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Notes

- 1 Few developing countries have adopted freely floating exchange rates for any period of time, and fewer still have maintained such a system as a permanent feature of their macroeconomic policy regime.
- 2 See Arida and Taylor (1985), Bruno (1979), Dauhahre (1987) van Wijnbergen (1982, 1983a) and Taylor (1983). The Neo-Structuralist view has been subject to a number of criticisms; see Agénor (1989), Buffie (1984), Kapur (1992), and Owen and Solis-Fallas (1989).
- 3 See Agénor (1990c) for a review of the literature.
- 4 Forward-looking expectations have by now become a major feature of developing-country macroeconomic analysis although the hypothesis remains subject to controversy, both in developing countries and elsewhere. See, for instance, Pesaran (1988).

1

Nature and Scope of Informal Financial Markets

Although the existence of informal economies is commonly accepted, there are very few detailed studies that attempt to determine the size of these markets as well as their significance for the economy and the design of economic policy. As mentioned previously, part of the problem is that by their very nature these markets are extremely difficult to monitor or quantify in any meaningful manner. Often the problem is compounded by the fact that the government attempts to regulate away informal activity, thus making such activity illegal. This makes it even harder to gather information on these markets.

In this chapter we examine the definition and significance of informal financial markets. We present an overview of what is currently known about these markets based on various types of information that has been collected in diverse contexts over an extended period of time. Our purpose is to demonstrate that these markets are indeed a widespread phenomenon in developing countries and that they constitute a significant portion of economic activity in most countries. Consequently, they can be expected to play an important role in the transmission of macroeconomic shocks.

1 The Informal Economy – A Definition and its Significance

The terms “informal”, “parallel”, “black”, “underground”, “fragmented”, “unorganized” “segmented” and “curb” markets have all

been used interchangeably in the literature to describe various forms of economic activity lying outside the officially regulated or monitored realm. In this manner, all activity that lies beyond the pale of official regulation or control is considered to be informal in nature. Since the sector is defined in this residual manner, and frequently labeled by emotional epithets such as "black marketing" and "underground", behavior in this sector of the economy has seldom been subjected to analytical or empirical scrutiny. In fact, the informal sector and all activity in this sector is subject to considerable ideological debate.¹

Informal activity is basically a market response of economic agents to their economic environment. As such this activity is demand-driven, generated purely by the needs of the marketplace. There is no specific area or segment of the economy to which such activity is confined. Such markets have been known to exist alongside similar activity in the formal sector, or to develop very rapidly in areas where no formal markets exist, or where formal markets are legally prevented from existing. At times, these markets are illegal, at other times they are merely tolerated. Sometimes, they are brought into the fold of formal activity by means of legislation.

The mere lack of an official blessing is often considered to be a testimony to the unproductive or undesirable nature of the informal sector and its markets. Effort is, therefore, put into considering legislative and other means of reducing or eliminating informal activity, rather than into understanding the growth and implications of the existence of these markets. As will be discussed below, according to the available evidence, unorganized or informal markets are not an insignificant segment of the economies of developing countries. The size and growth of these markets argues against the hypothesis that they are unproductive or undesirable. In any case, because such markets loom large in developing countries, there is a clear need to understand the nature of informal activity and its effect on the economy.

For a long time the informal sector was considered to be comprised mainly of survival activities for the destitute.² The large and rapidly-growing urban centers of most developing countries supported, and continue to support, a large amount of disparate economic activities to allow increasing inflows of migrants to be

supported without substantial growth of the formal sector. The informal sector was therefore considered to be comprised of the poor - casual labor and street hawkers - and recent migrants, all of whom were still in search of the an entry into the more secure and better-paid formal sector. As such, it has been considered to be primarily a transitory and transitional phenomenon which would disappear with economic development and growth. By this definition, the informal state in itself was considered undesirable and, consequently, the individuals in this state were perceived as attempting to exit the sector and enter the formal sector. Analysis therefore concentrated on how entry into the formal sector could be facilitated by economic growth and the extension of infrastructure.

This view of the informal sector was unable to incorporate parallel financial markets other than to regard them as a state of transition for the poor.³ As such, these markets were regarded as a necessary evil that ought to be regulated away. Consequently, the informal financial markets received little attention in the macro-economic literature. Few attempts were made to understand whether the effects of economic policy were in any way affected by the existence of these markets.⁴ However, attempts at increased control of informal financial markets did not achieve the desired effect, often serving only to encourage further innovation in such markets. Consequently, over time there has been a growing acceptance of the need to understand the economic significance of these markets, if only from the standpoint of how their existence effects the efficacy of policy initiatives.

Considerable evidence has been gathered in recent years to suggest that in virtually all countries - both industrial and developing - a parallel or an informal economy operates alongside the more visible and better-recorded official economy.⁵ By all evidence, the informal sector does not appear to be insignificant when compared with the official or the formal sector. In some cases, especially those of the developing economies, it has been suggested that this sector is at least as large as the official sector and may even be larger.

Unfortunately, because of the very nature of this sector, information on such activity is not easily obtainable. As a result, few systematic efforts have been made at collecting information on the size and the nature of informal markets. Most research in the area

consequently remains anecdotal in nature, relying on individual observations. The lack of information has also resulted in the concentration of analytical and empirical research on the recorded official sector only. The economic consequences, or the effects on economic behavior of the informal activity, are therefore not well understood.

By its very nature, informal activity is not specific to any one sector. If anything, it can be expected to pervade all sectors of the economy. However, from a macroeconomic perspective, the acknowledged role of well-functioning financial markets in industrial country macroeconomics suggests that informal activity in the financial markets of repressed economies may be critical to understanding the effects and the efficacy of economic policy. Before going on to develop analytical approaches to studying informal markets, we present a brief review of the scope, nature and implications of informal financial markets in developing countries.

2 Informal Loan Markets

2.1 Sources and Uses of Informal Credit

The informal credit market consists of a large number of diverse activities encompassing all forms of unregulated transactions. It includes the lending and borrowing transactions of very varied types of individuals and intermediaries, such as professional and non-professional moneylenders, private finance firms, indigenous bankers, rotating saving and credit associations, pawnshops, traders, landlords, and households.⁶ Attempts to classify transactions in the informal credit markets into reasonably mutually exclusive or exhaustive subsets are, therefore, thwarted by the diversity of activity in the sector. At the same time the largely unrecorded transactions that take place in this sector also make it very difficult to achieve a meaningful classification. Having said this, however, we have classified the activities in this sector into the following four categories:

- (a) *Occasional Lending*: Occasional, direct lending by individuals and institutions with a (perhaps temporary) surplus of funds.

- (b) *Regular Moneylending*: Lending by individuals or institutions specializing in lending using their own funds or intermediated funds.
- (c) *Tied Credit*: Lending by those whose main activity lies in markets other than the credit market but who tie credit to transactions in markets where their primary activities lie.
- (d) *Group Finance*: Various forms of cooperative efforts to generate loanable funds for individual credit needs.

The classification is by no means exhaustive. In fact the possibility of any individual participating in more than one of these markets occasionally and/or simultaneously cannot be ruled out. Given the fungibility of capital as well as the lack of regulation of informal credit markets, the likelihood is that of individuals simultaneously participating in many of these activities. In these circumstances, it can be expected that complete arbitrage will take place. Rates of return can be expected to be equalized across markets or activities. If not, borrowing will take place to arbitrage any information advantage. Inadequate flows of information are the only impediment to such arbitraging.

- (a) *Occasional Lending* In environments where consumer credit and small business loans are unavailable, friends, relatives and others who might have an identity with the borrower, are an important source of credit. Such loans are extended at various terms including at no interest and with no collateral. Often the terms depend on the nature of the relationship between the borrower and the lender. The repayment terms are also in keeping with the terms of the loans and may depend on the nature of the relationship or association. Frequently, repayment terms tend to be open-ended and may sometimes evolve into grants or even equity participation.

In an environment where institutional monitoring and enforcement mechanisms are weak and institutional credit for individual needs is virtually unobtainable, friends, acquaintances and relatives turn out to be an important source of funds. The relationship of the borrower and the lender minimizes the moral hazard that might be associated with credit and, therefore, implies lower monitoring costs. Furthermore, reciprocity is frequently observed in these relationships, allowing individuals to help tide each other

over difficult times or meet certain important needs by extending such loans to each other. These continuing social and economic ties that have developed over the years, perhaps even over generations, act as a means of enforcing the terms of the loan, or changing them in some mutually agreeable fashion.

In a credit-constrained environment such as that prevailing in most developing countries, these loans are used to meet the various individual small business and consumption needs. In agrarian societies where income tends to be uncertain and quite variable, such loans are used to smooth consumption over time. Certain lumpy consumption commitments, such as durable goods purchases, education, and marriages of children, have often been known to have been financed by loans if this type. Individuals who are looking for the capital to set up, or run, small businesses and who are denied credit for such purposes by the banking system find it easier to raise credit from their friends, acquaintances or relatives.

Intermittent lending to meet short-term liquidity needs is not restricted only to individuals and their acquaintance groups. In a credit-constrained environment, such as that which frequently prevails in most developing countries, firms also extend intermittent credit to each other. This is done on a reciprocal basis to smooth out short-term cash flow problems, and also occasionally to ease longer-term credit constraints. Firms which may have an excess of liquidity on hand, will on occasion place their funds on the informal market for lending to other firms who may, at that time, require liquidity. Unlike the individual transactions of friends and relatives, such lending often takes place on market terms. In India, the size of this market is estimated to be the equivalent of 13-25 percent of total bank credit to industry. In Korea, until recently funds were channeled from surplus firms and individuals via the "curb" market to industries in need of working capital. According to one survey, for example, in 1969 three-quarters of all respondent firms in that country had debts outstanding in the informal credit market.⁷

(b) *Regular Moneylending* Specialist moneylenders are also found conducting regular moneylending activities in informal markets using their own or borrowed funds. These individuals or

institutions operate regularly as a pure moneylending business without tying in their moneylending transactions to transactions in other markets. Examples of such individuals or institutions who specialize in moneylending activities are regular moneylenders, pawnbrokers, indigenous bankers and finance companies. The business of these regular moneylenders is often based on the moneylender's intimate knowledge of his clientele, which has relatively few links with other financiers whether formal or informal. This asymmetric information advantage that the moneylender has over any competition that is likely to arise from without the community gives the lender an almost monopolistic position. As a result, the demand curves facing such moneylenders are relatively inelastic, allowing these financiers to earn rents on the information that they possess. Borrowers often tend to be those who are unable to obtain credit from sources other than the moneylender.

Credit from this source is expensive and, therefore, often a last resort. Consequently, such credit is normally held for a short duration. Because of the information advantage of the moneylender and because of the limited alternatives available to the borrower, interest rates in this market often tend to be high, especially when estimated on an annual basis. However, contrary to popular belief, the high interest rates that are charged in these markets are not all pure rents that accrue to the moneylender. The moneylender does incur costs in the form of information and transaction costs, the risk associated with lending to individuals who are otherwise not creditworthy, and the maintenance of idle cash balances by the moneylender for immediate supply of credit. These factors may explain a substantial part of the high annualized interest rates that are sometimes observed in these markets. Credit is also allocated rationally among clients and in keeping with risk perceptions and past performance. Thus, for example, longstanding clients who have established creditworthiness are charged a lower interest rate than those who are first entering the market.

While some lenders in this category are pure moneylenders, others combine pawnbroking with moneylending activities. Pawnbrokers will lend against household valuables or assets which are provided by borrowers as collateral. The loan that is provided in return is serviced by the borrower for a predetermined duration, after which either the principal is repaid and the collateral

recovered or the latter is forfeit. The pawnbroker provides a valuable service to his clientele by providing liquidity, when needed, to assets that are otherwise illiquid. In many traditional societies household savings are invested in precious metals and ornaments and consumer durables. In times of need, these illiquid assets can be made temporarily liquid with the help of the pawnbroker.

The main interest of the pawnbroker is moneylending. The principal means of earning, therefore, is interest earning and not the sale of goods. Consequently, for maintaining his moneylending business, the pawnbroker is often not insistent upon seizing the collateral. Furthermore, in order to retain the clientele in the moneylending business, the pawnbroker is often prepared to extend the loan beyond the agreed duration so long as the interest continues to be paid.

In some countries, private finance companies operate like saving institutions, extending loans against deposits of investors. As a rule, these companies do not offer checking accounts and depositors are treated either as bondholders or as equity partners. They are created in response to the desire on the part of individuals to invest their savings at a market-determined rate in an environment where formal interest rates are regulated. The rates of return that they offer are often very high, especially when compared to officially regulated rates. Because of these high rates of return, they are able to attract depositors and grow rapidly.

The operations of these finance companies are normally just beyond the pale of regulators, who look upon them with considerable suspicion. On occasion regulatory action has been taken against such companies; on other occasions they have been forced out of business, often only to resurface in some other guise. For example, in Korea in 1972 they were forced by regulation to merge with the formal sector. On the other hand, they were forced by regulators to close down in Pakistan in 1979 and again in 1989. In Kerala, India, they were closed down in 1987.⁸

(c) *Tied Credit* An important form of credit that is observed in most countries is that which is extended between individuals or institutions that have a continuing involvement in some other market. For example landlords may extend credit to their tenants, a supplier to a purchaser, or an employer to an employee. In such

cases, the continuing business relationship acts as collateral. A continued good reputation, which includes the timely servicing, as well as the return, of debt, is needed for the business relationship to last through time. Consequently, the need for other more formal collateral is reduced, as are the transaction costs as well as the risks associated with lending. Such loans are also used as a means of ensuring continuing supply or demand, as the case may be. They also enable the small businessman whose access to the formal credit markets is limited to meet his working capital needs. Evidence suggests that tied credit may be a large fraction of total informal credit. In India, DasGupta (1989) found that tied credit accounted for the largest share of urban informal credit. In Malaysia, Wells (1980) found that the purchasers of agricultural produce provided almost two-thirds of all rural credit.

Prices of tied purchases or sales have frequently been observed to differ from market prices. Generally they tend to be below market prices, thus allowing the lender to charge an implicit interest rate. Although direct evidence is hard to obtain as the terms of these loans tend to be transaction-specific, it is often conjectured that tied credit is a means for lenders to extract rents or usurious interest rates from borrowers. It is hard to see how this is possible, however, if the supplier or purchaser does not have a monopolistic position in the product market. In cases where the primary market in which the borrower and the lender are transacting is competitive and where the lender has no advantage over his competitors in terms of obtaining credit, it is unlikely that the terms of the loan could deviate extraordinarily from prevailing market conditions.

(d) *Group Finance* This is a traditional form of finance that continues to be used frequently in both urban and rural areas. Individuals group together voluntarily to pool their savings on a regular basis to generate loanable funds for the membership. In this manner individuals, who might be credit-constrained because of the difficulty of access to official credit, are able to overcome this constraint. Rotating savings and credit associations (ROSCAs), as these groups are generically known,⁹ are very common in Asia and Africa, but less so in Latin America.

The distinguishing feature of ROSCAs is the periodic pooling of

deposits by its membership and the making of the pooled resources available primarily or exclusively to the membership. Members commit themselves to making a fixed deposit at regular intervals for as many periods as there are members. At each pooling of deposits the deposits are lent out to a member or some members. How these pooled resources are distributed is determined by the membership. The most common approach is to make the pool available to each member in turn. The rotation of access to the pool of deposits is determined in different ways, the most common of which are lotteries and bidding, with the former being most common for household associations and the latter being more common for those engaged in business activity.¹⁰ In the auction system, the potential borrowers indicate their demand for the pool by offering a discount on the membership contribution. The bid offering the highest discount wins the right to become the borrower of the pool and establishes the discounted contribution required of members. In this manner, the early recipients of the pool become net borrowers while the later recipients become net lenders and the size of the pool grows with the passage of time. The bidding system, therefore, ensures that, in each period, the pooled funds are loaned out at a market-determined interest rate.

ROSCAs are a flexible saving and loan cooperative effort that has been practiced for a long time in many different urban and rural settings. They are simple to operate, requiring no major organizational or monitoring costs. Individuals can group together and determine the credit allocation mechanism that most suits their own needs. They range from small associations of friends and relatives to large organizations of traders or manufacturers. Since the basis of most ROSCAs is the grouping together of individuals of similar background or those who have some form of common relationship, they allow both transaction costs as well as the probability of default to be minimized.

2.2 Size of Informal Credit Markets

There is little information, especially of a detailed quantitative nature, available on the size of informal credit markets in developing countries or on the transactions that take place in these

markets. The participants in such markets, either because of the need to maintain an informational advantage, or to avoid regulatory action, often prefer to remain anonymous and are reluctant to divulge information on their transactions to official agencies. Moreover, the heterogeneity of activity in the sector increases the costs of information gathering. Data gathering has therefore relied on occasional surveys and anecdotal information. Furthermore, such surveys are infrequent and have tended to rely on recall, with little attempt to develop systematic means to permit the size of these markets to be assessed and the trends in both the size and the composition to be determined.

Nonetheless, the available information on informal loan markets, while fragmentary and relying on disparate and noncomparable sources across countries, reveals a consensus that the size of such markets in many developing economies is by no means negligible. Table 1.1 lists some recent estimates of the size of informal loan markets in several developing countries. These estimates suggest that the share of informal credit in total credit varies from about a third to about three-quarters in these countries. Informal credit accounts for about a third to two-thirds of total credit in Bangladesh and China, about two-fifths in India and Sri Lanka, and two-thirds to three-quarters in Malaysia, Nepal, Pakistan and Thailand. Since loans in the informal sector tend to be smaller than those in the formal sector and of a shorter duration, the proportion of informal sector loans in the total is likely to be higher than the figures in table 1.1. In any case, these figures, despite all their shortcomings with regard to comparability and timeliness, do indicate that informal credit markets are an important feature of developing country financial markets.

Since much of the activity in the informal sector results from regulation in formal markets, it is natural to expect that the informal sector would shrink with financial liberalization or deregulation. In India, the decennial All-India Rural Credit Surveys show that the informal sector has declined in importance over the last two decades. In 1962, 85 percent of the outstanding rural debt was owed to lenders in the informal sector. By 1982 this figure had declined to 40 percent because of the rapid expansion of banking in the rural sector over the two decades. A similar decline also seems to have taken place in other countries where

Table 1.1 Share of informal credit, rural and urban, in selected countries

Country	Share ^a	Remarks	Source
<i>Bangladesh</i> Rural	33-67	Share of total volume of rural borrowing	Range of estimates by Rahman <i>et al.</i> (1989), Hussain (1983) and Credit Survey, 1987
<i>China</i> Rural	33-67	Share of borrowing, mid-1980s	Various Studies reviewed by Feder <i>et al.</i> (1989)
<i>India</i> Rural	38	Share of outstanding household debt owed to informal sector, 1982	All-India Debt and Investment survey, 1981-2
Urban	40	Share of outstanding household debt owed to informal sector, 1982	All-India Debt and Investment survey, 1981-2
<i>Korea</i> Rural	51	Share of average outstanding liabilities held by farm households	Yearbook of Agriculture and Forestry, 1982, Ministry of Agriculture and Forestry
<i>Malaysia</i> Rural	75	Share of borrowing	Wells (1980)
<i>Nepal</i> Rural	76	Proportion of farm families borrowing from informal sector 1976-77	Agricultural Credit Review Survey, 1985
<i>Pakistan</i> Rural	69	Share of borrowing, 1985	Pakistan Rural Credit Survey, 1985
<i>Philippines</i> Rural	70	Share of borrowing, 1987	Philippines Institute of Development Studies, 1988
Urban	45	Share of borrowing, 1987	Philippines Institute of Development Studies, 1988

Table 1.1 (cont.)

Country	Share ^a	Remarks	Source
<i>Sri Lanka</i> Rural	45	Share of borrowing among paddy farmers, 1975-76	Survey of Credit and indebtedness, Central Bank 1976
<i>Thailand</i>	66	Share of debt outstanding, 1987	Philippines Institute of Development Studies, 1988

^a Share of informal credit in total credit allocation (percent).
Sources: Asian Development Bank and the World Bank (1990).

the formal financial system has been liberalized.¹¹

Given that the possibilities of borrowing from the formal sector where interest rates are low and lending in the higher interest rate informal sector cannot be ruled out, activity in the informal sector can be expected to be affected by the credit policy of the government. Credit policy could also affect the informal sector via its general effect on the economy. However, the entire informal sector may not be affected by events in the formal sector. Chandravarkar (1987) makes a distinction between the "autonomous" informal sector which has developed indigenously and in many ways precedes the formal sector (e.g. ROSCAs, moneylenders, etc.) and the "reactive" part of the sector that is a response to regulations, credit constraints or other deficiencies of the formal sector (e.g. finance companies). It is the second component of the informal sector that would be more directly affected by credit policy and the level of financial repression and therefore would interact with macro-economic considerations in the formal economy. For example, an increase in the rate of inflation may increase both the supply of funds to, and the demand for loans from the informal sector by reducing the real deposit interest rate in the formal sector and increasing the demand for foreign exchange or for real assets such as real estate and the accumulation of stocks of durable goods. The reactive component would also be the most responsive to any changes in regulation or the extent of liberalization. The autonomous component, which is based more on exploiting

asymmetric information advantages and low transaction costs, may exhibit less response to policy changes.

2.3 Interest Rates in Informal Markets

Given the heterogeneity of loans, the risks associated with them, and the costs of monitoring them as well as the various implicit contracting arrangements, information on interest rates charged in the informal markets is very difficult to obtain. The traditional view of these markets that considers them to be usurious has also tended to make the lenders in these markets more circumspect about providing information and the borrower more aggressive in his exaggeration. As a result various usury laws have been passed in several countries, though they have remained ineffective in these markets, with observed interest rates often higher than those prescribed by these laws.¹²

Available evidence suggests that interest rates have been substantially higher than those prevailing in the formal markets. Tables 1.2

Table 1.2 Non-institutional rates of interest, 1968–71

<i>Region and country</i>	<i>Date</i>	<i>Lower^a exceptional</i>	<i>Usual^b</i>	<i>Occasional^c</i>	<i>Higher^d exceptional</i>
<i>Africa</i>					
Burundi	Early 1960s				300
Ethiopia	1970	40–60	70	90	120
Ghana	1955		150	200	100
Ivory Coast	1972				
Madagascar	1962		30	100	
	1971		20–50	50–70	
Nigeria	1958		10–50	70	
	1961	Less than 10	60	80	
Senegal	1960s		60	130	
Sudan	1972				200
<i>Asia</i>					
Hong Kong	Early 1960s		30–40	60	120
India	1962	6–12	18–37	33.3–50	100–150
Indonesia	1950–57		40		80–100
Korea	1969	38	42–54	72	100
Malaysia	1956		24–36	40–60	133–200
Nepal	1969–71	10	25	50	

Table 1.2 (Cont.)

<i>Region and country</i>	<i>Date</i>	<i>Lower^a exceptional</i>	<i>Usual^b</i>	<i>Occasional^c</i>	<i>Higher^d exceptional</i>
Pakistan	1962		20–32	46	100
Philippines	1954–55	10–20	25–30	100	200
South Vietnam	1955–67	12	36	60	
	1972		30–36	60–72	
Sri Lanka	1969	6		35	Above 100
Thailand	1962–63	11	22–35	40–50	80–150
<i>Latin America</i>					
Bolivia	1961		48	98	120
Brazil	1969	15	29–40	80	
Chile	1964–65	27	85	105	155
Colombia	1963		24	60	95
Costa Rica	1969	12	18–24	35	Above 100
Ecuador	1965–66	2	20–27	50	80
El Salvador	1970		25		
Honduras	1971		40		
Mexico	1955		36–72	144	300
Paraguay	1972	18	24–30	36	60
<i>Middle East</i>					
Afghanistan	1963		33	50	
	1971	18	35	30	48
	1971	7	18–24		
Iran	1971				
Jordan	1971		20		
Lebanon	1972	10	16–20	25–36	

^a Refers to the lowest rate reported.

^b Refers to the most frequently reported rate – or the mode of the distribution.

^c Reported rates that lie between the "usual" and the highest.

^d Highest rates reported.

Source: U Tun Wai (1980).

and 1.3 present some information on non-institutional interest rates in various countries. Although the information is dated, it clearly shows that prevailing interest rates, though exhibiting wide variation, tend to be high and generally higher than those prevailing in formal markets. Whether these rates are the effective rates facing borrowers or not is not clear given the various contracting arrangements that are linked to each loan. For example, as discussed above, it is not unusual for the price of a product to be tied

Table 1.3 Interest rates in informal rural credit markets

Survey region and period	Mean interest rate by sector	
	Formal	Informal
Nakhon Rachisma Province, Thailand 1984-85	12-14	90
India		
1951	3.5-12.5	7-35
1981	10-12	22
Chambar, Pakistan 1980-81	12	79

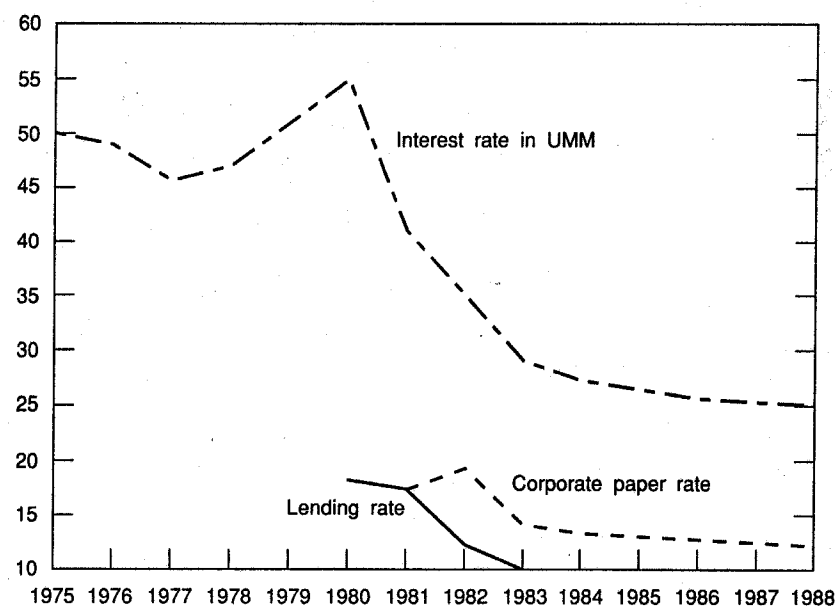
Source: World Bank Economic Review, Symposium Issue, (1990).

to the interest rate or the amortization of the loan. Moreover, on various forms of moneylender or pawnbroker debt, the lender treats his debt as the selling of a consol as he is less interested in the return of the capital as in obtaining a high interest rate on his investment.

There has been a considerable debate on the degree of monopoly in the informal markets, prompted by the observation of high rates of interest such as those presented in tables 1.2 and 1.3. A recent survey of a local market in Pakistan found an excess supply of lenders, indicating that, at least in that market, there is likely to be a fair degree of competition among moneylenders. This suggests that entry into the business of lending may be quite free (see Aleem, 1990). Lenders were, in fact, finding it difficult to cover their fixed costs adequately over the relatively small amount of loans that they were contracting. Though imperfect information and an established clientele allowed some lenders to operate above their average cost curves, Aleem (1990) found that the main reason for the high interest rates were (a) the high costs of loanable funds which themselves were sometimes obtained from the informal markets; (b) the relatively large costs of monitoring and administering the loan and (c) the costs associated with delinquency.¹³

Since the size of the informal markets can be expected to shrink as deregulation takes place and as financial innovation is permitted

in the formal sector, one would expect interest rates in the informal markets to show a declining trend over time. This would happen not only because of a trend toward liberalization in the financial markets but also because of improved information flows and means of reducing transaction and monitoring costs. These trends would be reinforced, especially in developing economies, by financial deepening and increased monetization accompanying economic growth (see Fry, 1988). As interest rates in the informal markets decline, the spread between the interest rates in the formal sector and the informal sector also declines. Unfortunately, except for Korea, there are no consistent time series data available on interest rates in informal markets that would allow these hypotheses to be fully tested. Figure 1.1 presents interest rates in both the informal and the formal sectors for Korea for the years 1975 to 1989. A clear declining trend is visible in the informal sector interest rate following the initiation of the financial sector liberalization in 1980. As

**Figure 1.1** Korea: interest rates

Sources: Sample Survey by Bank of Korea and *International Financial Statistics*

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a result of this decline, the spread between the interest rates in the two sectors narrowed considerably. Table 1.4 also shows data across two decades for various developing countries, suggesting that interest rates in the informal sector have displayed a declining trend.

Because time series observations on interest rates in informal credit markets are not readily available outside of Korea, formal testing of hypotheses about the determination of such interest rates is difficult. For example, the "high" informal lending rates reported in tables 1.2 and 1.3 may reflect neither monopoly power nor the cost of doing business in informal markets, but rather macroeconomic forces such as domestic money market conditions or international interest-rate arbitrage in the presence of expected devaluation premia. Recall that, in the absence of organized secondary securities markets and in the presence of financial repression, lending in the informal credit market may represent

Table 1.4 Non-institutional interest rates

Region	No. of countries		Interest rate		
	1948-51	1968-71		1948-51	1968-71
Africa	1	7	Mean	45	65
			Median	45	60
Asia	10	11	Mean	41	32
			Median	31	30
Latin America	5	10	Mean	48	38
			Median	30	30
Middle East	6	4	Mean	44	24
			Median	43	20
All regions	22	32	Mean	44	40
			Median	33	30
13 countries common in both periods ^a			Mean	40	30
			Median	34	28

^a These countries consist of Nigeria, India, Pakistan, Philippines, South Vietnam, Sri Lanka, Thailand, Columbia, Honduras, Mexico, Jordan, and Lebanon.
Source: U Tun Wai (1980).

the relevant opportunity cost of holding money for domestic residents. If so, informal loan rates may play the role in repressed economies of market-determined interest rates or securities in industrial countries, and as such would respond primarily to domestic money market conditions. Alternatively, in poor economies market-determined rates in informal credit markets may respond primarily to arbitrage opportunities between domestic lending and foreign lending (or the holding of foreign currency).

Determining the extent to which informal loan markets may respond to these alternative influences is important for the same reasons that tests of capital mobility are important in industrial countries - that is, the short-run efficacy of monetary and fiscal policies is at stake. Such tests could be undertaken through the estimation of interest parity relationships if observations on informal loan rates were readily available. In their absence, indirect means have to be employed. Appendix B presents a series of tests addressed to the question of whether the unobservable market-determined interest rates in informal markets in a large number of developing countries are influenced primarily by domestic money-market conditions or by arbitrage relationships with foreign financial variables.¹⁴ Surprisingly, the results indicate that the latter are dominant. This suggests that informal credit markets are quite efficient in intermediating between domestic and external financial conditions, and supports our contention that agents in these markets are relatively effective and well-functioning financial intermediaries.

2.4 Implications of Informal Loan Markets

Informal financial markets, as we have seen, seem to perform a useful economic function in the evolution of the financial sector in developing countries. They allow access to credit, albeit at high interest rates, to the small borrower who is otherwise unable to borrow. In some cases, they also allow small savers to obtain high interest rates on their savings and hence could be an inducement to save.¹⁵ However, one must be careful in pushing the notion that informal markets may encourage savings too far, for the bulk of the transactions in the market are related to loans and most often

loans are made from the lenders' own funds. Nevertheless, instruments such as ROSCAs are likely to encourage saving. The high interest rates charged in these markets are not totally usurious or monopoly rents as high transaction and administrative costs are incurred in making these loans. The opportunity costs of such loanable funds as measured by the rates of return in alternative activities are also commensurately high.¹⁶

At the macroeconomic level, concerns have been expressed for the efficacy of monetary and fiscal policy in an economy where such markets are large. On its own the sector creates no deposits and hence does not directly affect the money supply. However, transactions in informal markets tend to be based primarily on currency. The large currency holdings that are accumulated therefore have the potential of reducing the authorities' control of the money supply. Attempts at monetary creation, for example, may be frustrated by a flight of currency from the banking sector into the informal sector, hence limiting the banks' ability to create deposits. A recent study in India found that there was evidence to support the view that the effects of monetary and credit policy are dampened but not completely frustrated (see DasGupta, 1989).

On the fiscal side, the government finds that the informal market frustrates its efforts at revenue collection as the bulk of informal transactions are officially unrecorded. Government revenue collection efforts must, therefore, be concentrated on the formal sector. However, attempts to increase revenues in that sector by means of increased taxation, say on the interest earnings of that sector, induces a switch to and, therefore, an increase in activity in, the informal sector. Consequently, the tax base of the government becomes smaller and more unstable as informal markets grow in size.¹⁷

3 Parallel Markets for Foreign Exchange

There has been growing recognition over the past few years that widespread exchange and trade restrictions in developing countries have been ineffective in preserving foreign reserves or in supporting an inadequate exchange rate. Evasion has been endemic and illegal markets for goods and foreign currencies have expanded,

defeating the very purpose of controls. Although, as with informal credit markets, the nature of parallel currency markets precludes collection of detailed and reliable data, they appear to be common phenomena in developing countries, with parallel exchange rates deviating in some cases considerably from official rates.¹⁸

Again in similarity to informal loan markets, the often illegal nature of transactions implies that information on the functioning of parallel currency markets is neither readily available, nor very reliable.¹⁹ The major qualitative features of these markets are, however, relatively well documented, suggesting that there are common features to be found in a variety of institutional settings. This section examines the nature and scope of parallel foreign currency markets in developing countries, and highlights their basic structural characteristics.²⁰

3.1 Emergence of Parallel Currency Markets

Parallel markets – whether for credit, foreign exchange, or any other good – generally 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 a large majority of developing countries are subject to both kinds of restrictions.²¹ Typically, the exchange rate is officially pegged by the central bank, and only a small group of intermediaries are permitted to engage in transactions in foreign exchange. Sale of foreign currencies is, in principle, restricted to uses judged by the authorities to be “essential” because of their effect on economic development or balance of payments viability. As a consequence, some of the supply is diverted and sold illegally, at a market price higher than the official price, to satisfy the excess demand. The proportion by which the parallel market exchange rate exceeds the official rate, the “parallel market premium”, depends in general upon a host of factors – in particular, the penalty structure and the amount of resources devoted to apprehension and prosecution of delinquents – and may vary substantially over time and across countries.

Figure 1.2 shows the evolution of the parallel market premium in nine developing countries in the early eighties.²² The charts

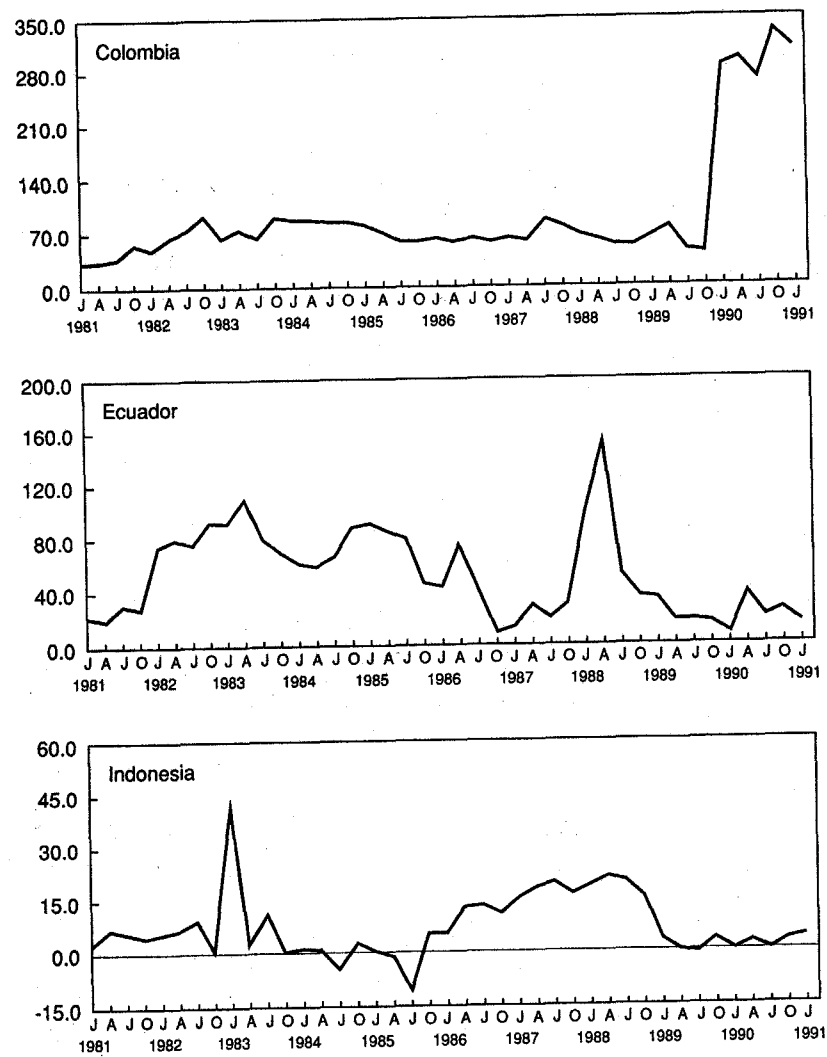


Figure 1.2(a)

Figure 1.2 Parallel market premia in developing countries (in percent)
 Source: International Financial Statistics and World Currency Yearbook.

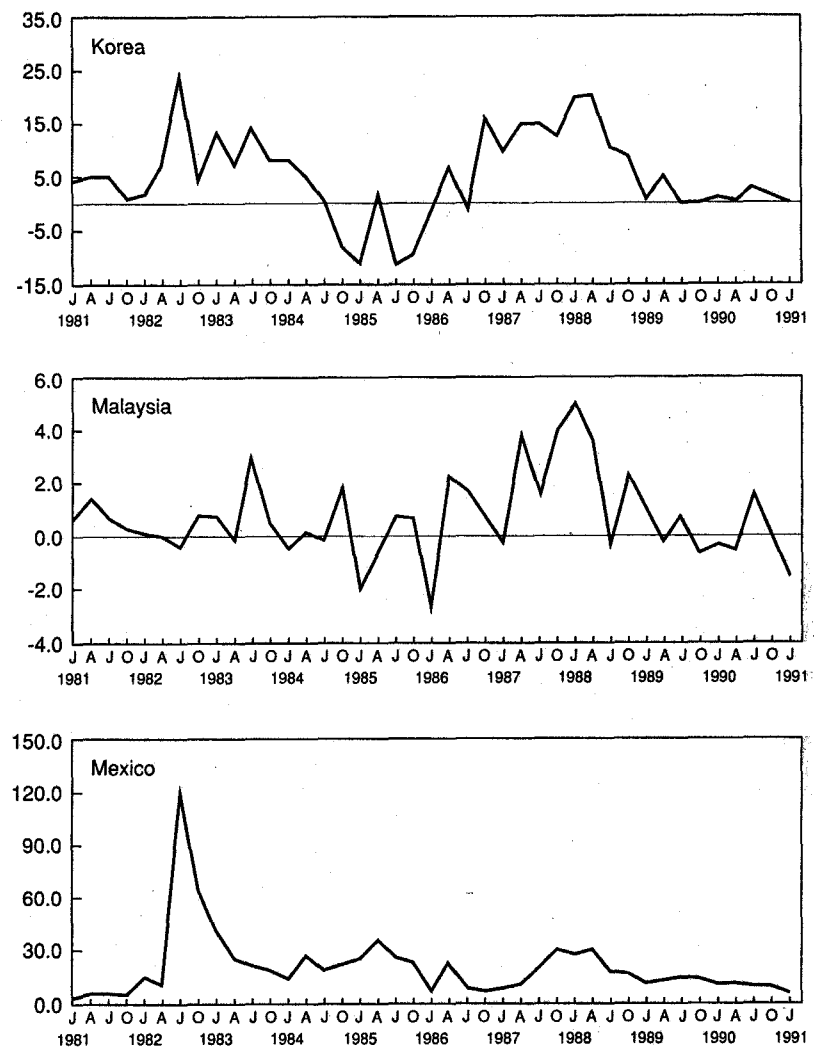


Figure 1.2(b)

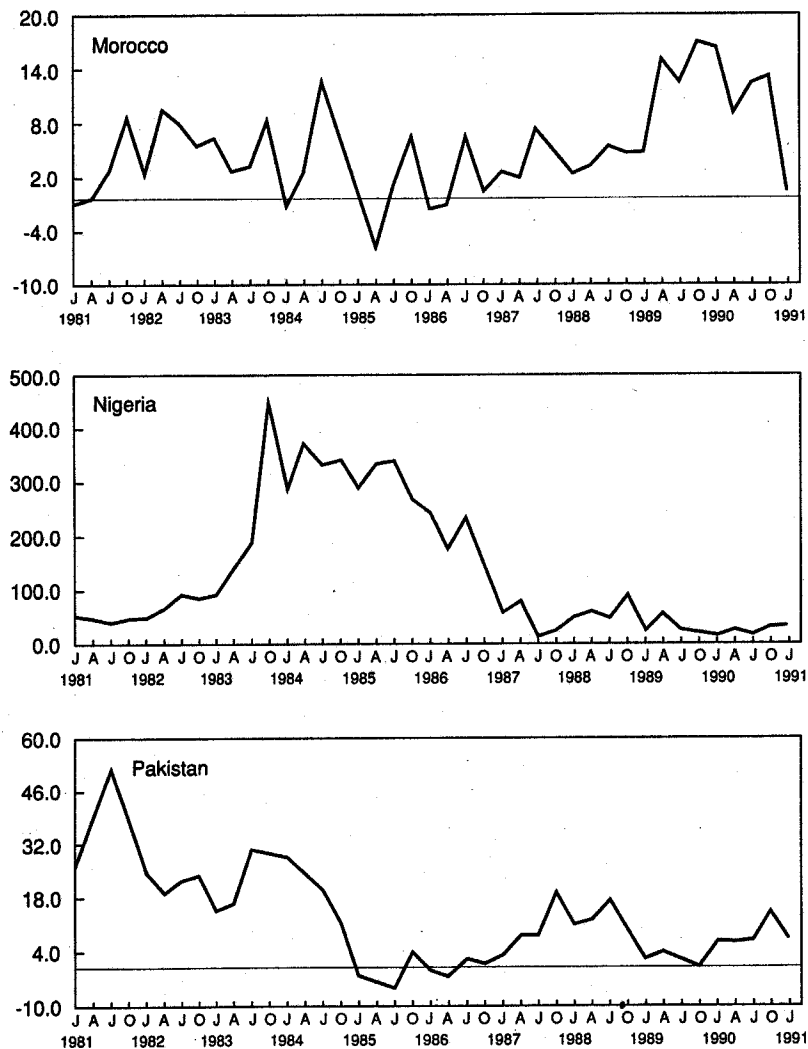


Figure 1.2(c)

show that the premium typically displays large fluctuations over time and across countries – a phenomenon often seen as reflecting the asset-price characteristics of the parallel exchange rate.²³ In periods characterized by uncertainty over macroeconomic policies, or unstable political and social conditions, parallel market rates tend to react rapidly to expected future changes in economic circumstances. The charts also indicate that the premium has been at times substantially negative in some countries, a somewhat surprising fact since exchange restrictions in the official market relate typically to the purchase of foreign currency and not to the sale. Although it is difficult to systematically rationalize episodes of negative premia, a number of cases can be accounted for by the following factors. First, in outward-oriented economies that have experienced high rates of growth and large external surpluses (notably in Asia), the central bank has at times restricted the rate of accumulation of foreign exchange by the banking system, leading to periods of temporary excess supply of foreign currency in the parallel market. Second, periods during which a significantly negative premium has emerged may have been associated in some countries (Morocco, for instance) with expectations of a revaluation of the official exchange rate. Finally, a negative premium may have emerged during periods when commercial banks have not been allowed to buy foreign currency without proper identification of the seller. In such circumstances, a negative premium represents essentially a “laundering charge” (Dornbusch *et al.*, 1983) which is paid by agents who have no legal right to possess the foreign exchange that they are offering for sale.

Parallel currency markets in developing countries have emerged primarily due to foreign trade restrictions and capital controls.²⁴ In the case of the former, the process starts with the government trying to impose regulations (licensing procedures, administrative allocations of foreign exchange, prohibitions, etc.) on trade flows. The imposition of tariffs and quotas creates incentives to smuggle and fake invoices (so as to lower the tariff duties), by creating excess demand for goods at illegal, pre-tax prices.²⁵ Illegal trade creates a demand for illegal currency which, in turn, stimulates its supply, and leads to the creation and establishment of a parallel currency market if the central bank is unable to meet all the demand for foreign exchange at the official exchange rate.²⁶

Under capital controls, the parallel market expands to become a major element in financing capital flight and portfolio transactions, foreign currency being a hedge against adverse political change and – in high-inflation economies – a hedge against the inflation tax.²⁷ There are, evidently, many other factors that may help explain the development of a parallel currency market in a particular country; in Pakistan for instance, the rapid expansion of the illegal market for foreign exchange in the late 1970s is often viewed as being primarily the result of the sudden influx of worker remittances from the Middle East (Banuri, 1989). In Colombia and Guyana, the development of the illegal market for dollars has been closely associated with drug-related activities (Thomas, 1989).

Whatever the initial factors leading to the emergence of a parallel market in foreign currencies, in any given country, the size of this market will depend upon the range of transactions subject to exchange controls, as well as the degree to which these restrictions are enforced by the authorities. In countries where the degree of demand rationing in the official market for foreign exchange is low, the parallel market will play only a marginal role. Conversely, in countries where balance of payments deficits are chronic and where the central bank does not have sufficient reserves (or the borrowing capacity) to satisfy the demand for foreign currency at the official parity, parallel currency markets will typically be well developed and organized, with an exchange rate substantially more depreciated than the official rate.

The coexistence of an official and a parallel market in foreign exchange results from the possibility of potential penalties – or, in other words, expected costs – on private agents who fail to conform with pricing or other regulatory directives (surrender requirements on exports, etc.).²⁸ Pitt (1984), and Jones and Roemer (1987), for instance, suggest that the existence of legal and illegal markets is based on how penalties are levied, that is, on the determinants of getting caught. Both the legal and the parallel markets will exist if the risk of penalties is reduced by engaging in legal sales which mask profitable but illegal transactions. However, even if the probability of detection depends upon illegal sales, the official market may still exist. This will occur if the expected penalties for illegal transactions drive the net marginal revenue of parallel market sales below the official selling price at quantities where

official sales remain profitable. Without these requirements, and given the pressure of competitive forces, the parallel market would likely collapse and a unified official market would emerge.

Parallel currency markets, although illegal, are often tolerated by the authorities in developing countries.²⁹ Although exchange dealers do not always advertise their services, “local” markets are substantially unified and the prevailing price is common knowledge among all those with an interest in it.³⁰ In some countries, transactors go through personal intermediaries, while in others the market is dominated by a small number of “big” operators – who fix the exchange rate, sometimes on a daily basis, based on their judgement of supply and demand – followed by a large number of intermediaries, who are physically present in the market on a day-to-day basis. The spread between what the intermediaries pay and what the major operators pay them is the source of the intermediaries’ income, thereby leading to the emergence of a spread between asking and trading rates. One consequence of this type of intermediation is that the actual size of the market is difficult to evaluate, and estimates become subject to wide margins of error, as indicated above.

3.2 Supply and Demand for Foreign Exchange

Transactions in parallel currency markets usually take the form of operations in cash, but checks are also commonly used in some countries. In markets where the risk of default is low and the surveillance of international transfers is ineffective, transactions in foreign currency notes are sometimes completed abroad. In Latin America and Asia, the principal traded item is US currency notes, although bilateral trade with the United States accounts for only a small share of external commercial transactions for some countries.³¹ Sources of supply and demand vary from country to country, and depend heavily on the nature and effectiveness of exchange restrictions imposed by the authorities.

The supply of illegal foreign currency comes in general from five possible sources: under-invoicing and smuggling of exports, over-invoicing of imports, foreign tourists, and diversion of remittances through non-official channels.³² In most circumstances, although

all five sources are likely to be utilized to some degree, there is in general a "dominant" source that may vary over time and across countries. For instance, the smuggling of exports was considered to be a major source of supply in Pakistan, India and Turkey in the early 1970s (Gupta, 1981, 1984). More recently, Gulati (1988) has estimated that during the period 1977-83, under-invoicing of exports as a percentage of official exports was 20 percent for Argentina, 13 percent for Brazil, and 34 percent for Mexico. Foreign tourism is regarded as a dominant source of supply of foreign currency in the case of Caribbean countries, while worker remittances represent the key component in the case of Egypt (Bruton, 1983), Morocco, Pakistan in the late 1970s, Turkey, and Sudan. For Pakistan, Banuri (1989) estimates the volume of illegal remittances to be anywhere between 15 and 35 percent of the officially recorded amount. This source of illegal dollars alone amounted to between 20 and 47 percent of international reserves (excluding gold) in 1983, and between 8 and 20 percent of the official money stock - a quite significant increase in liquidity. In the case of Bangladesh, studies in the early 1980s found that 35 percent of the migrants remit their savings through private, informal channels. Similar observations have been made for several other remittance countries (Keely and Tran, 1989).

Remittances and tourism differ from illegal trade sources of foreign currency in that they do not necessitate an additional illegal transaction (Banuri, 1989). Smuggling of exports, for example, requires that the export good be illegally transported across the country's borders. This raises the real costs (in terms of clandestine transportation, payoffs to officials, risk of confiscation and of other legal penalties) of supply. This implies that the parallel market premium should be high enough to compensate the supplier for the higher risk, as well as for higher real costs. Unless there are significant economies of scale and learning by doing in smuggling activity, this argument suggests that, everything else equal, the parallel market premium will be lower in remittance countries.

Available estimates, although generally subject to error, stress the importance of smuggling,³³ under-invoicing of exports and over-invoicing of imports as the major sources of supply of foreign currency in most developing countries.³⁴ It should be noted, however, that the incentive for over-invoicing of imports exists only

when the tariff rate on imported goods is sufficiently lower than the parallel market premium. In a country with high tariff barriers, the price incentive is for under-invoicing (smuggling in) of imports rather than for over-invoicing - the one exception being, of course, the case of capital goods imports, where tariffs are generally lower than average, or even zero. Consequently, it appears likely that the single major source of unofficial currency supply from illegal trade is the under-invoicing of exports. When there is a tariff on exports, under-invoicing allows the exporter to avoid the tariff and to sell the illegally acquired foreign exchange at a premium; when there is a subsidy on exports which is less than the parallel market premium, the sale of foreign exchange in the parallel market may more than compensate for the loss of the subsidy. Thus, for given taxes, the higher the parallel market premium, the higher the propensity to under-invoice exports.³⁵

The demand for foreign currency in the parallel market results generally from four main components: imports (legal and illegal), residents traveling abroad, portfolio diversification, and the purposes of capital flight. The demand for foreign currency to finance legal imports stems from the existence of rationing in the official market for foreign exchange. Demand is also to finance illegal imports of goods which are either prohibited or highly taxed and which are smuggled into the country. The inherent "confidentiality" of transactions in the parallel market - and the absence of legal accountability to anyone operating in it - provide an incentive for agents to use it for concealing illicit activities.

The portfolio motive is particularly acute in high-inflation economies, and in countries where considerable uncertainty over economic policies prevails, because foreign currency holdings represent an efficient hedge against domestic inflation bursts. Econometric evidence suggests that in middle-income developing countries this component accounts for a substantial part of the demand for foreign exchange in the parallel market (Agénor, 1991). Consistent with the evidence discussed in Appendix A, this phenomenon is conducive to a high degree of substitution between domestic assets and foreign currency, with consequent problems of monetary control. Finally, the capital flight motive derives from the existence of restrictions on private capital outflows in many countries. Attempts at circumventing the regulations are funded through the

parallel market. Portfolio and capital flight motives are, of course, often related, as appears to be the case in some major Latin American countries.

3.3 Implications of Parallel Currency Markets

The existence of a large parallel currency market has important consequences for the functioning of a developing economy. The major arguments that have been advanced in favor of these markets are the following. First, by allowing financing of parallel market activities, parallel currency markets make available commodities (food, intermediate inputs, durable goods, etc.) which would not have otherwise been forthcoming, due to the existence of rationing in the official market for foreign exchange and/or trade restrictions. Second, the increased supply of goods through these markets has often reduced social and political tensions. Third, the existence of informal markets for goods and foreign exchange provides employment and income opportunities to many small traders.

There are, however, a variety of distortions created by the existence of parallel currency markets. First, and most generally, the expansion of a parallel market for foreign exchange weakens the effectiveness of capital controls imposed by the central bank. Formally, it has effects similar to an increase in capital mobility – which may help accelerate capital flight – and may lead to an increase in the degree of substitution between domestic and foreign currencies. The potential for currency substitution – defined as the ability of domestic residents to switch between domestic and foreign money – becomes an effective way of avoiding the inflation tax on the holdings of domestic cash balances. The shift from domestic to foreign money results therefore in a loss of seignorage for the government which, for a given real fiscal deficit, may call for a higher inflation rate, an expansive monetary policy, or recurrent devaluations of the official exchange rate (see Agénor, 1990b).

Second, although informal markets increase the supply of goods, parallel exchange rates have an impact on domestic prices. Since trade takes place at both the official exchange rate (through official channels) and the parallel market rate (through smuggling), the

domestic price of tradable goods will reflect both exchange rates. However, in most countries where foreign exchange rationing by the banking system prevails, the officially fixed exchange rate is not relevant for the determination of market prices of tradable goods. It only measures the rents captured by those (usually the government and a small group of “privileged” importers) to whom foreign exchange is made available at the official rate. If domestic prices of tradables are based on the marginal cost of foreign exchange – or its implicit resale value, that is, the parallel market rate – the aggregate price level will reflect to a large extent the behavior of the unofficial exchange rate. It has been noted that in Ghana and Uganda, for instance, prices of tradable goods have tended to reflect more the prevailing exchange rate in the parallel

Table 1.5 Variability in exchange rates and prices in developing countries, 1975–86^a

Country	Exchange rates		Consumer prices
	Official	Parallel	
Bangladesh	0.301	0.519	0.370
Bolivia	2.689	2.577	2.745
Chile	0.893	0.930	0.754
Colombia	0.693	0.732	0.672
Greece	0.578	0.593	0.620
India	0.173	0.178	0.280
Indonesia	0.438	0.459	0.348
Korea	0.243	0.231	0.373
Malawi	0.324	0.413	0.304
Malaysia	0.058	0.061	0.165
Mexico	1.604	1.637	1.446
Morocco	0.371	0.356	0.321
Nigeria	0.214	0.458	0.539
Pakistan	0.216	0.147	0.260
Singapore	0.061	0.064	0.137
Tunisia	0.306	0.320	0.291
Zambia	0.437	0.481	0.675

^a Standard deviation of the quarter-to-quarter rate of change of the relevant variable, divided by the sample mean.

Sources: *International Financial Statistics* (IMF), and *World Currency Yearbook*, various issues.

market than that in the official market (Chhibber and Shafik, 1990; Roberts, 1989). To the extent that parallel exchange rates – being very sensitive to actual and anticipated changes in economic conditions – are more volatile than official exchange rates, domestic prices are likely to display a significant degree of instability, which may adversely affect economic decision making.

Table 1.5, which presents data over the period 1975–86 on exchange rate variability and consumer price volatility for 17 developing countries, provides some empirical evidence on this issue. The results shown suggest that parallel exchange rates have been in general more variable than official rates (except in Pakistan and, to a lesser extent, Bolivia, Korea and Morocco), and that countries with the highest degree of parallel exchange rate variability have also exhibited a significantly greater degree of price volatility (figure 1.3). The figure does not, of course, provide in any way a “proof” of a causal relationship, since the instability in both variables may be the result of a highly variable stance of macro-

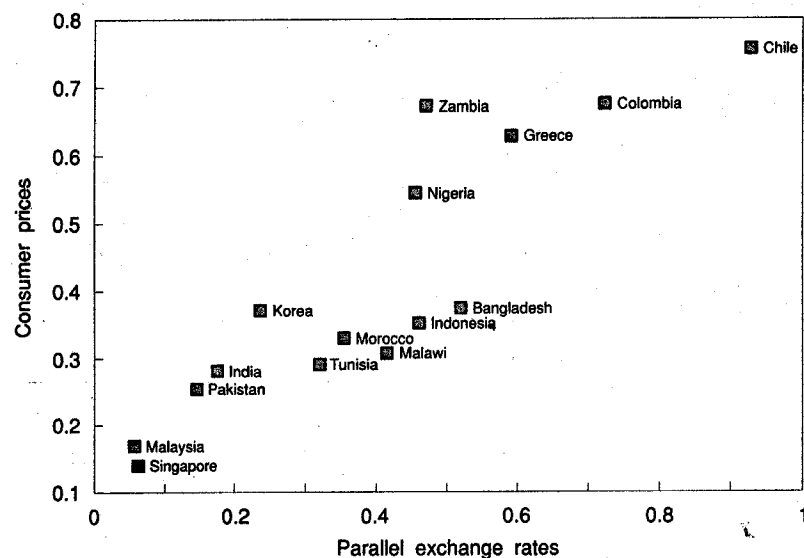


Figure 1.3 Variability in consumer prices and parallel exchange rates in developing countries, 1975–86

Source: Table 1.5

economic policy. Nevertheless, it is consistent with the assumption that domestic price setters take into account the behavior of the marginal cost of foreign exchange when setting prices.

Third, since there are two prices at which foreign exchange can be bought and sold, exports whose proceeds are repatriated at the official exchange rate are taxed relatively to other exports. Consequently, the parallel market premium may be seen as an implicit tax on exports (Pinto, 1989, 1991). This view suggests the existence of a trade-off between the premium and the rate of inflation in financing a given real fiscal deficit. The implications of this trade-off for unification strategies is further discussed in chapter 3.

Fourth, the parallel market for foreign currency can be expected to play an important role in the transmission mechanism of short-term macroeconomic policies. How do shocks in the real economy influence conditions in a parallel market for foreign exchange? How is adjustment to these shocks helped or hindered by the existence and size of this market? How does a parallel currency market constrain policy responses to shocks? The analytical and quantitative evidence provided in the next chapters will be shown to support the view that the parallel exchange rate (as well as informal interest rates) plays an important role in the transmission process of short-run macroeconomic policies.

Finally, it should be noted that the welfare implications of the existence of a parallel market in foreign currencies are unclear.³⁶ The gains and losses depend on a number of factors, in particular the penalty structure. If expected costs of engaging in parallel market activities are low, for private transactors welfare is likely to be higher than if they carried out their transactions only through official channels. For instance, workers abroad remitting funds or foreign tourists selling dollars would get more units of domestic currency at the parallel exchange rate than at the official price. If penalties (fines, prison terms, etc.) are enforced to some degree, however, expected costs for private transactors may be quite high. Though it is not possible, in general, to quantify the exact magnitude of gains and losses, it can be shown (see Bhagwati and Hansen, 1973) that in the case of smuggling losses can outweigh gains. This is when smuggling operations are subject to rising costs (on account of penalties) so that smuggling activity only replaces the official imports without lowering the cost of imports to

domestic consumers. This result may not, however, carry over to other forms of cheating like fake invoicing and diversion of remittances. For instance, if manipulation of invoices is associated with negligible costs, welfare gains will probably outweigh potential losses (Gupta, 1984).

From the point of view of the authorities, parallel markets have some obvious adverse effects. First, there is a cost of enforcement, of counteracting parallel market activities somewhat and punishing offenders. Second, there is a loss of tariff revenue (due to smuggling and under-invoicing), a loss in income taxes and domestic indirect taxes, and a reduced flow of foreign exchange to the central bank, which lowers the capacity to import of the government. Third, parallel markets encourage rent-seeking activities (corruption of government officials, for instance), which lead to a sub-optimal allocation of scarce resources. Despite these costs, however, parallel currency markets are widely tolerated in developing countries. The usual argument to justify this is that governments realize that as long as there is demand rationing in the official market for foreign exchange, there is bound to be a "secondary" market, whose cost of elimination is likely to be prohibitive. Viewed in this way, a parallel market in foreign currency can be taken to be "socially desirable" – even though ultimately the authorities' goal is to remove discriminatory practices and stress legality in economic activities – as it meets the demands of operators rationed in the official market. Another argument which may help explain why authorities tend to accommodate rather than confront unofficial markets has recently been put forward by McDermott (1989). The existence of a parallel currency market may yield, according to McDermott, two types of benefits. First, it increases employment by raising the domestic availability of imported inputs. Second, it may actually raise the flow of foreign currency to the central bank. This latter – somewhat paradoxical – effect may arise when the increased availability of inputs allows total exports to be increased, and so much so that foreign currency flows in increased amounts, both clandestinely and legally.

The foregoing analysis suggests that exchange restrictions are often largely inoperative. Instead of increasing the foreign exchange reserves at their disposal, the controls imposed by the authorities often only succeed in diverting a substantial part of the foreign

exchange underground, implying that they not only fail to solve the problem, but they actually worsen it. The logical and obvious implication is that if parallel markets emerge in response to the imposition of controls, the most effective way to reduce their size is to eliminate these restrictions and let prices reflect the full scarcity of foreign exchange.³⁷ Indeed, in the past decade, several developing-country governments have shifted towards relatively less restrictive trade and exchange regimes. There are, however, a variety of costs associated with such a liberalization process which are not yet fully understood. Some of these issues will be examined in chapter 3, in the context of an integrated macroeconomic model with informal financial markets.

Notes

- 1 See Castells and Portes (1989) for a more detailed discussion of the definition and the nature of the informal sector, as well as Lindauer (1989) and Feige (1989).
- 2 See Mazumdar (1981).
- 3 See Akerlof (1970).
- 4 See the treatment of such markets, for instance, by McKinnon (1973).
- 5 See Tanzi (1982) and Portes, Castells and Benton (1989).
- 6 Although there is a fair amount of work on rural credit (see, for instance, the discussion by Hoff and Stiglitz, 1990), part of which documents information on the rural moneylender, there is relatively little work on informal loan markets as a whole. For a good survey of such work see Chandravarkar (1987).
- 7 See van Wijnbergen (1982).
- 8 In Pakistan, again in 1991, cooperative finance companies were forced out of business by the government at a considerable loss to depositors.
- 9 As could be expected, there are many variations of ROSCAs prevalent in developing countries. They are also known by different names in different countries, including "committees" in Pakistan, "Chaer" in Thailand, "Kye" in Korea, and "paluwagon" in Indonesia. For more information on these see, for example, Chandravarkar (1987) and Bouman (1989).
- 10 Typically ROSCAs comprised of households are motivated by saving considerations. For example, a household could obtain credit from the ROSCAs to finance a lumpy purchase and repay from its savings

over the lifetime of the association. Business ROSCAs, on the other hand, are formed typically for their business financing needs such as the need for working capital, or the generation of capital for expansion or investment. These organizations are more responsive to market signals and hence determine the sequencing of the rotation of access to their pools by market means such as auctions.

- 11 For some evidence on this trend, see Onchan (1989) for Thailand, Sanderatne (1989) for Sri Lanka, and Timberg and Aiyar (1984) for India.
- 12 See Chandravarkar (1987).
- 13 See Chandravarkar (1987) and Wells (1980) for some additional evidence on the cost structure of moneylenders.
- 14 In other words, this is an indirect test of capital mobility.
- 15 Largely because of official decree, deposit-taking does not constitute a large part of informal activity, but free entry, lending to friends and relatives, and ROSCAs do provide small savers the opportunities to benefit from the informal markets.
- 16 See Wells (1980) and Chandravarkar (1987).
- 17 Tax evaded or hidden wealth - "black" money as it is commonly called - as it grows, tends to create an excess demand for assets where it can be easily hidden, such as foreign exchange, real estate and real assets.
- 18 According to data presented in the *World Currency Yearbook*, 1990, parallel currency markets exist in all developing countries, except the high-income oil exporters. The evidence available suggests that parallel currency markets have recently increased in size and sophistication in many countries, in relation with capital movements.
- 19 As such, magnitudes mentioned in this section should be treated with a certain amount of caution.
- 20 The analysis that follows draws largely on Agénor (1992), to which the reader is referred for more details.
- 21 The nature of these restrictions is well documented, for instance, in the Annual Reports on Exchange Restrictions published by the International Monetary Fund (IMF).
- 22 Parallel exchange rates are taken from the *World Currency Yearbook* and official exchange rates are from the IMF database. Data are end-of-period exchange rates relative to the US dollar.
- 23 See Akgiray, Booth and Seibert (1988), and Akgiray, Aydogan, and Booth (1990) for formal statistical analyses of the distribution properties of parallel market exchange rates.
- 24 Trade restrictions may have been the critical factor in low-income countries, while capital controls may have predominated in middle-

income countries. There is, however, no strong empirical evidence to support this view. The role of capital controls in the emergence of a parallel currency market is discussed, for instance, by Kamin (1991a) in the case of Argentina in the 1930s.

- 25 For a general description of illegal transactions, see Bhagwati (1978, pp. 64-81). An interesting case study of Indonesia is described by Cooper (1974).
- 26 The imposition of a tariff, by itself, creates incentives for smuggling but does not create incentives for the emergence of a parallel currency market. Such a market will usually emerge only if foreign exchange controls are in place. But in the particular case where legal trade requires the sale or purchase of legal foreign exchange, the existence of a positive tariff will also be sufficient to induce illegal trade activities and foreign currency transactions (Pitt, 1984).
- 27 See Swidrowski (1975) for an extensive discussion of various aspects of foreign exchange and trade restrictions.
- 28 Greenwood and Kimbrough (1986) motivate the existence of a parallel currency market with a cash-in-advance requirement that forces individuals to accumulate foreign currency (either officially or illegally) before they can consume.
- 29 A strictly illegal market often develops into a tolerated one - or becomes officially recognized and legitimized, as in Bangladesh in 1972, in the Dominican Republic in 1982 or in Guyana in 1987 - as its scope of operations expands and the authorities recognize its inevitable character and relative benefits.
- 30 This does not preclude substantial variations within countries. For instance, in Guyana, the exchange rates offered in border towns are significantly more depreciated than those quoted in the "Wall Street" are of Georgetown (Thomas, 1989). Nevertheless, these price differentials often seem to reflect "structural" factors (transportation costs, etc.) rather than market segmentation.
- 31 This may be the result of the "convenience" of the US dollar in international transactions or a "safe haven" effect. The use of US currency notes may also result from the importance of non-trade-related sources of supply and demand for foreign exchange in the parallel market.
- 32 Government officials may also allow diversion of foreign exchange from the official to the parallel market in return for bribes and favors.
- 33 Smuggling may take place with regards to legal or prohibited goods. Cocaine exports, for instance, are considered to account for a large share of the unofficial inflow of US dollars in some Latin American countries. In Brazil, illegal trade (gold and coffee exports, in

- particular) is believed to account currently for nearly 30 percent of foreign currency supply in the parallel market (Novaes, 1990).
- 34 The extent to which traders engage in fake invoicing is typically measured by partner country trade-data comparisons. To investigate the scale of under-invoicing or over-invoicing of exports, for instance, one would need to look at the ratio of exports to major partner countries, as shown by domestic data, to the corresponding imports as recorded in partner country data. When this ratio is less than unity, the evidence points to under-invoicing of exports. To be able to make these partner-country comparisons, however, it is important to adjust the trade data for transport costs, timing of transactions, and classification of transactions. See MacDonald (1985), Gulati (1988), and Arslan and van Wijnbergen (1989) for recent attempts to use these procedures to estimate the degree of under- and over-invoicing in foreign trade transactions.
- 35 See Arslan and van Wijnbergen (1989) for econometric evidence supporting this proportion in the case of Turkey, and Kamin (1991*b*).
- 36 The welfare effects of foreign exchange restrictions have been analyzed by Greenwood and Kimbrough (1986). Using a choice-theoretic cash-in-advance general equilibrium model, they examine how the imposition of foreign exchange controls affects decision-making by private agents, notably the decision to evade the restrictions by purchasing foreign currency illegally in the parallel market. They show that while foreign exchange controls may improve the trade balance and the balance of payments of an economy with parallel markets, they unambiguously lower economic welfare. This is because foreign exchange controls essentially place a quota on imports, thus raising their domestic relative price in the same manner as a tariff would.
- 37 Policies of active repression of parallel markets have been attempted by some countries (Guyana in 1980, Tanzania in 1983, or Algeria in May 1990). It has proved difficult to maintain a punitive stance against well-entrenched informal activities.

2

Models of Informal Financial Markets

1 Models of Informal Credit Markets

1.1 McKinnon-Shaw Models of Financial Repression

1.1.1 An Overview of McKinnon-Shaw Models

The first systematic analyses of financial markets in developing countries to take seriously the special characteristics of financial institutions in such countries were by McKinnon (1973) and Shaw (1973).¹ The so-called McKinnon-Shaw school, which coined the term "financial repression" to describe such characteristics, represents the currently dominant strain of thinking about developing-country financial markets, and the forceful criticism of financial repression by economists in the McKinnon-Shaw tradition has provided the intellectual underpinnings for a recent movement toward financial liberalization in many parts of the Third World.

According to McKinnon (1973), the defining feature of underdevelopment is fragmentation – i.e., a situation in which agents face different prices and do not have access to the same technology. This fragmentation has largely been the product of government policy designed to favor certain activities or certain classes of agents at the expense of others. In turn, intervention has often been justified by the pursuit of social goals that are inhibited by the improper functioning of capital markets. In the absence of private finance, public policy has relied on transfers of income to targeted activities. Since fiscal constraints have often precluded direct income transfers through the budget, governments have resorted to less