock.

The crisis was not resolved until after the military coup of September 1980, when with IMF and consortium assistance some measure of solvency was restored. Successive devaluations and import liberalization policies were used to reduce the size of the black market. Finally, in May 1981, the currency was placed on a controlled floating system, with the effective rate being determined daily. Capital controls have also been relaxed, and residents are now permitted to maintain foreign currency accounts with Turkish banks, and even to purchase foreign securities with prior approval.

3.5 Yugoslavia

Yugoslavia's experience is, in many ways, the mirror image of the Turkish one. Yugoslavia, which had fairly restrictive exchange rate and commercial policies during the 1960s, had started on the process of policy liberalization in the early 1970s. Following a much-awaited devaluation in early 1971, and two later ones in 1971 and 1973 with the devaluations of the dollar, the Dinar was placed on a controlled, floating basis in July 1973.[69] Subsequently, the currency was devalued on a regular basis, and kept in line with the black market rate, the premium ranging between 0-10 percent from 1973 to 1977, and between 10 and 20 percent thereafter.

One of the consequences of the early adjustment can be seen in the behavior of official remittance flows. Despite the recession in the labor importing countries, remittances to Yugoslavia managed to maintain their momentum, and the country seemed to have escaped the severe dislocation suffered by its neighbor to the east, Turkey.

Since 1979, however, Yugoslavia began facing payments problems of its own, at the time that it attempted to revive official currency markets in order to stem the rapid depreciation of the black market Dinar. These attempts have consisted of tightening of foreign currency controls, restrictions on foreign travel, reduction of duty-free allowances for returnees, and increases in import duties, in addition to various contractionary policies. Despite these policies, however, neither the inflation nor the payments position has been brought under control.

3.6 Pakistan

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[69]In February 1981, this was amended to a floating link to a trade-weighted basket of undisclosed currencies.

Pakistan, like Turkey and Egypt, has often been singled out by writers on account of its extensive array of trade controls and exchange restrictions. Even today, unlike the other two countries, residents are not allowed to own foreign currencies, foreign securities, or to maintain bank balances abroad. All proceeds from exports or invisibles have to be surrendered and all imports are subject to licensing.

Despite these restrictions, however, the experience of the 1970s and 1980s is quite different from that of the 1960s. Pakistan, like other South Asian countries, can be characterized in Bardhan's terms as "inflation-sensitive".[70] As such, there is a very strong resistance to devaluations which are seen as being inflationary, and by that token, politically destabilizing. Nevertheless, when the black market premium on the dollar began rising and drawing remittances away from the official sector, on January 1982 the Rupee was placed on a controlled, floating effective rate in relation to an undisclosed basket of currencies, and has been devalued regularly ever since then. At the same time, import tariffs have been reduced from an average level of 26% of the value of import in 1973, to 18% in 1982. The number of items on the Free List of imports has been increased steadily since 1973, and now includes 435 items instead of 342.

Pakistan devalued its currency from Rs. 4.76/dollar to Rs. 11/$ in December 1971, and at the same time abolished the complicated multiple exchange rate regime which had been built up to support the par rate. The subsequent devaluation of the dollar led to a reval-uation of the exchange rate to Rs. 9.90/$ in 1973, where it remained until January 1982. After the 1971 devaluation, the payments position deteriorated somewhat in the mid-1970s, but devaluation as a means of structural adjustment was resisted by the government. In the meantime the inflow of remittances helped the balance of payments somewhat, as did buoyant exports in the late 1970s and the subsequent dose of U.S. aid commitment in 1981. The interesting point of the story is that it was at this point of a strong current account

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[70]See Bardhan (1984: 68).

situation that the government decided to opt for a devaluation. The apparent reason seems
to be that the temporary overvaluation of the currency in the fourth quarter of 1981 had
caused a decline in remittance inflows, and a re-adjustment was recommended to avoid further
deterioration in these flows. Before remittances became a major factor in the economy, and
the black market for dollars expanded its size and efficiency, such an action would have
been seen as unnecessary, and would have been strongly resisted by the government.

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