INFORMAL AND FORMAL CREDIT: SIX CASE STUDIES

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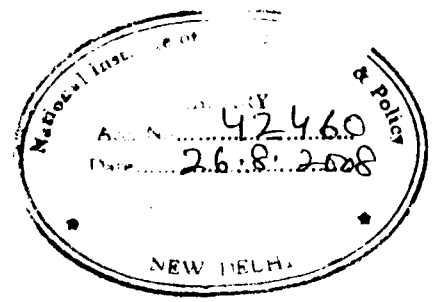

A JOINT STUDY
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PREFACE

This study of informal and formal credit sources of selected productive sectors was undertaken jointly by the NIPFP and the State Bank of India. It formed part of an ongoing study initiated by the Asian Development Bank at the NIPFP.

The project coordinator for the NIPFP study was A. Das-Gupta. From the Economic Research Division of the State Bank of India, S.C.Bandopadhyay and M.D. Desai were associated. SBI officers who carried out field investigations for the project were M.L. Bijlani, K.S. Dinesh, Thomas Gomez, A.K. Jain, S. Kumar and C.S. Shivkumar. Research assistance at the NIPFP was provised by Sanjeev Mohanty, Hiranya Mukhopadhyay and J.K. Pandey.

The close association of the State Bank of India in this collaborative study would not have been possible without the interest taken by the then Chairman of the State Bank of India, Shri D.N. Ghosh.

The NIPFP project coordinator, A. Das-Gupta, had overall responsibility for the study and has written or revised all material in this report. J.K. Pandey co-authored chapters 5 and 6 and Hiranya Mukhopadhyay co-authored chapter 2.

It is hoped that the findings and conclusions of the study will be of interest to a wide audience.

The Governing Body of the Institute does not take any responsibility for any of the views expressed in the report. That responsibility lies primarily with the authors.

New Delhi
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Amaresh Bagchi
Director, NIPFP

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In carrying out this study the project team has profited greatly from the help and advice of a number of persons and institutions whom it is my pleasant duty to acknowledge.

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Generous help from various government and bank officials, officials of associations of intermediaries, traders or producers, researchers and others was received during the course of our investigations. While they are too numerous to acknowledge individually they have our grateful thanks.

None of those acknowledged can be held responsible for shortcomings in the report the responsibility for which rests with the authors.

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A. DAS-GUPTA
Project Coordinator

CONTENTS

CHAPTER 1

INTRODUCTION AND OVERVIEW

1.1 Objectives

1.1.1 The objective of this project was to "conduct an examination of the sources and uses of funds of selected sectors in selected areas to discover the extent of reliance of these sectors on informal finance and the reasons for not availing bank finance".

1.1.2 Information collected through questionnaire based field interviews was used to try to shed light on

i. Scope for additional bank finance.

ii. The impact of the regulatory environment on the credit markets serving the sectors studied.

iii. The impact of informal finance on credit availability, investment and economic activity in the sectors studied.

iv. The relative importance of different sources of finance in the sectors studied.

1.2 Coverage

1.2.1 The study was carried out jointly by the ational Institute of Public Finance and Policy and the Economic Research Division of the State Bank of India. The NIPFP was responsible for research design, training of SBI officers for field work, analysis of information collected and report preperation. The Economic Research Division was responsible for the provision of officers for field work and for provision of assistance for training.

1.2.2 The study planned for coverage of six sectors. In four cases sample sizes and/or regional coverage were larger than was ultimately acheived due to difficulties faced by the SBI in finding officers for field work and due to non-cooperation by some sample units interviewed by SBI officers. An overview of coverage and sample sizes is in Table 1.1. A summary description of the scope of the study and a review of its main findings is now presented. This is followed by individual chapters describing each of the case studies.

1.3 Definition of informal credit adopted

1.3.1 The concept of informal credit used in this study roughly corresponds with the concept `non-institutional credit´ used by the Reserve Bank of India (RBI) in its surveys of households. It excludes banks of all types, government financial institutions, housing finance institutions and the organised capital markets for shares, debentures, fixed deposits and government bonds. The remaining external sources of finance constitute informal credit of credit using sectors.

1.3.2 The definition of informal credit is motivated primarily by considerations of government regulation. Implicitly, the notion of the formal sector which we seek to capture is of that portion of financial markets which are effectively subject to government control in the matter of allocation of credit and deposit mobilisation. In particular, financial institutions which are directly affected by central bank short run monetary policy measures, including among these measures reserve requirements and selective credit controls, are classified as belonging to the formal sector. Attempts by the government to curb money supply growth or to curb credit availability for different purposes and to different sectors will have their primary impact on what we

classify as formal credit markets.

1.3.3 While this does not imply that informal credit markets are entirely beyond central bank regulation, the extent of direct control over activities of informal lenders and intermediaries is much more limited.

1.4 Analysis

1.4.1 In view of the small sample size for each sectoral study, only means, variances, correlations and ratios have been computed. More sophisticated statistical analysis has been eschewed, except for a solitary regression. In one case, a mathematical model has been constructed on the basis of stylised facts drawn from the field study.

1.5 Importance of informal credit to productive sectors studied

1.5.1 Trade credit proved to be the most important external source of finance for the productive sectors studied, especially for smaller firms. However, owners' capital is the dominant source of finance in road construction. In textile distribution, trading agents (wholesalers) rely more on own funds than non trading agents (brokers and commission agents). While it was learnt that finance from professional financiers is the main source of finance for road construction contractors in Kerala, pure informal intermediaries played next to no role in any productive sector studied. Informal credit from friends, relatives and other associates was, however, of importance, being more important than bank finance in road construction and textile distribution. Whether such funds really reflect informal finance or represent illegal funds is not ascertainable for individual firms but are, in all probability, largely illegal funds in the aggregate given that we estimate such funds to exceed net household sector dues receivable as estimated

by the RBI (1987). That bank finance is not the main source of finance even to garment exporters, despite various export incentives and concessions, is revealing. Formal credit is more important only for households (in the housing study). Details are in Table 1.2.

1.5.2 Brief sketches of credit conditions in the sectors studied will be of some interest at this stage.

a. Garment exporters, particularly the larger firms, are net receivers of credit and are able to generate large internal surpluses due to the combined operation of three factors: Cheap bank credit to finance exports, export tax concessions and the manner in which the quotas under the Multi Fibre Agreement are allocated between competing firms.

b. Road construction contractors are net providers of credit to the monopsony buyer of their services, the government, due to the need to provide security deposits and due to delayed receipts of dues.

c. Textile distribution intermediaries in the middle of the distribution chain are net providers of credit, the beneficiaries being retailers.

d. Powerloom units reloan about half their borrowed fund as trade credit.

1.5.3 This evidence, while attesting to the importance of informal credit and transmission of credit received from sellers to buyers, also attests to the fact that some sectors are constrained to own fund for capital formation and working capital.

1.6 Interest rates

1.6.1 The average interest rates for productive sectors, in Table 1.3 below, are surprisingly low and are comparable to that of banks (the State Bank of India advance rate was 16.5 per cent at the time of the field surveys). Trade credit rates vary with

the period of credit since cash discounts were typically specified. They tended to be somewhat higher than rates for direct loans given that the average period of trade credit was of relatively short duration.

1.7 Cost of funds versus duration of loans of credit using sectors

1.7.1 The generalisation that informal loans are short term is incorrect. Trade credit periods of upto 200 days were reported in wholesale trade and the powerloom sector, though two months is approximately the average. While most loans were found to be for working capital purposes and were thereby short term loans or even loans on call, the mean effective loan duration was greater than that for formal sector credit in road construction. Furthermore, some informal loans were reported to be outstanding with firms for several years. All-India estimates of informal credit for surveyed sectors are in Table 1.4.

1.7.2 The average informal interest rate was estimated to be lower than the cost of bank finance in four sectors studied, though the median rate was higher and the dispersion was large in road construction. The main reason for this is low, often zero, interest rate loans from friends and relatives. Finally, persons interviewed in the textile wholesale market reported that the effective cost of bank credit, inclusive of transactions costs, was higher than that of informal credit.

1.8 Allocative efficiency and Informal credit

1.8.1 Concepts of efficiency for financial markets: In analysing the efficiency of resource allocation, the ultimate focus must be on the non-wastefulness of factor use and on the allocation of factors to the most socially productive purposes. To analyse the impact of credit on the efficiency of resource allocation, a

framework is required that relates credit availability and the cost of credit to these.

1.8.2 Tobin (1984, quoted in Fry, 1988) lays down four concepts for judging the efficiency of a financial system:

a. **Information arbitrage efficiency:** which is the degree of gain possible by the use of commonly available information. Efficiency is inversely related to the gain.

b. **Fundamental valuation efficiency:** The extent to which the present discounted benefits stream from an asset are reflected in its price.

c. **Full insurance efficiency:** The extent of hedging possible against future contingencies.

d. **Functional efficiency:** This is reflected in the transactions cost of borrowers and lenders combined (lower transactions costs reflect more functionally efficient the market). An extended discussion of this concept is in Fry (1988).

1.8.3 Implicitly, these concepts reflect the impact of credit markets on the efficiency of resource allocation. However, while information arbitrage efficiency and functional efficiency are certainly concepts which can be used in judging the relative efficiency of different components of a financial markets, the other two concepts are more difficult to apply. Valuation efficiency is lowered by a credit market segment which is subject to quantitative controls and administered prices. However, freely functioning markets may ration credit and keep loan rates of interest below their market clearing level in a world in which there is asymmetric information and incomplete contingent markets, implying some degree of inefficiency by the full insurance criterion (see Stiglitz and Weiss, 1981 and Santomero, 1984).

1.8.4 However, while accepting that actual credit markets will depart from full efficiency, it is still possible to examine the relative efficiency of resource allocation facilitated by dif-

ferent market participants if a set of criteria can be laid down to judge efficiency. A crude set of criteria that can be used to judge the impact of formal and informal credit on the efficiency of factor use in the Indian situation are the relative magnitudes of three ratios by firms primarily supported by formal/informal credit. The ratios are the capital-output ratio, the labour-output ratio and the capital labour ratio.[1] The rationale is as follows. In the Indian situation, the formal sector keeps rates of interest below their market clearing levels and rations credit through selective credit controls. Consequently, it can be expected that firms with access to formal credit will have an overly capital intensive choice of techniques, which detracts from the efficiency of factor use. Furthermore, due to less than perfect credit rationing, inefficient firms may receive finance while efficient firms are rationed out of the market. Inefficient choice of techniques are reflected in the capital-output ratio while relatively inefficient factor use is reflected in the factor ratios for firms within the same industry. It should be pointed out that low factor use ratios are neither sufficient nor necessary as proof of inefficiency. Furthermore, unless there are constant returns to scale, a higher capital output ratio for a firm may simply reflect a different scale of operations compared to another firm.[2] Likewise, capital labour ratios may reflect non-homotheticity. The measures are therefore crude. Thus, whenever it is possible to supplement the evidence of the ratios with direct evidence this is done.

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1. The relative ranking by any two ratios do not necessarily determine the relative rank by the third. For example, suppose firm A has both factor output ratio higher than from B. The capital/output ratio ranking is still indeterminate.

2. I am grateful to T.N. Srinivasan for these observations.

1.8.5 Even if it is accepted that formal credit leads to inefficient factor use, it is by no means clear that the informal sector leads to relatively efficient capital use. This is since informal credit markets are themselves imperfect and segmented. ing to known parties only in some segments). Informational considerations may also lead to suboptimal interest rates.

1.8.6 **Impact on the efficiency of resource use:** The ratios are presented for three productive sectors in Table 1.5. As can be seen, in no case do the ratios provide unambiguous support for the hypothesis that informal credit increases efficiency of resource use. More importantly, no single ratio supports the hypothesis for the item measured by it in all sectors. In fact, in road construction, informal borrowers are less efficient than formal borrowers by the factor use ratios. Thus no firm global conclusion can be drawn.

1.8.7 In the study of the textile distribution system in India, where most credit and goods market transactions are jointly made, we argue in the report using a three-agent model based on the stylised facts of the system, that informal credit lowers distributional costs and distributes the cost of risk arising from demand uncertainty. That is, we argue that informal credit contributes to more efficient resource utilisation in trade.

1.9 Impact of informal finance on small firms

1.9.1 The relevant criterion here is the percentage of total borrowed funds from informal credit sources received by smaller, presumably economically weak, units both absolutely and relative to large units. The data summarised in Table 1.6 shows that informal finance to borrowers scores positively on both counts. Thus, tentative conclusion is of a positive association between urban informal finance and economically weak firms. Finally, the provi-

sion of informal finance to the textile distribution system, it has been argued, has positive inter-regional distribution effects.

1.9.2 **Cause and effect**: Are weaker firms weak because of exploitative informal finance or despite it? At one level, the answer to this question does not matter: if borrowers can be taken to reveal their preferences for some informal finance to none, then informal finance is clearly welfare improving. However, if it is exploitative then this alone is insufficient and informal credit should be supplanted by non-exploitative sources of credit if possible. The direct evidence of borrowers in credit using sectors leads us to reject the hypothesis of universally exploitative informal credit. This is despite the evidence, albeit not global, of higher informal sector interest rates.

1.9.3 Regarding the position of informal finance relative to repressed formal sector finance, it is worth quoting the conclusions, regarding formal finance, of two recent studies. Little (1987), concluding on the basis of a study of small manufacturing enterprises in a selection of developing countries (including India) has this to say:

> " The tentative conclusion seems to be that controlled capital markets of most developing countries are likely to penalize the large-small or medium size firms (covering about 20 - 100 workers) that aspire to rapid growth and therefore cannot rely on their own finance. Unless they are in a specially favoured sector, either interest rates will be higher or access more difficult than with free capital markets (Little, 1987, p. 221)".

Fry (1988) examines the available evidence for a selection of developing countries (excluding India) and concludes:

> "Specifically, financial repression and the ensuing credit rationing worsen income distribution and increase industrial concentration. "The evidence presented ..... indicates that subsidised credit policies discriminate against rather than favor small borrowers, (Fry, 1988, p. 165).

1.10 Are formal and informal finance complements or substitutes?

1.10.1 Three types of situations need to be distinguished here:

i. The first type of situation is where banks do not enter or are unable to enter a particular market segment or when informal finance cannot substitute for bank finance. In such cases, formal and informal finance are clearly complementary. Most case studies in this report found this type of situation prevailing due to banks being unable or unwilling to compete with informal lenders and also (especially) trade credit. In one case (road construction), informal financial instruments were not acceptable as a substitute for bank guarantees.

ii. The second situation is when banks provide credit but up to a ceiling amount. In such cases, informal finance complements the credit flows to a particular section of credit constrained borrowers or the credit flow for particular uses. All sectors studied fall into this category.

iii. The third situation is when banks and informal intermediaries are in active competition. This does not appear to be the case in any loan market, though it is largely the case for the mobilisation of deposits by some, though not all informal intermediaries. One area in which informal and formal sectors are in competition, to the latter's disadvantage, is in the transfer of funds between geographical centres. Informal couriers, known as `angadias' are seen as superior to banks by many businessmen.

1.10.2 A second finding relevant to the discussion here is the opinion of borrowers of the two sources of credit. In all field studies of credit using sectors and of borrowers from particular intermediaries, informal credit was, broadly speaking, viewed positively due usually to the expected speed and informality (and in some cases, low cost) of informal credit while bank credit was viewed negatively.

1.10.3 Thus, given the current state of banking, complementarity is supported by micro studies but not necessarily by the regional evidence. Given the discussion in the previous paragraphs, it

would appear that the formal and informal sector specialisation in some areas identified in the micro studies should be deliberately strengthened.

1.11 Informal credit and monetary policy

1.11.1 **Prior evidence and issues:** Does informal credit frustrate short-run monetary policy? Limited evidence is available on this issue. Acharya and Madhur (1983) argue that excess demand for constrained formal credit spills over into the ICM driving up ICM loan rates in times of restrictive central bank operations thus leading to an overall credit squeeze. They test this with data relating to `bazaar bill rates´ (this RBI data series was discontinued in 1977) and find support for their hypothesis. Sundaram and Pandit (1983) criticise the data used by Acharya and Madhur and show that the conclusion is sensitive to the data series used. The debate in India between Acharya and Madhur on one side and Sundaram and Pandit on the other is inconclusive.

1.11.2 Fry (1988) cites studies relating to the Korean economy and concludes that time deposits in the formal sector are closer substitutes to assets which are primarily inflation hedges rather than to curb market loanable funds which are relatively insensitive to time deposit rates in a three asset portfolio model. On the basis of the econometric evidence he concludes that

> " ....an increase in the time deposit rate of interest would lead to an increase rather than a decrease in the total supply of credit in real terms", (Fry (1988), p. 161).

Edwards (1988), studying the Korean economy, finds a positive link between deposit bank time rates and curb market loan rates.

1.11.3 The relevant issues, to our way of thinking, revolve on five points.

i. Does lower money supply (including bank credit) necessarily lead to a fall in total credit availability (or can informal credit counteract this sufficiently)?

ii. A related point, do movements in the bank loan interest rates lead to general movements in informal loan interest rates or credit in the same direction?

iii. Is the opposite of (ii) true for bank deposit rates?

iv. Can selective credit controls, which are used in India, be effectively imposed in the face of informal credit?

v. Even if all four questions are answered in the affirmative, is the credit multiplier the same as it would be in the absence of informal credit (or is it lower or less predictable)?

If the answer to all five questions is in the affirmative then the hypothesis that informal credit frustrates monetary policy can be rejected.

1.11.4 **Evidence:** To go into sectoral detail, the following observation may be made. Except for the inter-corporate funds market, no evidence has been found of short run responsiveness of informal credit to formal interest rates or credit availability. However, the cross section nature of the study is a limitation that has to be kept in view. The hypothesis that the inter-corporate market increases the variability of the money multiplier and reduces the effectiveness of selective credit controls has been advanced in the report though the evidence is not of the type permitting a firm conclusion to be drawn.

1.11.5 Trade credit and on-lending in general raises serious doubts on the effectiveness of selective controls. The findings of Bhole (1985) may be cited for other points. Bhole used Reserve

Bank of India data on the company sector for the years 1952 to 1978 to study the impact of trade credit on monetary policy. In the study he examined inter alia, the effect of the short run bank lending rate and bank credit availability on trade dues, trade receivables, net trade credit and the credit period of dues and receivables in days. His results give affirmative support to points (i) and (ii) above though the evidence is not always robust. However, his findings tend to reject an affirmative answer to point (iv). There were some differences between different groups of companies for the impact on the volume of trade credit though not the credit period. In sum, his results argue for a weakening of the predictability of monetary policy for the company sector but not for its frustration in terms of direction.

1.11.6 In conclusion, the limited evidence presented here argues for a weakening of the impact of monetary policy with the informal sector either unresponsive or, in the case of trade credit, counteracting monetary policy. However, complete frustration of monetary policy cannot be inferred from the evidence here. The question is, therefore, still open.

1.12 The McKinnon (1973) complementarity hypothesis[3]

1.12.1 By this hypothesis, financial and physical assets are complements due to the existence of credit constraints and low interest policy as part of repressive formal sector policy. This happens since an increase in the supply of credit adds to the stock of financial assets and while stimulating greater investment activity. The hypothesis has received limited support from cross-section inter-country studies (Gonzales Arrieta, 1988). While for-

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3. See, among others, McKinnon (1973), Fry (1988), Gonzales Arrieta (1988) and Shaw (1973).

mally a macroeconomic hypothesis, it would find support at the microeconomic level if investment by firms was limited by cash in advance constraints made binding due to supply constraints on credit. Net funds for the purchase of productive factors (as distinct from raw materials or stock in trade) are limited to own funds on average, in road construction and for trading agents in textile wholesale markets (Table 1.7). Thus for specific sectors in India, support for this hypothesis exists. We may tentatively conclude that the hypothesis is valid for a part of the Indian economy, though at the macro-level, no conclusion can be drawn on the basis of this study.

1.13 Links with the black economy

1.13.1 Firms studied would obviously not reveal any finance of illegal activity. "Market rumours" indicate such activities on the part of saome traders. All sectors studied employed suspected illegal funds in the guise of informal credit (usually from friends and relatives). Finally tax evasion by intermediaries and most firms is generally believed to be widely prevalent in India (Acharya and Associates, 1985). While black economy links have not been a central part of our field investigations, some evidence of links certainly exists. ADB (1985) expresses the opinion that most black money remains outside the formal credit market. Furthermore, they point out that black funds do play a positive role in promoting saving and investment given formal sector rigidities.

1.14 Main findings

1.14.1 The main findings of this study may be summarised as follows:

i. Given the importance of credit from friends and relatives, the average cost of borrowing in the productive sectors

studied in this report, for informal credit users, is lower than the average for all units taken together. Loans from informal intermediaries are unimportant to all but one productive sector studied.

ii. The evidence suggests that in some cases informal credit promotes efficiency of resource allocation though negative and inconclusive evidence has been found in other cases. The evidence supports the view that informal credit serves economically weak sections relatively more than formal credit.

iii. That informal credit is, by and large, complementary to bank finance, given current banking practice, finds support from the case studies. Informal credit is said to complement bank credit when they serve different groups of borrowers or are used for different purposes so that the two sectors are not in competition for the same custom. It is possible that informal credit lowers short run monetary policy effectiveness, though there is less reason to believe that it renders it totally impotent.

iv. The hypothesis of financial repression finds some support from the evidence.

v. Informal credit is more important for working capital and capital maintenance finance than for financing the purchase of capital goods.

TABLE 1.1

Sample Characteristics for Sectors Studied

Sector	Secondary data source for financial data				Field data	
	Name	Year	Location	Sample size	Location	Sample size
Intercorporate funds market	-				Metro Cities	60
Road construction	-				Delhi and Western U.P.	35
Garment exporters	-				Delhi	19
Powerloom units	-				Surat(Gujarat)	18
Textile wholesale trade	Jain et.al.(1982)	1979	All India	950	Bombay	37
Housing finance of households	V.D. Lall(1984)	1984	All India	720	-	-

TABLE 1.2

Sources of Funds of Using Sectors

Sector	Own funds	Formal credit	Informal credit
Road construction	62	6	32
Garment exports	31	26	43
Powerloom units	43	10	47
Textile Trade Units	42	10	48
Housing Finance of Households	66	20	14

TABLE 1.3

Cost of Informal Credit

Using sector	Range of interest rates	Average informal interest rate	Average cash discount on trade credit
Road construction	15 - 24	15.89	-
Powerloom	12 - 16	12.03	11 - 13
Textile wholesale trade	12 - 18	15.31	-

TABLE 1.4

Sectoral Estimates of Informal Credit Outstanding Based on Field Data

(Rs. Crore)

Sector	Date/year of estimate	Informal credit
Garment exporting units	86-87	259
Powerloom units	86-87	914
Film production		279
Intercorporate funds markets	March 86	
Public sector		3392
Private sector		600

Note: Only year of estimate can be given if a flow all-India statistic was used to obtain the aggregate estimate.

TABLE 1.5

Efficiency Ratios for Productive Sectors

Sector	Capital-output ratio	Labour-output ratio	Labour capital ratio
1. Road Construction			
All borrowers[1]	0.349	1.197	3.43
Informal borrowers	0.233	3.809	16.35
Formal borrowers	0.079	1.037	13.13
2. Garment Exporters			
Informal borrowers	0.23	0.56	2.43
Formal borrowers	0.35	0.33	0.94
3. Powerlooms			
All borrowers	0.085	0.40	4.71
Informal borrowers	0.141	0.30	2.14

Notes: 1. Includes non-borrowers and borrowers from both sources.
2. Informal Credit excludes trade credit: All firms in these sectors are substantially dependent on trade credit.

TABLE 1.6

Percentage of Total Borrowings from Informal Sector

Sector	Large	Small
1. Road construction	93	78
2. Garment exporters	67	62

Note: Small: Below the sample mean.

TABLE 1.7

Loans and Advances and Borrowed Funds of Credit Using Sectors

(In percentage of total assets)

Sector	Road construction	Garment exporters	Power-loom	Aratiyas (textile trade)	Textile wholesale traders
Loans and advances	43	39	26	72	57
Borrowed funds	38	70	59	82	37

CHAPTER 2

THE INTERCORPORATE FUNDS MARKET

2.1 Introduction

2.1.1 When the supply of formal credit to economic units is constrained at prevailing interest rates, and when the return on saving through formal channels is fixed by regulation at below its market clearing level, some increments to the pool of loanable funds inevitably remain outside the formal credit system. Such funds, intermediated by a variety of informal intermediaries and markets, are attracted by the existing arbitrage opportunities: suppliers to better returns and buyers to cheap loans or additional finance. The intercorporate funds market (IFM) in India is, to an extent, one such market. Brief references to this market and its functioning are to be found in Timberg and Aiyar (1980) and Reserve Bank of India (1985). However, to our knowledge, no systematic attempt to study the working of this market has yet been made.

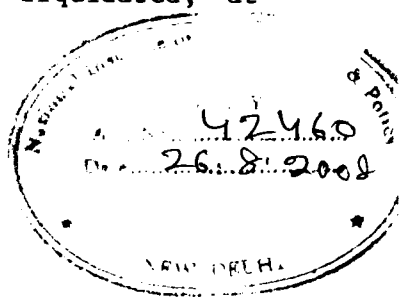
2.1.2 In this study we examine some of the organisational features of this market and try to evaluate its economic role. Besides describing the functioning of this market, the most important issue that must engage our attention is an evaluation of the hypothesis put forward by the Report of the Committee to Review the Working of the Monetary System, Reserve Bank of India (1985), better known as the "Chakravarty Committee". According to this report, "The loans are generally made by corporate units with seasonal surplus funds to other companies" and also "Evening out liquidity imbalances in the corporate sector through the development of the intercorporate funds market would provide a means of

reducing the variability in the demand for bank credit and hence provide greater maneuverability to monetary regulation measures" (RBI (1988), para 12.66). The hypothesis is, therefore, that the IFM helps to decrease fluctuations in credit availability around the trend determined by monetary measures.

2.2 Scope of the intercorporate funds market

2.2.1 Corporations have financial dealings with other corporations in three major ways: First, there are flows through their receivables account for value given. Secondly, there are flows through investment in the debt or equity of other corporations via capital markets, public issues, takeovers or the formation of subsidiaries. Finally, there are short-term loans made to other corporations and intercorporate deposits. By definition we exclude the first and second type of financial flows from the purview of this study. This corresponds with earlier usage of the term IFM. Certain external funds which flow to corporations through the same organisational channels as corporate funds are however also included in the market.

2.2.2 Exclusion of receivables is clearly appropriate since these simply represent delayed payments and have little or no relation with short term loans a priori. The exclusion of investment, especially at the short term end (represented for example, by public sector corporation bond issues with a functioning secondary market) may result in a somewhat misleading picture of the flow of funds through the intercorporate market, since both forms of corporate debt are clearly substitutable. However, even at the short-term end, the degree of substitutability is limited due to two reasons. Firstly, interest rates payable on public sector bond issues are subject to a ceiling and secondly, despite secondary markets, such investments are less readily liquidated, at least in principle, than intercorporate loans.



2.3 Organisation of the intercorporate funds market

2.3.1 This description is based on about 80 interviews with finance managers of corporations, bank officials and intercorporate brokers. Information from corporations was collected with the help of a structured questionnaire.

2.3.2 The IFM has two segments which have little or no interaction. One segment is the market for funds between public sector corporations. The other segment is the market for loans between private sector corporations. Both segments of the market are highly active and include among their participants the largest corporations in the respective sectors and in the latter case, blue chip companies. However, among intercorporate lenders in both segments, public sector financial institutions such as the Unit Trust of India, The Life Insurance Corporation and the General Insurance Corporation are to be found.

2.3.3 The flow of intercorporate loans is either directly negotiated between borrowers and lenders or intermediated through brokers. For public sector corporations, the portion of loans intermediated is relatively small.[1] Furthermore, the brokers for the public sector are themselves public sector banks or their subsidiaries (such as the State Bank of India's subsidiary, SBI Capital Markets). In the case of private sector corporations, the general impression is that the quantum of brokered transactions exceeds direct transactions.[2] Brokers are normally leading

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1. Exact figures are not available. According to the sample of firms studied, 22 per cent is brokered.

2. Based on claims made by persons interviewed.

sharebrokers and are to be found in all the metropolitan cities.[3] Recently, multinational banks such as Grindlays Bank, have selectively begun offering brokerage services. Nationalised banks are, however, yet to make much headway in this market.

2.4 Brokerage, interest rates, loan duration, loan size and miscellaneous features

2.4.1 The brokerage charged by private brokers varies between 0.25 per cent and (in the case of one broker) 1.5 per cent. Multinational banks charge 0.5 per cent. The brokerage varies with the creditworthiness/reputation of the borrower given the added difficulty of finding willing lenders for less creditworthy borrowers. The brokerage also varies with the urgency of the loan demand.

2.4.2 Interest rates among public sector units vary between 12 and 15 per cent. These rates are bounded above by the commercial bank prime lending rate (16.5 per cent) and below by the relevant bank deposit rate (8 to 11 per cent). In the private sector, interest rates reportedly vary between 13 and 19 per cent.[4] One broker in Bombay reported the following structure of interest rates.

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3. In Delhi, leading brokers include (i) Bajaj Capital and Investments; (ii) Amrit Lal Bajaj; (iii) Rajeev Relan; (iv) Bishamber Dayal Aggarwal; and (v) Vijay Mehta. In Bombay the leading brokers include (i) Jagdish Dalal; (ii) Champaklal Investments; (iii) Bhupen Champaklal; (iv) C.J. Dalal; (v) DSP Financial; and (vi) J.M. Financial.

4. Business Standard, January 20, 1988 and conversations with brokers.

	Call	3/6 month
A class companies	13.5-14	15-16.5
B class companies	13.5-14	16.5-18
C class companies	13.5-14	18-22

Another newspaper report[5] maintained that the upper range of interest rates, 18 to 19 per cent, is applicable to companies with a low capital base facing liquidity problems due, for example, to sales fluctuations. The middle range, 16 to 17.5 per cent is for firms with strong sales who, due to a low capital base, cannot get bank accommodation. The lowest range is for companies who require short term accommodation and who have a very high credit rating due to frequent participation in the IFM. Some companies have reportedly offered interest at rates of upto 22 per cent but have been unable to find lenders at this rate which ties in well with asymmetric information based credit market models such as that of Stiglitz and Weiss (1981). Rates in the private sector are reported to vary with two factors. Firstly, the creditworthiness of the company comes into play. As can be seen from the example of the company offering 22 per cent, there appears to be an upper bound on the credit risk lenders are willing to face in making loans (Stiglitz and Weiss, 1981). The second feature is the extent of accommodation received by the firm from the banking sector. For this, the size of the capital base of a firm relative to its yearly sales is reportedly of relevance.

2.4.3 A second source of information claimed that loans fluctuated between a narrow level of 17 to 18 per cent for call loans and loans of upto 6 months duration. Our samples of companies, to

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5. Business Standard, ibid.

be discussed further below, has revealed rates between 15 and 19 per cent.

2.4.4 Loans may be extremely short, call loans or may be for upto two years duration. The median loan in the private sector appears to be of three to six months duration, while the median loan in the public sector appears to be of six months to one year duration.[6] Most loans in the private sector vary between Rs 25 lakh and Rs 1 crore, with a loan of as little as Rs 20,000 and another of as much as Rs 3 crore being observed. One broker claimed that blue chip companies who were frequent borrowers and/or lenders on the market had dealings of Rs 10 to Rs 15 crore per year in amounts ranging from Rs 25 lakh to Rs 1 crore. Assuming a median loan of Rs 50 lakh and dealings of Rs 13 crore, this would imply fortnightly transactions on the part of these companies. The broker in question confirmed that the market worked at a very fast pace.

2.4.5 The average loan size in the public sector market is much larger at about Rs 10 crore though loans of Rs 100 to Rs 150 crore are not unknown. The total amount of loans outstanding at the year ending of one public sector company was as much as Rs 241 crore. In at least four other cases, total exposure exceeded Rs 100 crore. Among borrowers, one had borrowings of over Rs 1000 crore. In the private sector, one broker reported an average of about Rs 2-3 crore of loans at a time for large companies who account for about 50 per cent of loans; Rs 1-2 crore for medium companies of who account for about 30 per cent of loans and about Rs 50 lakh for small companies.

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6. Field interviews and survey. The Business Standard, June 15, 1988, cites a 3 year loan at 14.5 per cent per annum.

2.4.6 Loan negotiations between private corporations or arrangements negotiated by brokers are reportedly concluded extremely fast, the period varying between a few hours to upto three days. Public sector transactions are reportedly to take longer to negotiate at upto one to two weeks.

2.4.7 Bad debts in the private sector market are not unknown. At least three examples of bad debts of large loans, involving Rs 2.5 crore, Rs 2 crore and Rs 1.2 crore respectively have been cited by interviewees. The first mentioned loan had been overdue for over two years at the time of the interview. Brokers interviewed also claimed that somewhat delayed payments in the private sector were common and that their good offices were often sought to secure loan repayments. No bad debts were reported in the public sector market.

2.4.8 Loans are mostly unsecured, though a few cases of secured loans have come to light. One broker claimed that recently, companies have become more cautious in their lending in view of a series of defaults by some borrowers. He cited four instances of this in substantiation.

2.5 The size of the market

2.5.1 For public sector corporations, a sample of 13 large corporations with an aggregate paid up capital of Rs 9267 crore in 1986-87 were interviewed. The aggregate paid up capital of the 1053 existing government companies on March 31, 1987 was Rs 31,124 crore according to the annual report of the Department of Company Affairs. Thus, the sample covered 1.23 per cent of public sector companies representing 29.8 per cent of the aggregate paid up capital. The volume of intercorporate loans outstanding on March 31, 1987 for the sampled companies was Rs 1010 crore. The sample

of firms included two companies which did not participate in the market, two pure borrowers, four firms that both borrowed and lent on the market and four pure lenders. The number of companies having dealings with these companies on the IFM was at least 27. If loans in the sample are scaled up proportionately by the total paid up capital of public sector companies (as on March 31,1987), the aggregate size of the market works out to be Rs 3392 crore in 1986-87. This corresponds closely to the aggregate size of the IFM guessed at by a senior banker in Delhi, the main centre for the public sector IFM.[7] For loans in the sample for which details were available, the (weighted) average loan duration was 8.2 months.[8]

2.5.2 The size of the private sector market has been estimated by one broker to be of the order of Rs 50 to Rs 100 crore in Delhi and Rs 300 to Rs 500 crore in Bombay at any one time. In Calcutta the market was estimated by another broker to be of the order of Rs 150 crore. The point in time estimate for the all India figure would therefore be between Rs 500 and Rs 700 crore giving a flow estimate of Rs 1500 to Rs 2250 crore if the average duration is taken to be four months. A sample of 47 private sector company with an aggregate paid up capital of Rs 134.84 crore in 1986/1987[9]

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7. Another banker felt that the size of the market at any one time would be about Rs 1000 crore. In view of the fact that the sample figure itself exceeds this - all firms sampled had the same year ending - this is clearly an underestimate.

8. The sample covered 2 to 4 years for each firm though only 1986-87 was common to all firms. The average loan duration is based on the total sample.

9. Unfortunately, firms in this segment had widely dif-

can be used as the basis for another estimate. Total intercorporate loans by the sample were Rs 111.69 crore. The all India figures as per the Department of Company Affairs (on March 31, 1987) were 1,37,133 companies with a paid up capital of Rs 9383 crore. Thus the point estimate of the all India size of the market on the basis of paid up capital is Rs 7772.08 crore. Even if intra-group loans amounting to Rs 4096 crore are netted out, the point estimate for the size of the market works out to Rs 4922 crore in 1986-87. These estimates are markedly different from the estimates given by the brokers, reflecting a bias in the sample towards large firms. Thus, for the private sector IFM we retain as our estimate the median estimate by brokers of Rs 600 crore.

2.6 Regulatory environment

2.6.1 The Chakravarty Committee has stated that, `According to Tandon/Chore norms, companies with a current ratio of less than 1.33 are discouraged from making intercorporate loans but those with a better current ratio are permitted to make such loans'.(Para 12.66)[10] However, the extent to which commercial

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fering balance sheet dates. Credit balances with one firm are not matched by debit balances with correspondent firms due to this reason. We have followed the practice of considering the larger figure if exact loan details are available. Furthermore, we have, perforce, ignored the different year endings. The reported figure is, however, for year endings between July 1986 and June 1987.

10. `Tandon' refers to the Reserve Bank of India's `Study Group to Frame Guidelines for Follow-up of Bank Credit, 1974 which provides guidelines for assessing credit requirements for industry and proposes inven-

banks monitor intercorporate lending at the time of sanctioning credit facilities to firms is open to question given that the Chakravarty Committee expressed dissatisfaction with current credit appraisal practices. Furthermore, these restrictions are only indicative. Their success, even if bank credit appraisal takes note of these norms, will be restricted to companies who find no substitute for bank credit and who are thereby forced to accede to these norms. A firm which has enough funds to lend on the IFM clearly will not be in severe need of bank credit unless it is channeling bank credit to the IFM.

2.6.2 A second item of regulation is provided by the Companies Act, 1956, Sections 369 and 370 relate respectively to loans (excluding book debts) by companies to their managing agents or to companies with the same managing agent and to loans (excluding book debts) to companies under the same management or other companies in general. The overall limit on such loan is fixed at 30 per cent of the subscribed capital plus free reserves of the company for loans to companies not under the same management (20 per cent for companies under the same management with no limits on loans from holding companies) unless prior approval of the Central government obtained. This limit is in the process of being revised. Furthermore, for loans in excess of 10 per cent of subscribed capital and free reserves, prior approval of the shareholders by special resolution is called for. Even here, the provisions of the Section 370 do not apply to private limited

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tory norms. `Chore´ refers to the Working Group to Review the Svstem of Cash Credit appointed by the Reserve Bank in 1977. This group recommended ways of encouraging firms to finance their own inventories. It also recommends methods of supervising borrowers.

companies.[11] During the year 1986-87 only 22 applications were considered by the Department of Company Affairs of which 11 cases were approved. It is hard to see how these sections are enforced given the possibility of making and liquidating loans between financial year endings. At any rate, it is entirely possible that the loan figures given in the previous section, though extremely large, underestimate the true extent of the market.

2.7 Supply and demand for funds: qualitative aspects

2.7.1 Various facts have come to light as to the determinants of supply and demand for funds in the IFM. The most important finds are as follows. Firstly, public sector corporations interviewed reported that they resort to the IFM in view of the spread between bank deposit and lending rates and borrow mainly to even out short term fluctuations in cash flows not expected to continue over the long term. Thus borrowers go to the IFM mainly due to its speed and due to the lower cost of borrowing. In contrast, private sector firms are actively constrained for funds. The evidence for this is the fact that they are willing to pay rates of interest above the bank lending rate. Secondly, borrowers on the private sector IFM on occasion use IFM funds to finance fixed asset formation. At least two cases of this - and that too of blue chip companies - have come to light.[12] Thirdly, the aggregate availability of funds in the market responds to changes in bank credit availability and attempts by banks and the government to mobilise

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11. Vide a judgement delivered in the Bombay High Court in Durga Prasad Mandelia versus Registrar of Companies (1987), 61, Company Cases, 479.

12. In the pharmaceutical and instrumentation sectors. A broker claimed that this practice was fairly common.

deposits. It has been claimed that the enhanced rates of return paid by government saving institutions in recent years, has caused the supply of funds to the IFM to decrease. Also, interest rates on the IFM display "seasonal" fluctuations. The tight season occurs towards the end of the calendar year since banks actively solicit deposits at that time to meet deposit mobilisation targets.[13] Besides these major features, two other points may be mentioned.

i. The public sector IFM reportedly has the blessings of the Finance Ministry.[14]

ii. The following two features, both related to government policies or activities, have been cited as contributing to the financial tightness faced by some firms: (a) requirements for the advance payment of various levies and taxes; and (b) tardy payment of dues by government departments and by public sector companies (to each other and to the private sector) for goods bought on deferred terms. Cases of overdues for up to two years have been cited.[15]

2.7.2 Regarding specific instances of sources of surplus cash, the following relevant information has been gained.

i. Manufacturers of vehicles, in both the public and the private sectors usually take advance payments, to be adjusted at the time of delivery, from customers who book orders for vehicles. These funds are often in excess of their needs especially when the vehicle manufactured is in high demand, so that bookings are in excess of production capacity. These funds are often deployed on the IFM. Since advance payments do not earn very high rates of interest, profitability of such

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13. Both points in relation to bank/government influence are from the Business Standard, January 20.

14. Business Standard, June 15, 1988, op. cit.

15. Both points are taken from the Business Standard, ibid.

firms is greatly aided by IFM loans.

ii. One public sector corporation, with sales primarily to government departments and undertakings, receives most of its payments in the month of March/April. This is utilised to make IFM loans. However, during the lean season (around September), it occasionally has to borrow from the IFM.

iii. Two large public sector trading firms get bank credit to pay for imports made by them. The credit period is 180 days. However, the resale of imported items is usually complete in three to four months, leaving the firms with surplus cash for two to three months. These funds are diverted to the IFM.

iv. Two firms, one in the private sector and one in the public sector, claimed that their surplus funds were simply from retained earnings not channeled immediately to fixed investment.

v. It is reported that several finance corporations and other non bank intermediaries also lend large amounts on this market.

vi. Directors and senior managers of corporations form investment companies to channel funds to intercorporate loans and investments. This has been reported in Nayar (1984).

2.7.3 With regard to demand for funds, the only important information gained, which has been mentioned earlier, is that some firms use funds to finance capital projects by rolling over loans. This has been claimed to be a fairly common practice.

2.7.4 The importance of such qualitative information lies in the fact that it provides indications of various factors affecting the cash flow of borrowers and lenders. Since the IFM is primarily a market for short term loans, it is most useful to have information about cash flows as this will ultimately determine which firms are borrowers and which lenders. Much of the evidence in this section provides support for the Chakravarty Committee's hypothesis. The rest of the evidence either has no bearing on the hypothesis or leaves open the door to contradicting it without actually doing so conclusively. Analysis of financial statements normally available is unlikely to prove as useful. Nevertheless, we now proceed to

an analysis of selected financial ratios to examine differences between borrowers and lenders.

2.8. Analysis of financial ratios of participating and non-participating firms

2.8.1 We consider five financial ratios in this analysis:

i. The equity-sales ratio (ES): The equity position of a firm has been cited as a key determinant of the extent of bank accommodation they can get. If equity is low relative to sales, then under this hypothesis, the quantum of bank finance would be inadequate. Thus, borrowers would be expected to have a lower ES than lenders. However, if the Chakravarty Committee is correct - in that the IFM meets temporary needs for finance not of a long term nature - then no pattern will necessarily be present.

ii. The debt-equity ratio (DE): Since intercorporate loans are relatively expensive, at least for the private sector, borrowers could on average be expected to exhaust other sources of borrowed funds, including long term sources, before approaching the IFM. Bank credit should also be less readily forthcoming for highly leveraged firms. Both arguments suggest that borrowers would have a high DE. Once again, a lack of any pattern in the DE would tend to support the Chakravarty Committee (DE has been computed here as the rate of borrowed funds to owned funds).

iii. The Net Current Ratio (NCU), Quick Ratio (QUI) and Current Ratio (CUR): All three ratios are measures of liquidity. The net current ratio gives the percentage of net current assets to total assets. A higher ratio would reflect a surplus liquidity position. Since current assets and current liabilities appear in the numerator, an intercorporate loan will not effect the value of the ratio.[16] Borrowers should therefore be expected to

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16. The lender will have a decrease in one current asset, cash and bank balances and an increase in another current asset, loans and advances. The borrower will have an increase in a current liability, short term borrowers and either an increase in cash and bank balances or a decrease in dues payable.

have lower NCUs than lenders. In case the ratio is higher or the same for borrowers as for lenders, this may be taken as a sign of sticky "current" assets in borrower's portfolios. Once again, such a finding would support the Chakravarty Committee's position since sticky receivables clearly constitute a case of "temporary" tightness in cash flow which can usefully be ironed out by non bank sources of funds. However, the alternate hypothesis outlined earlier is not thereby rejected. The quick ratio (current assets less inventories as a ratio of current liabilities) should similarly be higher for lenders than for borrowers if the Chakravarty Committee thesis is to be contradicted. Finally, the current ratio (current assets to current liabilities) should also be lower for borrowers.

2.8.2 Table 2.1 presents the average ratios separately for public and private sector borrowers and lenders. For comparison, average ratios for non borrowers and for all firms are also presented.

2.8.3 In the case of private limited companies, ES provides evidence against the committee's view but the evidence is weak given that non-participants have the same ES as borrowers. The ratio DE tends to reject the Chakravarty Committee's position though the difference in means between borrowers and lenders is not statistically significant. However, the more important liquidity ratios NC and Q do not add their support to DE. Likewise, CUR has the opposite sign from that expected. The ratio CUR, being low for all private sector firms, goes to suggest that bank credit norms are irrelevant for the private sector IFM. Overall, the evidence does not permit us to reject the committee's hypothesis.

2.8.4 In the case of the public sector IFM, only the quick ratio has the right ranking between borrowers and lenders and even here, the difference in borrower's and lender's ratios is not significant. Thus, the analysis of ratios for the public sector also tends to support the committee's position[17].

2.8.5 Overall therefore, both qualitative information and ratio analysis cannot reject the position of the Chakravarty Committee with regard to the public sector IFM. In the case of the private sector IFM, qualitative evidence suggests that long term credit constraints also play a role. We must enter the caveat that, the sample size being limited, the findings are tentative.

2.9 Some omitted factors

2.9.1 Two factors which will clearly prove revealing in the study of the IFM have been omitted due to the limited data base for the study. The first is the sectoral pattern of intercorporate borrowings and the second is the influence of India's fast expanding stock market. The first item requires a large panel data set so that the fluctuating fortunes of different sectors

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17. To further examine the situation, net intercorporate borrowings was regressed on ES, DE, CUR/NCU and QUI separately for private and public sector units. CUR and NCU were only tried separately due to their high correlation. One observation each per firm per year for which data were available was used. Thus there were 27 observations for the public sector and 81 observations for the private sector. While goodness of fit and specification diagnostics were uniformly poor for the private sector regression, CUR and DE were significant and contrary to the committee's position for the public sector regression. However, specification diagnostics were poor for this regression as well. The regressions are therefore not reported here.

over time can be captured. The second item requires time series data. Both items are presently beyond our resources since available data bases on the corporate sector do not give details of IFM transactions.

2.9.2 The influence of the interest rate and of the structure of returns on alternative assets has also not been addressed. Once again, this is because of the unavailability of a sufficiently large panel data set. The interest rate dispersion observed in the private IFM, it seems clear, is the result of differences in risk and convenience. While this could be tested with the aid of balance sheet ratios and other available data, the available qualitative information appears to be strong enough to make the exercise unnecessary.

2.10 Implications for monetary policy

2.10.1 The large size of the intercorporate funds market - at least 20 per cent of bank credit to companies - must give it the potential to destabilise monetary policy. While it is true that the evidence cited indicates that both the quantum and the cost of funds on the IFM respond to changes in bank credit and money availability, this does not give a complete picture of the impact of the market on monetary policy.

2.10.2 The first problem concerns the size of the money multiplier. While it is indeed likely that a tight credit policy will be reflected in a tight IFM, the exactness with which the Reserve Bank can predict the impact of a given degree of credit tightening must necessarily be affected. Thus policies designed to counter a given level of inflationary overheating in the economy may either have a negligible impact or an overly restrictive impact. What is important is the greater uncertainty associated with the multiplier engendered by this market.

2.10.3 Secondly, it should be clear that selective credit controls, applied to different segments of the corporate sector will be seriously undermined. Thus, while the Chakravarty Committee may be right in saying that the IFM smooths over short term funds availability problems, it must be acknowledged that this works equally well when the cause of the credit tightness is a selective credit control.

2.10.4 Both these destabilising influences are likely to be aided by the fact that funds flow into this market from outside the corporate sector proper (through, as mentioned, other non bank intermediaries).

2.11 Summary of main points

2.11.1 The IFM has been defined to be the market for short term loans and deposits to corporations, usually between corporations, in accordance with earlier usage. It has two segments which are more or less compartmentalised. One segment consists of public sector companies and the other consists of private corporations. In the public segment, transactions are negotiated either directly or by nationalised banks and their subsidiaries. In the private segment loans are negotiated directly, through brokers and, in the recent times, by multinational banks. In the private segment, brokerage rates range between 0.25 and 1.5 per cent.

2.11.2 Interest rates vary between 12 and 15 per cent in the public sector segment and between 13 and 19 per cent in the private segment. In the private segment rates vary with the urgency of the loan demand and with the credit rating of borrowers. Potential borrowers offering higher rates reportedly do not find lenders due to the adverse creditworthiness position such an of-

fer signals. Loan durations are usually from 3 to 6 months in the private segment and 6 to 12 months in the public segment. The average loan size is Rs 10 crore in the public sector and Rs 25 lakh to Rs 1 crore in the private sector. The private sector market is reportedly very fast paced and fluid.

2.11.3 Lending on the market is regulated indicatively by banks who discourage firms with current ratios of less than 1.33 from lending on the market. Sections 369 and 370 of the Companies Act, 1956 also place a ceiling, in terms of net owned funds, on the quantum of loans to related and unrelated corporate bodies unless prior government approval is obtained. The effectiveness of the latter body of regulations is open to doubt.

2.11.4 Three important findings as to the supply and demand for funds in the IFM are:

i. While public sector firms mainly enter this market to take advantage of better returns or cheaper loans than banks offer, private sector firms may borrow from the IFM to ease credit shortages.

ii. Funds from the private sector IFM are demanded by some firms to finance fixed capital formation.

iii. Bank credit availability and deposit mobilisation and government credit instruments influence the cost and availability of funds in the IFM.

2.11.5 A fourth feature influencing demand is compulsory advance payments of rates and taxes and tardy government payment for value received.

2.11.6 Advance deposits for vehicles, bunched payments by government departments for value received and extended bank credit for foreign trade finance are some of the sources of surplus funds identified.

2.11.7 Non bank intermediaries such as finance corporations are also known to lend on the IFM.

2.11.8 From the analysis of financial ratios, the Chakravarty Committee's hypothesis cannot be rejected.

2.11.9 Three potentially important factors not studied due to lack of data are the sectoral pattern of IFM participation; the influence of capital markets; and the influence of interest rates both in the IFM and for alternative assets.

2.11.10 *A priori*, the IFM has the potential to destabilise monetary control by enhancing the uncertainty of the money multiplier and rendering selective credit controls ineffective though this is not testable with available information.

TABLE 2.1

Selected Financial Ratios

FIRM GROUP		equity-sales	debt-equity	current	net current	quick
All Firms	mean	0.57	2.06	0.56	-0.19	-0.03
	st. dev.	1.02	1.43	0.38	0.42	0.42
Public Sector						
All firms	mean	1.12	2.57	0.44	-0.23	-0.05
	st. dev.	1.86	1.86	0.32	0.50	0.52
Borrowers	mean	1.57	2.32	0.39	-0.21	-0.11
	st. dev.	2.27	2.03	0.22	0.53	0.58
Lenders	mean	1.19	2.89	0.40	-0.25	0.05
	st. dev.	2.09	1.96	0.23	0.53	0.42
Others	mean	1.01	1.65	0.74	-0.12	0.29
	st. dev.	0.49	0.77	0.57	0.22	0.16
Private Sector						
All firms	mean	0.38	1.89	0.60	-0.18	-0.01
	st. dev.	0.34	1.21	0.39	0.17	0.40
Borrowers	mean	0.28	2.42	0.62	-0.16	-0.11
	st. dev.	0.15	1.36	0.35	0.18	0.43
Lenders	mean	0.47	1.81	0.51	-0.19	-0.16
	st. dev.	0.38	1.26	0.25	0.12	0.26
Others	mean	0.28	1.94	0.76	-0.14	0.16
	st. dev.	0.23	1.21	0.50	0.19	0.45

CHAPTER 3

TEXTILE WHOLESALE TRADE IN INDIA

3.1 Introduction

3.1.1 Apart from certain types of cloth that are distributed through the public distribution system, the bulk of textiles in India are distributed through the private sector distribution system. Furthermore, most agents in the distribution chain between textile production units, whether integrated mills or decentralised powerloom units, and the consumer are in the small, unorganised sector. That is, almost no firms are organised limited companies and most firms are small relative to the total market. Most agents in the distribution trade rely primarily on own funds or informal sector credit. More importantly, many distribution agents are also important sources of credit in their own right. Commercial bank credit is relatively unimportant. Furthermore, these markets reportedly generate and use substantial amounts of unaccounted or improperly accounted funds.

3.1.2 While the study and understanding of distributive mechanisms, especially informal mechanisms like that under discussion here, is important in its own right, the role of informal credit and unaccounted funds in the trading sector is of even greater interest. Since the role played by distribution agents as suppliers of credit is linked to the specific role they play in the distribution system, a description of key features of the distribution system must be provided.

3.1.3 In this chapter our objective is to provide a description

of the textile distribution trade in India emphasising the flow of credit and attempt the construction of an analytical model which will facilitate an understanding of its functioning. Understanding the role played by credit is the main task we undertake. The framework will be used to study the efficiency of the distribution system and its impact on income distribution.

3.1.4 For the empirical description we rely on a pioneering India wide study by Abhinandan Jain et.al. (1982) supplemented by our own field work in the Bombay textile wholesale market.

3.1.5 The rest of the chapter is organised as follows. In section 3.2 we describe the samples used in Jain et.al. (1982) and in our own more modest field study. Sections 3.3 to 3.6 are descriptive sections on prevailing distribution systems, distribution agents, the role of credit and own funds and the nature of the distribution market. In section 3.7 a model of the distributive trade is constructed paying full attention to credit flows. Section 3.8 uses the model to explore the welfare implications of informal, illegal and bank credit. Section 3.9 offers some concluding comments and section 3.10 contains policy recommendations.

3.2 Data base for the study

3.2.1 Jain et.al. (1982) this pioneering study covered a total of 950 distributive units (191 wholesalers, 556 semi-wholesalers and 203 retailers) from 15 major textile trading centres all-over India in 1979. This sample was supplemented by in-depth case studies of a few trading and non-trading units, representative of all types of distribution agents, and also conversations with `knowledgeable persons´ in all the 15 centres. The sample represented an estimated 6.5 per cent of all wholesalers, 3.7 per cent of semi-wholesalers and 0.06 per cent of retailers or 0.31 per cent of the overall population of these agents. Since the study

was sponsored by some associations of textile traders,[1] data reliability may be presumed to be high given the limitations of sample size relative to the total population. The study also threw up a wealth of invaluable qualitative information. By design, the study did not cover any non-trading agents such as aratiyas (commission agents), angadias and brokers. Furthermore, since the decentralised (mostly small scale) powerloom sector has been growing rapidly in recent years and the integrated mill sector has been declining due to the high costs and obsolescence of the latter, a new breed of production-cum-distribution agents, semi-manufacturers[2] have recently gained in importance. These agents, not being widely prevalent in 1982, were not covered by the 1982 study.

3.2.2 Our field survey (1988) Accordingly, it was decided to supplement the study by Jain et.al. (1982) with a small survey of a particular textile distribution centre. Bombay was selected because of its importance and because of the prevalence of the full spectrum of distribution agents there. Office bearers of the 4 leading textile distribution agents associations, 6 bank officials, 3 semi-manufacturers, 9 aratiyas and 20 wholesalers were interviewed. Financial data were obtained on 18 wholesalers, 12 semi-manufacturers and 7 aratiyas. Of these, data on sales by wholesalers were rejected since their information differed excessively from the qualitative information on finances obtained to cross check the specific interviews. Due to reportedly widespread tax evasion, sales data was not easily extracted from agents, who

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1. The Maskati Cloth Market Association, Ahmedabad, The Bombay Piece Goods Merchants Mahajan and the Panchkuva Cloth Merchants Association, Ahmedabad.

2. This convenient term, coined by Anil Agarwal, Secretary of the Bharat Merchants Chamber, Bombay is not yet widely used.

harboured the suspicion that we were tax enforcement agents. Capital structure information is, however, very similar to that in Jain et.al. (1982). In the case of semi-manufacturers and aratiyas, most of whom receive bank credit, financial statements were available from banks. These statements may be taken to be fairly reliable. A wealth of useful qualitative information on the role of different agents and interactions between them was also obtained. Thus, while our study does supplement the study of Jain et.al. qualitatively, on the quantitative side we have had less success, at least for sales by wholesalers.[3]

3.3 Textile distribution systems[4]

3.3.1 The number of distributive agents intermediating between mills/powerlooms and consumers varies between 2 and 6. The shortest chain is mill/powerloom - semi-manufacturers/semi-wholesaler - retailer and the largest chain is of the form mill/powerloom - trading agent/semi-manufacturer - wholesaler - non-trading agent - semi-wholesaler - non-trading agent - retailer. Non-trading agents include brokers, mill's agents and aratiyas. Aratiyas are the predominant non-trading agent though, recently, brokers have been gaining ground. An additional agent, the angadia, plays a role as a courier of cash between geographical locations. Table 3.1 provides information on the geographical coverage and cost of

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3. Since almost all semi-manufacturers and aratiyas receive bank credit, their sample will not display serious bias. The wholesalers samples is clearly biased in favour of those who cooperated with us but the nature of bias is unknown.

4. To avoid frequent repetition of our source we state at the outset that (i) all quantitative information for 1979 is from Jain et.al., (ii) qualitative description of trading agents also draws heavily on their work and (iii) while we have been selective, many empirical findings are due to them.

distribution of various systems.

3.3.2 Table 3.1 reveals a striking feature of the distribution system: As the distance between consumers and producers increases (whether measured by the index of geographical reach, cost of distribution or total capital employed) the number of links in the chain increases. Return on capital also decreases as the number of links increases, though not uniformly. The return to the typical agent, who participates in more than one system, will be an average of (appropriate proportions of) these figures. This is indirect evidence that the transactions costs and risk of serving customers increases with distance.

3.3.3 An additional feature revealed by our field study is that, when the textile market is depressed, there is a tendency to reduce dependence on long chains even at the cost of greater risk. Specifically, in the currently depressed textile market, the volume of sales intermediated by aratiyas has decreased. The importance of non-trading agents in 1979 is shown in Table 3.2. A final feature of the distribution system is that larger mills tend to bypass wholesalers.

3.4 Types of agents: Their role as suppliers/users of credit and in the distribution of goods

3.4.1 The main trading agents are wholesalers, semi-wholesalers, and semi-manufacturers. They are now briefly described.

3.4.2 Wholesalers: Their main function is to provide finance to the distributive trade and insulate mills from price and quantity risks emanating from the demand side. Along with aratiyas, wholesalers are the main financiers of textile distribution. Thus, while the major portion of their purchases are against cash or on short term credit, sales are made on a relatively long term credit. Jain et.al. (1982) report 51 per cent cash purchases and

an average of 31 days credit on credit purchases as compared to 84 per cent credit sales and 55 days credit given. Table 3.3 shows that the same trend has been maintained to the present. Wholesalers now offer 53 days credit on average. However, it was reported to us that the total credit period may exceed 200 days because of the currently depressed condition of the market. Outright bad debts, reported to be 0.45 per cent of sales in 1979, are now reported to be in the region of 7 per cent to 8 per cent. Most wholesalers specialise in a limited product range. In fact some only deal in `grey´ (unfinished) goods which, in the distribution market, is the most prestigious segment.

3.4.3 Semi-Wholesalers: Their primarily function is to stock a large variety of goods to serve retailers in their regional submarkets. They serve to reduce search costs of retailers. Their role as suppliers of credit is more limited given that, on average, 67 per cent of goods were purchased on credit averaging 48 days and 77 per cent of sales were credit sales with credit given averaging 57 days in 1979. However, inventories were equal to almost twice the number of days of sales as compared to wholesalers in 1979 (43 days as against 22 days).

3.4.4 Retailers: Retailers bought about 55 per cent of goods on credit averaging 51 days in 1979. Most retail sales were on cash or very short term credit (6 days) in 1979. However, inventories averaged 70 days of sales.

3.4.5 Semi-manufacturers: The number of these agents has grown dramatically in recent times. Most semi-manufacturers were formerly wholesalers or aratiyas, though some continue to carry on both their former and new activities simultaneously. These agents purchase grey goods from powerlooms or wholesalers and have them processed, according to their specifications by the large number of small processing and finishing units in existence, under a put-

ting out system. The latter is used to keep labour costs in check. Processed goods are resold to wholesalers, semi-wholesalers or retailers. For up-country sales, non-trading agents, mainly brokers, are used by them.

3.4.6 The main types of non-trading agents in the wholesale segment are aratiyas, brokers and angadias.[5]

3.4.7 Brokers or indenting agents: These agents, may be located either at the wholesale/semi-wholesale centre or in up-country markets. Brokerage rates are currently 1 per cent to 1.5 per cent of the value of sales. They use their superior knowledge of the wholesale market to lower the transaction cost of purchases by semi-wholesalers and retailers. They also play a role in communicating market intelligence to wholesalers and semi-wholesalers. In recent times there has been an increase in the role played by brokers and a secular decline in that of aratiyas.

3.4.8 Angadias: Though not formally a part of the textile distribution system, this traditional institution plays a significant role in speeding up payments and other financial transfers. Bank cash remittance facilities in India are notorious for their delays, inefficiencies and high prices.[6] Angadias[7] who provide a

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5. We deliberately neglect agents between mills and wholesalers/semi-wholesalers and between semi-wholesalers and retailers. The former play a relatively passive role as selling agents for mills and the latter are relatively unimportant according to Jain et.al. (1982).

6. The recent, ludicrous, case of computer readable cheques illustrates their gross inefficiency. By a central bank (Reserve Bank of India) directive, only select metropolitan bank branches still have the facility of encashing traditional bank drafts and cheques though most non-metro branches do not as yet have the new technology. The protests of trading associations have, so far, gone unheeded.

cheap , quick and reportedly secure way of transmitting funds have therefore been gaining in importance in recent years. Thus, though they neither supply nor use credit from textile markets, they have an important role to play in providing efficient informal financial services to this sector.

3.4.9 Aratiyas: There are between 750 to 800 aratiyas in the Bombay market intermediating an estimated 65 per cent to 70 per cent of sales. Aratiyas make purchases from manufacturers/ wholesalers/semi-wholesalers on behalf of semi-wholesalers/ retailers and arrange for their dispatch to these clients. Their rate of commission is normally 2 per cent to 3 per cent over the purchase price. An additional role they play is to extend credit to their clients since the credit they receive (2-3 months) is less than the credit given to clients (upto 6 months). Along with wholesalers they are the main financiers of textile distribution. In order to preserve their credit rating, aratiyas seldom default or delay payments. This has been confirmed by several persons interviewed. Aratiyas specialise in particular up-country submarkets which they visit during the lean season (peak season is normally the festival months between September and December). They act as pure informal lenders outside the textile business during the lean season. In fact, many aratiyas are former Gujarati Shroffs, who, due to restrictive policies, have found it difficult to survive as pure indigenous bankers. This transition had been well under way even a decade ago (Timberg and Aiyar, 1980). Thus, aratiyas, due to their intimate knowledge of the wholesale market and particular up-country markets, serve an important transactions cost reducing role. More importantly, due to their superior knowledge of up-country markets and their role as

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7. Literally "Those who carry on their person". See Timberg and Aiyar (1980) for an earlier reference to them.

suppliers of informal credit, they serve to reduce the total risk cost of the distribution system. Though Table 3.5 shows that aratiyas are net recipients of credit, it also shows that, of all agents, the loans and advances by aratiyas tie up the greatest share of the funds available to them. This state of affairs, given that aratiyas are the best informed about the creditworthiness of customers of all intermediate agents, suggests that informal credit markets are relatively efficient informationally .

3.4.10 Agents cost structures: The total cost of doing business for all agents except aratiyas is very low, with the exception of bad debts (which are, currently, high) and the processing costs of semi-manufacturers. Table 3.4 provides relevant details.

3.5 Role of bank and informal credit

3.5.1 Commercial bank credit: Although bank credit is a relatively unimportant source of capital for all agents in the market, the experience of different agents varies with their collateral availability. Semi-manufacturers and wholesalers get overdraft or "cash credit" facilities upto specified limits against hypothecation of stock-in-trade, trading premises or guarantees by proprietors/partners in their personal capacity. The limits are normally very conservative relative to the value of collateral. Table 3.5 shows that all wholesalers in the sample use cash credit while two of them also have overdraft facilities. Although Table 3.5 shows only two wholesalers as having bill discounting facilities from commercial banks due to the small sample, it was reported in our field work that most wholesalers, semi-manufacturers and aratiyas have bill discounting facilities. Aratiyas, since they hold little or no stock in trade, are unable to offer any acceptable collateral to banks and are therefore restricted to bill discounting. If we look at the bank-wise distribution of account holders (Table 3.6), it may be seen that the

majority of customers from this sector are dissatisfied with both the finance received and their bankers.

3.5.2 Two types of malpractices have come to light in our discussions. There are reportedly brokers in the market who guarantee the provision of bank loans against bribes (such bribes are picturesquely called `paperweight´) the going rate being 2 per cent of the credit limit sanctioned by banks. Secondly, at the consignee end in up-country sales, consignees pay bribes to bank managers and transport operators to release consigned goods before the bank receives payment on the bill of exchange. Consigners (aratiyas, wholesalers, semi-manufacturers or semi-wholesalers) are then forced to pay back the principal and interest on dishonoured bills and attempt recovery of sales proceeds directly from customers. Several aratiyas and wholesalers reported such corruption (see Table 3.7). Of other reasons for dissatisfaction, the most serious reasons were delay in the provision of services, high bank charges and poor customer service. Associations of agents in Bombay have been lobbying for credit against hypothecation of book debts, for the facility of giving loans to groups of traders and for raising the credit limit to collateral ratio in order that the usefulness of bank services may be enhanced. They have yet to meet with any success.

3.5.3 The normal bank interest rate is 16.5 per cent per annum (exclusive of bank charges).

3.5.4 Cooperative bank credit: The share of such credit is even lower than that of commercial banks. Cooperatives normally charge a white interest rate of 18 per cent per annum coupled with reported black interest at 6 per cent.

3.5.5 Informal credit: Informal credit is the major source of borrowed funds for all agents. As discussed, distribution agents

ensure that credit received by them from primary creditors is passed down the distribution chain. The major suppliers of primary informal credit to the market are `friends and relatives' at a widely reportedly, 15 per cent to 18 per cent per annum, 18 per cent being the most prevalent rate. Intra-market loans at the same interest rate are also common. It was found in our survey that out of 28 wholesalers, 18 received loans from friends and relatives at an average rate 14.97 per cent per annum (see Table 3.7). Similarly, of 12 semi-manufacturers and 6 aratiyas, 10 and 5 respectively received loans from friends and relatives at an average rate 16.5 per cent per annum. `Others' referred to in Table 3.7 are mainly intra-market loans. The upper bound on interest rates at which agents can take loans is fixed periodically by agent's associations. Since loans from `friends and relatives' are a popular method of laundering own black funds, much of this credit may in fact be unaccounted wealth.[8] Informal credit for the sample was, without exception, unsecured and without any margin requirement. However, in all cases, borrowers had personal and/or long standing associations with lenders which may be looked upon as implicit security. Most informal loans are repayable on demand but can be substituted by other informal loans unless there is a generally tight credit market.

3.5.6 Trade credit given by agents are subject to delayed payments, and less frequently, outright default. Currently, 75-90 days is reported to be the prevailing recovery period for wholesalers though this is not uniform. Effectively, the price of goods sold to borrowers varies with their (subjectively assessed) creditworthiness.

3.5.7 Sources, uses and cost of funds: Quantitative data: Table

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8. This has been communicated to one of the authors by an income tax official.

3.8 to 3.11 present quantitative information on the sources, uses and cost of funds of different agents covered by the two field studies. The main characteristics revealed by Tables 3.8 to 3.11 are as follows:

1. Aratiyas receive more bank finance than trading intermediaries. However, they also receive more informal finance except as compared to semi-manufacturers.

2. Except for semi-manufacturers, all trading intermediaries rely significantly on own funds, retailers being the most constrained.

3. The proportion of funds outstanding by way of loans and advances is highest for aratiyas. However, they are net receivers of credit.

4. Wholesalers and semi-wholesalers are net suppliers of credit.

3.5.8 Illegal funds and tax evasion: As we have mentioned, data on sales for wholesalers collected by us were not reliable and diverged significantly from other estimates. Since wholesalers harboured suspicions that we were tax enforcement agents, sales figures reported to us were presumably those reported to tax authorities. Using data from Jain et.al. (1982) a guesstimate of income tax evasion and under-reporting could therefore be made.[9] Our guesstimates, given in Table 3.7, are computed as follows:

$$p_i = (x\ JK_i - S_i)m/xJK_i$$

where

p_i is under-reported profit as a proportion of sales for the ith wholesaler,

x is 0.75, 1.0 or 1.25 for lower, median and upper estimates,

J is the sales to total capital employed ratio as in Jain et.al. (1982), J= 5.1963,

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9. We are grateful to Tapas Sen for suggesting this possibility and also helping us with the formulae.

K_i is the capital reported by the ith wholesaler in our sample,

S_i is reported sales by the ith wholesaler and

m is the average profit rate before tax of wholesalers in Jain et.al. (1982), m=0.058.

Thus xJK_i is our estimate of true sales.

3.5.9 When we assume a conservative 15 per cent effective rate of income taxation we get the guesstimates in Table 3.12. According to these figures, about 0.78 per cent of total sales are evaded taxes. Consequently, since total sales in the textile sector were Rs 6222 crore in 1986-87 (Ministry of Textiles,) the amount of evaded taxes in that year was about Rs 49 crore. It should be noted, furthermore that this is only an estimate of income tax evasion and not of sales tax or local tax evasion.

3.5.10 Bank credit versus informal credit: The first feature to note is that the effective bank interest rate we have reported, inclusive of `paperweight´ and bank charges, is higher, on average, than the informal interest rate. That banks require collateral but informal lenders do not is also important. This runs counter to the usual finding for informal and curb markets. The finding is based on oral evidence, we remind the reader, of around 40 interviewers and may be taken as fairly reliable given the lack of contradictory reports. This evidence is indirectly supported by two considerations.

3.5.11 First, there is the limited informal credit in the market as a whole at, furthermore, a rate of interest fixed by the associations in the short run. Secondly, the fact that agents reported that they need bank credit facilities most in the peak season, corresponds with a priori expectations of the use of a high interest source of loans. Furthermore, Table 3.13 reveals

that banks finance relatively inefficient agents, judging by profitability, to the extent that higher bank charges are not the cause of lower profitability. However, since there is a gap between the demand for credit and supply of informal credit during the peak season, by providing funds to agents formal credit does play a useful role, though this can clearly be enhanced.

3.5.12 The distinguishing features of informal credit - speed, informality and absence of collateral requirements - are normally cited as reasons for their being preferred to bank funds. In this sector the lower cost of informal finance is also important. On the whole, given the peak season role of bank credit under current conditions, bank and informal finance can be seen to be complementary.

3.5.13 A final feature of informal credit may be mentioned. Though there were no cases of this in sampled firms, higher cost informal credit, from indigenous bankers, was reported to be a source of funds if credit from friends, the market and the banks was inadequate. However, recourse to such credit would be a signal of extreme distress and would not be publicised by firms using it.

3.6 The structure of markets in the distribution system

3.6.1 The first point to note in this context is the prevalence of tied credit and goods transactions in the textile market. This can be attributed to the lower informational costs of market agents in supplying credit as well as due to the high transactions costs of obtaining formal credit.[10]

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10. Such costs are standard explanations in the theoretical literature on interlinked transactions. See, for example, Bardhan (1980).

3.6.2 Secondly, though there is specialisation in particular goods within the market, the degree of price competition in all segments may be taken to be high since most goods have either close substitutes or many sellers. Furthermore, entry and exit barriers do not appear to be a major factor. In the currently depressed market, it is reported that agents, mainly wholesalers, are downing shutters every week. Finally, since, in Bombay, all agents have their establishments close to each other - many under the same roof[11] - widely dispersed prices are difficult to sustain. It is therefore reasonable to suppose that the Bombay markets, for each type of agent, are competitive or nearly so. Up-country markets, being localised, are less competitive.

3.6.3 Agents are organised, along community lines or according to specialisation, into four Associations. Associations have their own dispute arbitration mechanisms (parallel courts) whose rulings are generally followed. Their main function, however, is to serve as lobbying organisations with banks and government. A third, interesting, role jointly played by associations is to serve as the `auctioneer' for the fixation of informal interest rates, since both borrowers and lenders belong to these associations. This makes the interest rate unresponsive to short term fluctuations in loan market conditions but not long term trends.

3.7 A model of trade and distribution

3.7.1 Basic features: In order to examine the role of credit, we now construct a stripped down analytic model. The framework contains three active agents, an intermediate trading agent,

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11. Visits to Surat and Calcutta, two other leading textile distribution centres reveal much the same locational pattern as in Bombay.

`wholesalers´, a purchasing agent retailers´ (or semi-wholesalers) and a non-trading agent, aratiyas. The wholesale sub-markets is assumed to be competitive and have many agents of each type while retailers are assumed to face downward sloping demand curves. Aratiyas are assumed to have scale economies due to costs incurred during their off season search activities. Nevertheless, given the absence of entry barriers and also the difficulty faced by aratiyas in responding quickly by lowering prices once a rival effects entry, they are assumed to set entry deterring limit prices. The difficulty in speedy responses to entry occurs since aratiyas are not likely to realise that a rival has entered the market till after some customers are lost, given that they would have returned to the wholesale centre from the up-country trip. Other stylised assumptions gleaned from the description given above are: the gross information structure which wholesalers have on the credit worthiness of retailers and the better information structure of aratiyas for retailers from the regions they serve; the fact that transactions costs increase with the distance of the retail from the wholesale market; and the option that retailers have of making credit purchases direct from wholesalers or aratiyas. The fact that wholesalers insulate producers from demand shocks is taken into account by assuming that purchases from producers are made at a predetermined price. Quantity insulation through inventory adjustment by wholesalers is omitted for simplicity.

3.7.2 Besides the assumption of only 3 types of agents, the main simplifying assumptions are:

1. All agents are risk neutral profit maximisers and each type of agent is identical with every other agent of the same type except as specified for retailers.

2. In the `medium´ run (when informal interest rates can vary) the opportunity cost of own capital of wholesalers and aratiyas is the informal interest rate. The `medium´ run is distinguished from the `long´ run here in an at-

tempt to capture the fragmentation of markets. Though the supply of credit in the market serving aratiyas and wholesalers is small relative to the entire credit market, the supply of funds is not perfectly elastic in the medium run and the interest rate is not a datum to the system.

3.7.3 The main purpose of the analytical exercises undertaken is to explore the efficiency and regional income distribution impact of informal credit supply by wholesalers and aratiyas. We find that both efficiency and income distribution are improved. However, interesting differences exist between the effects of credit through wholesalers and aratiyas.

3.7.4 Agents

Retailers: Define the following notation:

p = Wholesale price of textiles.

C_R = Retailer specific per rupee transactions, search or brokerage cost applicable on direct purchases from wholesalers. We have $0 \leq C_R \leq C^*$.

H = Wholesaler's premium over the cash sale price applied on credit sales.

I = Aratiyas' premium over the market price.

s = Retailers' discount factor, $s = 1/(1+r_R)$, common to all retailers.

Retailers are assumed to incur transactions costs if they buy directly from wholesalers. They stock their shops on date 1. Retail sales and payments to wholesalers/aratiyas are made on date 2. Transactions costs will, in general be a function of the retailers distance from the market, the quantity of goods purchased and the price of goods purchased. Quantity affects costs since retailers buy many varieties so that each unit or lot has individual search requirements. Shipping costs also rise with quantity. Price enters due to brokerage or freight insurance

costs and because expensive textiles will necessitate a more careful search in order to satisfy discriminating customers in local markets. The simplest function that captures all three elements is the function $C_R pq$. This is, accordingly, assumed.

3.7.5 Retailers face identical state-dependant downward sloping demand curves. The inverse demand curve is assumed to be

$$R = N_1 - 0.5q \quad \text{with probability } x \text{ in state 1 and} \qquad (1)$$

$$R = N_2 - 0.5q \quad \text{with probability } (1-x) \text{ in state 2} \qquad (2)$$

where $N_1 > N_2$.

3.7.6 Retailers may either buy goods from the wholesale market for cash or make credit purchases through wholesalers or aratiyas. In the event of purchases through aratiyas, no transactions costs need be incurred. In the event that state 1 (the good state) occurs, retailers are assumed to honour their debts to wholesalers or aratiyas. If state 2 occurs, retailers are assumed to honour only a fraction J of their debts. Expected retail profits are therefore given by

$$E_c = s(N-0.5q)q - p\,(1+C_R)q \qquad (3)$$

$$E_w = s(N-0.5q)q - p(sVH+C_R)q \qquad (4)$$

$$E_a = s(N-0.5q)q - pVIq \qquad (5)$$

where $N=xN_1+(1-x)N_z$; $V=x+(1-x)J$ and E_c, E_w and E_a are respectively profits given cash purchases, credit purchases through wholesalers and credit purchases through aratiyas. In what follows we will treat N as constant so that each retailer has the same market size in this sense. Implicitly therefore, N_1 and N_2 are assumed to

vary as x varies so as to leave N constant. From here, retailers demand curves on the wholesale market can be found to be

$$q_c = N-p(1+C_R/s) \tag{6}$$

$$q_w = N-p(VH+C_R/s) \tag{7}$$

$$q_a = N-pVI \tag{8}$$

Clearly, retailers will choose the option with the lowest unit costs.

3.7.7 Wholesalers: Define the additional notation

m = Per-unit ex-mill price of textiles.

k_W = Own capital of wholesalers assumed to be given.

b_W = Borrowed capital of wholesalers.

f_W = k_W+b_W.

r = Market interest rate.

g = Wholesaler's subjective probability of receiving payment from a buyer of type g, common to all wholesalers. g=1 for aratiyas. g is assumed to be a constant for all direct sales to retailers.

3.7.8 Wholesalers are assumed to borrow (or lend) own funds and purchase textiles from producers on date 1. The market meets on date 1 and goods are delivered on that date. Payments are received on date 2 and loans plus interest are paid out on the same date. The per period opportunity cost of wholesalers own funds is the market interest rate r in the medium run. Additional transactions costs are incurred on date 1 and payments made on date 2 along with additional interest. These costs are $y+Q^2_W$, so that, adding interest cost, a normal quadratic cost function is assumed. Competition between wholesalers ensures that the ex-

pected present value of payment per unit of sales received on date 2 equals the market price p prevailing on date 1. That is $p = gpH/(1+r)$, so that

$$H = (1+r)/g \tag{9}$$

3.7.9 No idle balances are kept by firms, so that goods purchased are $Q_W = f_W/m$. In the aggregate, this gives

$$Q = F_W/m = (B_W+K_W)/m. \tag{10}$$

Thus, a wholesaler's profits are given by

$$pq - mq - q^2 - y$$

3.7.10 In medium run zero profit equilibrium, the price is given by the minimum of the average cost curve and is, with our assumptions, constant:

$$p = 2y^{0.5} + m \tag{11}$$

and

$$Q_W = y^{0.5} \tag{12}$$

3.7.11 Aratiyas: Aratiyas borrow (or lend) on date zero and incur fixed costs of information collection from both the wholesale market and the up-country market they serve. The up-country market is assumed to consist of retailers, all of whom have the same cost parameter C_R. These costs are denoted by Z. The remaining funds, if any, are lent out on the market till date 2. On date 1 aratiyas order goods from wholesalers and despatch it to customers. On date 2, wholesalers are paid, payment is received from clients and loans plus accrued interest paid off. An aratiya's subjective probability that a retailer defaults is V,

which is taken to be equal to the true probability, based on a knowledge of retail demand conditions in the up-country market. Given that the fixed costs incurred by aratiyas are their major cost item apart from interest costs and the opportunity cost of their own funds, we assume away the existence of other, nonlinear cost terms. For reasons discussed earlier, each aratiya is assumed to operate in a contestable market and to limit price. Limit pricing is justified given that aratiyas would find it difficult to adjust their premium after entry occurs since they would have returned from their trip to their up-country market. Since there are no other entry barriers, the limit price is assumed to give aratiyas zero profits. Thus, I is set so that

$$VpIq_a - p(1+r)q_a - Z(1+r) = 0 \qquad (13)$$

Using 8 in 13, I may be determined. From 13, using 8, it is easy to show that

$$I = f(r,N,Z,p)/pV;\ f_r>0;\ f_N<0;\ f_Z>0 \qquad (14)$$

Finally, demand for borrowed funds is given by $(Z+pq_a-K_a)$ where K_a is the aratiya's own funds.

3.7.12 The role of credit: A full specification of market equilibrium will require the specification of demand/supply equilibrium in the wholesale market, the sub-market served by aratiyas and the credit market to which aratiyas and wholesalers but not retailers have access. In addition, expectational equilibrium requires that the ex post unit price received by wholesalers equals the (ex ante) expected value (gpH). Otherwise, wholesalers will revise their beliefs. While such an exercise and the identification of conditions under which an equilibrium exists is easily undertaken, it will entail a lengthy digression from the main objective of this section. Instead, we simply assume that the

existence and stability of equilibrium for the system just described and proceed directly to an analysis of the role of credit.

3.7.13 To analyse the impact of informal credit, we first partition the set of pairs (V,C_R), which identify retailer types, according to their preferred route of purchase. Note that C_R indicates the distance of a retailer from the wholesale market and V measures the variability in demand, with low V indicating a higher probability of the bad state occurring.

3.7.14 Equating (6), (7) and (8) after substituting (14), we get three loci: The locus of indifference between credit purchases through wholesalers and cash purchases (wc), the indifference locus between credit from aratiyas and wholesalers (aw) and the locus of indifference for aratiyas purchases and cash purchases (ac). These are given by

$$sV = 1/sH \qquad (wc) \qquad (15)$$

$$sV(1-H) = c_R \qquad (aw) \qquad (16)$$

$$sVI = (1+c_R) \qquad (ac) \qquad (17)$$

3.7.15 The three loci are plotted in Figure 3.1. The arrow in the north-east of the figure indicates the direction in which retailers facing greater disadvantages in terms of distance from wholesale markets and variability in demand are to be found. The figure at once provides a first insight into the role played by informal credit whether through wholesalers or aratiyas.

Property 1: Existing informal credit channels in the wholesale market selectively lower costs of disadvantaged retailers. Only retailers in markets near at hand with relatively constant demand do not avail of informal credit provided by wholesalers or aratiyas.

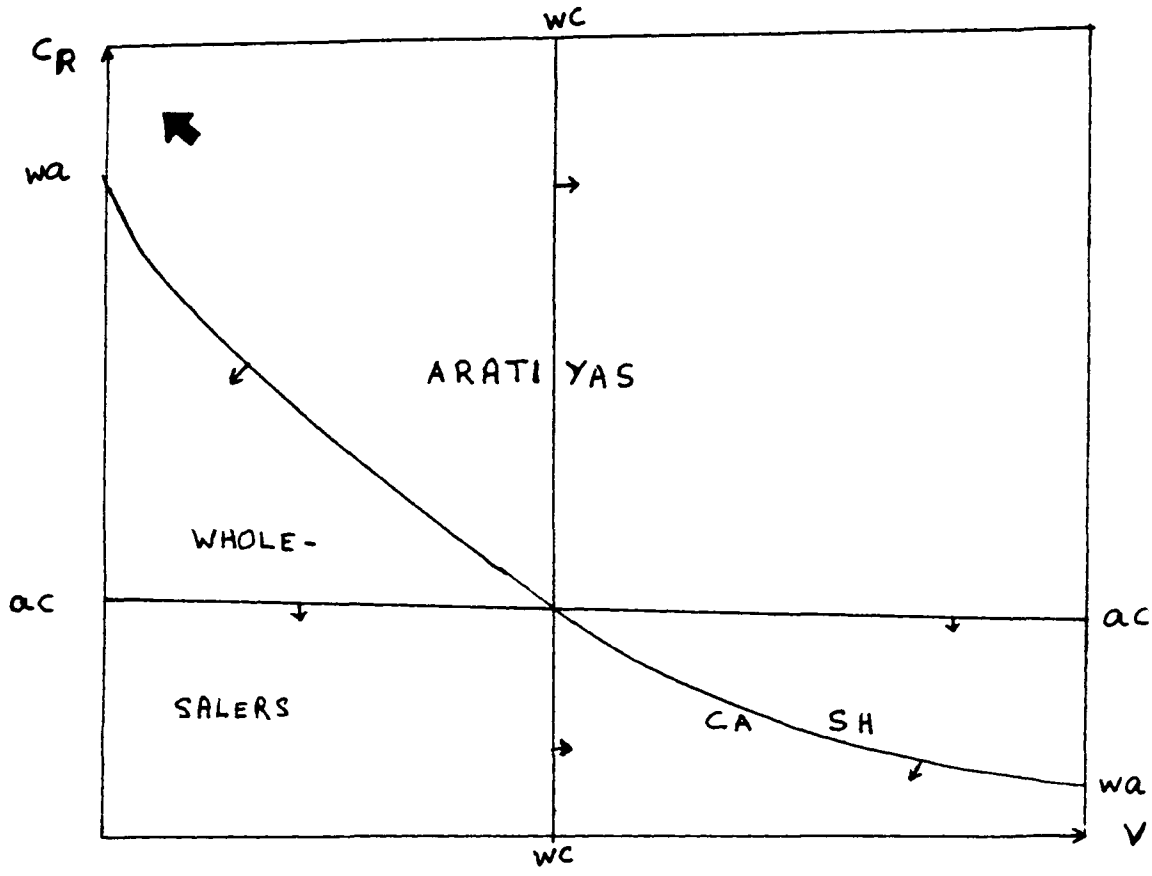

FIGURE 3.1: Mode of Purchase on Wholesale Markets by Retailers of Different Types

3.7.16 A second property which is also evident is the following.

Property 2: If retailers with a given c_R are served by credit from both aratiyas and wholesalers, then, of these retailers, wholesalers serve retailers with greater demand uncertainty (lower V).

3.7.17 Property 2 can be used to derive an additional insight into the role of informal credit. From the structure of the model it is evident that some retailers would continue to make purchases through aratiyas even if they did not offer any credit. Their main role is to reduce transactions costs, though aratiya credit does ensure that aratiya services are used by more retailers than would otherwise be the case. However the credit aspect of wholesaler credit sales is crucial for it to have an advantage over cash sales. Thus we have

Property 3: Informal credit serves primarily to distribute the costs of demand uncertainty through the distribution chain though it does aid in reducing transactions costs as well.

3.7.18 Additional insight into the effects of informal credit may be gained by measuring its impact on the efficiency of goods distribution. An appropriate yard stick for this is the expected difference between retail prices for cash and credit sales. Noting that the expected retail price is N-0.5q we can get in the case of credit from wholesalers

$$\text{Efficiency gain} = p\,(1-VsH)/2s$$

and in the case of credit from aratiyas

$$\text{Efficiency gain} = p\,(1+c_R - sVI)/2s$$

Since VI does not change with respect to V in view of (14) we may state

Property 4: The efficiency gain due to informal credit from wholesalers increases as demand variability increases but is independant of the distance between the retail market from the wholesale market. Conversely, the efficiency gain due to sales through aratiyas is independant of demand variability but increases with distance between the retail and wholesale markets.

3.7.19 It is clear that the efficiency gain for retailers already using informal credit will increase if there is a greater external supply of informal credit (lower r) to wholesalers and aratiyas. Also, in this event, the cash sales region in figure 1 will shrink. Finally it is easily shown that aratiyas will gain market share relatively to wholesalers, due to scale economies, if external informal credit supply increases.[12] Thus, increased supply of informal credit expands the market share of aratiyas and also credit transactions as a whole.

3.7.20 These findings, besides having efficiency implications also have implications for income distribution. That the benefits from informal credit through aratiyas increase (or does not decrease) with the distance separating retailers from wholesale markets means that informal credit promotes inter-regional equalisation of real income. Secondly, it may also be argued that since credit through wholesalers leads to a greater absolute cost

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12. From (16) this requires $d(I-H)/dr>0$. Note from (13) that $I=(Z+pq)(1+r)/pqV$ and $H=(1+r)/g$, and also from (16) that $I>H$ for C_R to have an interior solution. Now $I>H$ is equivalent to $I/(1+r)>1/g$. Thus it suffices show that $dI/dr>I/(1+r)$. Simple differentiation and comparison of the resulting expressions establishes this.

reduction in regions with greater demand variability, it too leads to regional income equalisation. The argument is as follows. Demand variability, in the sense taken in this study, will depend both on the variability of consumer income and their income elasticity of demand for textiles. The demand for textiles is likely to have a greater income elasticity in very poor regions of India rather than in the better off regions. Consequently, given equally variable consumer income in the sense of equal coefficients of variation, poorer regions will have a more variable demand for textiles.[13] Thus we may state

Property 5: Informal credit through aratiyas and, under some conditions, wholesalers promotes regional income equalisation.

3.7.21 The implications for policy are clear. More funds should be made available to wholesalers if demand variability is perceived to be a major contributing factor to inter-regional inequality. Likewise if promotion of more equal textile prices across regions is desirable, more funds should be made available to aratiyas. In both cases, average efficiency of textile distribution increases. Furthermore, given the informational disadvantage of banks, formal credit should not attempt to supplant the credit supplying role of wholesalers and aratiyas in the distribution chain.

3.7.22 We now turn to a brief examination of black funds.

3.7.23 Black money: While a full analysis of black money and evasion would first call for the introduction of taxes, a task beyond the scope of this paper, some general remarks can be made. A non-

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13. Note that retailers may still have the same expected market size if they serve more customers in poorer areas.

distortionary tax can be introduced by subtracting a fixed amount, t, from wholesalers' and aratiyas' profits if a similar amount is also deducted from the opportunity cost $K_A(1+r)$ or $K_w(1+r)$. In the absence of evasion, profit equations are unaffected. Tax evasion is then seen as a declaration of bankruptcy when, in fact, excess funds are available. This lowers the expected tax burden on the textile business, and is therefore equal to a decrease in the fixed cost.[14] This will, clearly, lead to an increase in investment in the distribution industry in zero profit equilibrium which lowers prices and raises welfare in this sector. Thus the general welfare decreasing effects of black money (due to reduced tax revenues, funds not flowing to their most productive use and distorted opportunity costs) may be mitigated by welfare increases in the sector of origin, textile distribution. This suggests that in designing optimal enforcement policy for a sector, the government needs to weigh both direct and indirect costs of stepped up enforcement, the indirect cost arising from reduced welfare in the sector. A full analysis of this phenomenon would of course require a careful incorporation of prevailing distortionary taxes.

3.8 Concluding comments

3.8.1 The role of agents left out of the model developed in the previous two sections can be briefly commented on.

3.8.2 Semi-wholesalers can be seen to be clubbed with retailers in the wholesale market when they purchase from wholesalers. Semi-wholesalers who buy direct from producers can be clubbed with wholesalers. The former role of semi-wholesalers implies that they participate in a second distribution market, with retailers

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14. Additionally, if black wealth has limited alternative uses, this lowers the opportunity cost of the stocks of capital K_w and K_A.

as the buyers, where they have some monopoly power. Clearly, for this to be possible, retailers transactions costs of going directly to the wholesale market must be sufficiently high.

3.8.3 Semi-manufacturers combine production and wholesale operations, thus being exposed to supply risk. The extra profits they can make by the flexibility they have in producing in small lots, geared explicitly to current fashions in the retail market, compensate them for additional losses arising from supply risk. Goods produced by them, in this case, will have to be seen as imperfectly substitutable for wholesalers' stocks.

3.8.4 Finally, the role played by brokers is implicitly reflected in the transactions costs of retailers.

3.8.5 This chapter has attempted an examination of the textile distribution trade in India. The textile distribution sector is distinguished by the fact that it handles many closely substitutable durable products with uncertainty in product demand for specific varieties. Furthermore, as has happened recently, droughts which lead to an increase in the relative prices of food products affect demand for the product adversely. That is, the market is vulnerable to aggregate supply shocks. Consequently, availability of credit plays a key role with intermediaries also acting as creditors. Furthermore, the industry is distinguished by large numbers of producing firms.

3.8.6 The distribution systems for foodgrains, oilseeds and molasses share many of these features. However, none of these markets have much product diversity though some quality gradation exists. The main features focused on here, demand variability and distance, are likely to be equally important in all these distribution systems. Thus, the framework of this paper is likely to be of use in the study of the distribution systems for these

goods. One the other hand, this paper is only a modest first attempt and leaves many issues unexplored.

3.9 Recommendations and suggestions

3.9.1 While the main thrust of this section is on ways in which banks can better serve the sector, at the outset it must be pointed out that a coordinated approach by commercial banks and agents' associations is needed if the credit restrictions faced by this sector are to be eased. In line with the suggestions of respondents - which we find worthy of consideration - the following activities may be considered by banks for better service and credit availability to agents in the distribution system.

a. Although advances against cotton textiles have been excluded from the purview of all selective credit controls with effect from January 8, 1985, traders are still not getting the full benefit of bill discounting and cash credit. Better credit facilities with long term renewals of credit limits, which should not be overly conservative, should be considered.

b. If possible, recently enhanced bank charges for collection and remittance of drafts, mail transfers or telegraphic transfers should be reduced.

c. Since these trades need more funds during the peak season, banks should adopt a more liberal approach during the peak season.

d. Banks may also examine ways to improve the quality of their services. Collection of up-country cheques and bills, despatch of account statements, sanctioning of loans and processing of loans are areas needing improvement.

e. Local branches of different commercial banks should accept non-MICR (magnetic ink character recognition) drafts issued by outstation branches till such time as conversion to MICR instruments is completed.

f. Banks should consider provision of book-debt loan facilities to traders and, if possible, consider reintroduction of joint loan facilities.

g. Since aratiyas do not maintain sufficient stock to use as collateral, banks should formulate an alternative mode of providing cash credit to commission agents or aratiyas.

3.9.2 Finally, formal financial institutions should, on the whole, continue to channel funds to the distribution trade through agents based at wholesale centres and permit trade credit to enable percolation through the distribution chain. This has the virtue of decentralising credit supply decisions to better informed agents and curbing bank portfolio risk.

TABLE 3.1

Features of Textile Distribution Systems in India (1979)

No. of links between producers & consumers	Cost of distribution (% of consumer price)	Index of geographical reach	Return on capital employed (%)	Total capital employed (days of sales)	Share of total sales (%)
Two	19.1	0.73	21.6	163	13.5
Three	19.8	0.89	18.2	213	38.0
Four	22.8	1.14	19.0	255	13.6
Five	24.0	1.51	18.9	265	24.8
Six	25.0	2.34	16.6	312	9.9

Note: The index of geographical reach is a value weighted average of distance between mills and retailers.

Source: Compiled from Jain et.al. (1982)

TABLE 3.2

Percentage of Sales Intermediated by Non-Trading Agents in 1979

Between	Intermediated transactions (%)
Mills and wholesalers	33
Mills and semi-wholesalers	53
Wholesalers and semi-wholesalers	75
Semi-wholesalers and retailers	33

Source: Jain et.al. (1982)

TABLE 3.3

Pattern of Credit Sales

1.	Average credit in days offered by wholesalers to their customers	53 (17.09)
2.	Average percentage of customers from distant locations	67 (23.98)
3.	Average percentage of customers in Bombay	33 (23.98)
4.	Average percentage of customers introduced by brokers	67 (25.74)
5.	Total respondents	18

Note: Figures in bracket are standard deviations.

Source: Field survey in Bombay.

TABLE 3.4

Expenditure Sales Ratios of Agents

(Figures are percentages of sales)

	Wholesalers (1978)	Semi-wholesalers (1979)	Retailers (1979)	Semi-manufacturers (1988)	Aratiyas (1988)
Total expenditure	3.04	3.36	4.64	16.68	35.40
Expenditure other than interest cost	2.31	2.78	3.28	16.10	31.64

Note: Purchase expenditure omitted.

Source: Jain et.al. (1982) and field survey in Bombay.

TABLE 3.5

Types of Credit Facilities

		No. of borrowers
1.	Cash credit	10
2.	Overdraft	2
3.	Demand loans	1
4.	Term loans	1
5.	Bill discounting facilities	2
	Total no. of respondents	10

Source: Field survey in Bombay

TABLE 3.6

Wholesalers' Opinion of Bank credit

(a) Bank-Wise details

	Total no. of account holders	Percentage getting need base finance	Percentage satisfied with banker
Central Bank of India	4	14	21
Bank of India	4	29	29
Dena Bank	4	14	7
Bank of Baroda	3	0	7
Others	5	43	36
Total	20	7	14
Total respondents	20	9	20

(b) Issue-wise details

	Yes (%)	No (%)	Total respondents
1. Reason for dissatisfaction:			
a) Delay in services	100	0	6
b) Inadequacy of credit	-	-	-
c) Others	-	-	-
2. Better services can be obtained from other agencies	40	60	15
3. Banks exercise undue supervision	50	50	8
4. High bank charges (including interest)	35	65	20
5. Corruption by bank officials	25	75	20
6. Overly short duration between renewals of loan limits	25	70	20

Source: Field survey in Bombay

TABLE 3.7

Salient features of Informal Credit

	Friends & relatives	Others	All informal sources
Wholesalers			
No. of firms	18	9	18
% of firms in sample	90	45	90
Average rate of interest	14.97	16	15.31
Minimum rate of interest	10	15	10
Maximum rate of interest	18	18	18
Average loan amount (Rs lakh)	7.70	5.71	7.03
Collateral and security	Nil	Nil	Nil
Semi Manufacturers			
No. of firms	10	5	11
% of firms in sample	83.33	41.66	92
Average rate of interest	16.5	16.5	16.5
Minimum rate of interest	15	15	15
Maximum rate of interest	18	18	18
Average loan amount (Rs lakh)	4.61	9.84	6.35
Collateral and security	Nil	Nil	Nil
Aratiyas			
No. of firms	5	3	5
% of firms in sample	71	43	71.42
Average rate of interest	16.5	16.5	16.5
Minimum rate of interest	15	15	15
Maximum rate of interest	18	18	18
Average loan amount (Rs lakh)	4.34	3.15	3.89
Collateral and security	Nil	Nil	Nil

Source: Field Survey in Bombay

TABLE 3.8[1]

Sources and Uses of Funds of Sampled Agents (1979)

(All figures in percentage)

Item	Wholesalers	Semi-wholesalers	Retailers
Sources of funds			
Own capital	63.3	68.6	77.1
Informal credit	27.9	23.6	16.1
Bank (formal) credit	8.9	7.8	6.8
Uses of funds			
Inventories	31.8	54.1	64.6
Loans and advances	57.2	25.5	5.6
Other assets	11.0	20.8	29.8
Sample size	191	556	203

Note: Figures may not add to 100% due to rounding.

Source: Jain, et.al. (1982)

1. The large `other assets' of most firms are primarily income tax deductible government bonds which offer a very high rate of return while tax benefits last and, correspondingly, reduce the effective tax rate.

TABLE 3.9[1]

Sources and Uses of Funds of Sampled Agents (1988)

(All figures in percentage)

Item	Wholesalers	Semi-manuf-acturers	Aratiyas
Sources of funds			
Own capital	63.37	22.59	18.02
	(34.65)	(9.59)	(13.31)
Informal credit	31.16	65.51	61.71
	(34.16)	(19.10)	(24.40)
Bank (formal) credit	5.46	11.89	20.25
	(8.54)	(18.03)	(19.63)
Uses of funds			
Inventories	26.11	25.94	9.00
	(20.63)	(19.42)	(13.70)
Loans and advances	63.27	68.19	72.45
	(24.97)	(18.02)	(14.08)
Other assets	10.62	5.87	18.55
	(10.52)	(5.44)	(14.68)
Sample size	18	12	7

Note: Figures in parentheses are standard deviations.

Source: Field survey in Bombay

1. See note 1 in Table 3.8.

TABLE 3.10

Percentages of Agents Receiving Credit From Different Sources (1988)

Item	Wholesalers	Semi-Manuf-acturers	Aratiyas
Percentage receiving:			
Formal credit only	22.22	0.00	0.00
Informal credit only	0.00	50.00	28.57
Formal and informal credit	55.55	50.00	71.42
No credit	22.23	0.00	0.00

Source: Field survey in Bombay

TABLE 3.11

Net Credit Received

	Net credit received (Rs lakh)	Days of working capital	Working capital used (days)	Shortfall in days
		Semi-Manufacturers		
All	3.44	7.44	194.17	186.72
	(6.70)	(45.59)	(268.23)	(302.51)
Informal borrowers only	1.89	19.74	115.14	95.39
	(3.99)	(39.4)	(46.57)	(47.56)
Both	4.98	-4.84	273.21	278.06
	(8.32)	(.48)	(33.948)	(405.07)
		Aratiyas		
All	1.53	6.28	133.94	1328.65
	(2.51)	(202.30)	(1408.65)	(1454.33)
Informal borrowers only	1.43	146.57	2978.28	2831.70
	(1.48)	(124.82)	(195.9)	(70.48)
Both	2.53	97.23	634.04	536.80
	(2.29)	(148.69)	(1021.41)	(874.80)

Note: Figures in parentheses are standard deviations.

Source: Field Survey in Bombay

TABLE 3.12

Guesstimates of Unreported Income and Tax Evasion for Wholesalers

	Average	Standard deviation
Unreported profit:		
Upper estimate	5.39	0.67
median estimate	5.18	1.00
Lower estimate	4.61	1.89
Evaded tax (median estimate only)	**0.78**	**0.15**
Number of observations: 12		
All India estimated unreported profit (median estimate only) in Rs crore	**322.03**	
All India estimated tax evaded (median estimate only) in Rs crore	**48.53**	

Notes: 1. Standard deviations must decrease as x increases by construction.
2. Figures are percentages of estimated sales except for the last row.

Source: Computed.

TABLE 3.13

Profitability of Firms (Z)

(Figures in percentage)

		Pat/total assets	Pat/income
Semi manufacturers		21.37	1.81
		(18.51)	(2.29)
Aratiyas		27.24	16.10
		(13.28)	(15.70)
By Borrowing Status:			
Semi manufacturers	Formal only	-	-
	Informal only	23.47	1.08
		(20.32)	(.61)
	Both	19.80	2.54
		(16.86)	(3.00)
Aratiyas	Formal only	-	-
	Informal only	37.89	16.53
		(13.69)	(10.17)
	Both	20.86	15.84
		(7.81)	(18.22)

Note: Pat: Profit After Tax. Source: Field survey in Bombay

CHAPTER 4

ROAD CONSTRUCTION IN DELHI AND WESTERN UTTAR PRADESH

4.1 Size of sector

4.1.1 Investment in road construction is undertaken almost entirely by the Central and State governments. Contractors tender for work contracts and winning bidders execute the contracts as per the terms of the contract. Table 4.1 (Row 1) provides details of the total expenditure on roads and bridges for the most recent years for which data were available. The table (Rows 2 and 3) also provides these details for surveyed regions.

4.2 Description of area surveyed and sample

4.2.1 Area surveyed: Firms of contractors in three major cities of western Uttar Pradesh and in Delhi were surveyed. Table 4.2 provides some descriptive feature of these cities and the surrounding areas.

4.2.2 Sample characteristics: Contractors are classified into four groups, A, B, C and D, by the Central Public Works Department according to the size of contracts for which they are eligible to bid. Category A firms include the largest contractors. The classification is done by taking into account the contractor's total assets, a bank solvency certificate and the past contract record. Firms in one category may apply for upgradation to the next higher category after accumulating sufficient assets and establishing a good contract execution record. Table 4.3 gives the distribution of the randomly selected sample firms. Despite a sample design in which cell-wise samples were proportional to the

population total (with extra firms included in case of non response by initially selected firms), due to non-cooperation by some firms or other difficulties in the actual sample. Delhi is marginally under-represented, with the incidence of non-response is inversely correlated with firm size. Since, in our analysis, no significant differences were found between different centres in the sample, only aggregate estimates of credit for the sector as a whole should be affected by this shortcoming.

4.2.3 55 per cent of the sample firms were sole proprietorships. Of the remainder, 2 category A firms (5.7 per cent) were private limited companies and the rest were partnerships with two to eight partners. The average firm was 13 years old while the oldest was 40 years old. The newest was only 2 years old. Firms engaged only in road construction with four exceptions. Of these four, two also undertook bridge building, one was also a supplier of raw materials for road construction to the Public Works Department and one had diversified into the unrelated area of hire purchase of consumer durables. One firm (excluded from sample) had not been functioning for 3 years due to lack of finance and another was in the process of winding up its business. Smaller firms were, in general, pessimistic about their future prospects in the sector while larger firms were satisfied with their prospects or were actually planning further purchases of capital equipment.

4.2.4 The average turnover for the most recent year of operation is given in Table 4.4.[1] For the sample as a whole, the average annual value of contracts executed was Rs. 13.13 lakh. The disag-

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1. Due to incomplete responses even among cooperating firms, averages, where given, may not pertain to all firms. Figures given are averages for firms with usable responses in the appropriate group.

gregated figures reveal that the turnover of firms in any category is roughly double that of firms in the immediately preceding category. Wide variations in turnover are, however, visible on further disaggregation. Firms in category D in Uttar Pradesh claimed that they were unable to bid successfully for contracts against larger firms with a better stock of equipment and one firm, in category C in Dehradun, claimed to be winding up its operations on this account. The greater "capital intensity" of large firms is reflected in Table 4.5, which gives crude estimates of capital-labour ratios, partially support this claim. It may be added that several smaller firms did not own any machinery but executed contracts with equipment hired from the local public works departments.

4.2.5 The return on own capital employed and on sales (Table 4.6) shows that firms in category D may in fact be less profitable than larger firms. Though the ratio of their profit after tax to sales is the highest of the four categories (column 2) the return on own capital employed is less than that of firms in categories B and C (column 2). Since profits after tax also include an implicit wage component for small firms, as proprietors or partners also work for the firm, columns (3) and (4) are based on the assumption that 80 per cent of distributed profits constitute wage income. With this assumption the return on capital for category D firms falls to below the interest rate on two year commercial bank fixed deposits. This is despite the fact that their profit margin (return on income: column 4) is the highest.[2] The difference in

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2. From Table 4.6 onwards, sample standard deviations are given. The mean for the entire sample may be taken as significant at the 90 per cent level if it is at least 27 per cent of the sample standard deviation. Likewise, for individual cities, categories or borrowing statuses the mean should be at least 77 per cent

estimated profitability is statistically significant as compared to B and C category firms while the mean estimated profitability for A category firms is itself not significant due, possibly, to the relative overestimation of wage income for these large firms.

4.3 Sources of funds and salient features of sources

4.3.1 Own funds, formal and informal borrowings: All firms for which information is available received trade credit. For large (A and B category) firms, a part of `trade credit´ is sometimes in the form of advances for works contracts from public works departments. However, advances are given only in exceptional cases and small contractors do not receive advances. Instead, they are paid in stages on completion of specific portions of contracted work. The breakup between supplier´s trade credit and advances from the government is not available for any firm. We therefore treat all trade credit as informal credit since the bias is unlikely to be large. Clearly, since government advances go only to large firms, supplier´s trade credit helps small firms more than our results below suggest Besides, trade credit, 27 per cent of the sample received formal credit in one form or another, 24 per cent received informal credit and an additional 21 per cent received credit from both informal and formal channels. 27 per cent received only trade credit. Of those who received only trade credit, 12 per cent were unaware of bank credit facilities or had been turned down by banks and a further 9 per cent were uninterested in bank credit. Table 4.7 gives details of the average percentages of total assets/liabilities from different sources.[3]

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of the group standard deviation. These figures are based on one tailed t-tests for the minimum group-wise sample size taking into account missing values.

3. While we have qualitative evidence that 2 firms in

The average firms in the sample relies mainly on own funds (61.54 per cent) with informal credit, contributing another 32.15 per cent to their funds. Of this however the bulk was trade credit which accounted for a quarter of the funds available to them. Thus bank loans and other formal credit contributed only 6.31 per cent of the total funds. The total credit made available by formal sources referred to here does not include bank guarantees. Bank guarantees were 7.8 times as large as total direct lending mainly on account of a bank guarantee of Rs. 3 crore enjoyed by one category A firm in Delhi (see Table 4.8). When this is excluded from total bank guarantees, total accommodation via bank guarantees reduces to 87 per cent of other bank credit. Nevertheless, when guarantees are taken into account, formal credit emerges as a more important source of finance than informal finance excluding trade credit.

4.3.2 The category-wise figures in Table 4.7 reveal no marked differences in reliance on trade credit. However, own capital is significantly more important as a source of funds for smaller firms. Correspondingly, both banks and informal lenders serve large firms more than small firms though the pattern is much less marked for informal credit. Furthermore, the extent of reliance of small firms on informal finance is much larger (at 4.17 per cent excluding trade credit and 29.21 per cent including trade credit for firms in category D) than their reliance on formal

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Delhi were bank borrowers, their financial statements were not made available. Thus, figures for own and informally borrowed funds for Delhi and all firms are biased upward. However, if Delhi is excluded from the sample, figures for the remaining firms are higher than those given for "all firms" in Table 7.

credit. A much clearer picture of this pattern is to be had in Table 4.10 which gives the break up by borrowing status.

4.3.3 Own funds employed by firms getting both formal and informal credit is significantly lower (at 49 per cent) than for those relying either solely on formal finance (62 per cent) or informal finance (61 per cent). Correspondingly (see Table 4.10) firms borrowing from both sectors are marginally less dependent on trade credit.

4.3.4 Except in one case, formal sector finance meant commercial bank finance. The exception was a category firm A in Agra which had received a term loan from the Public Works Department for the purchase of machinery. However, two firms were contemplating approaching the Public Works Department or a State financial institution for term loans. Informal finance was mainly from friends and relatives (80 per cent of informal borrowers) or from partners. Only one firm, a C category firm in Agra, had approached an indigenous banker for a loan. Most B, C, and D category firms were aware of the availability and cost of informal loans. Some claimed that many other contractors borrowed from indigenous bankers, though, with the exception discussed, the sample studied did not reveal any evidence of this.

4.3.5 One component of funds not separately reported in financing figures of road construction firms is known to be sales by them of excess cement, bitumen and steel supplied by the government against work orders. This is reported to be a major source of funds for the contractors and has been reported by some interviewees to equal 10-15 per cent of the value of the material supplied or about 5-7 per cent of the value of the work order. However, no details of this source were revealed by sampled firms. This may be a factor explaining the large owned funds position of contractors.

4.3.6 Purpose, duration and cost of loans: The bulk of loans from both formal and informal sectors was for working capital finance. Three formal borrowers had received term loans (two from banks, one from the public works department) though this made up a small fraction of total formal finance. While only one informal borrower had received a long term loan (from friends/relatives) with an explicit pay back period, most claimed to have received loans which, while formally repayable on demand, were outstanding for over one year (in one case for 4 years) and were expected to continue to be available. If these loans are treated as long term loans, then the percentage of long term loans from the informal sector is seen to exceed that from the formal sector (See Table 4.8 and 4.9). The average cost is lower than that from the formal sector (15.89 per cent versus 16.20 per cent: see Tables 4.8 and 4.9). However, this was due to two interest free loans from friends and relatives in the sample. The median cost of credit in the informal sector was 18 per cent as against 16.5 per cent from commercial banks. The cost of borrowings from informal financiers was 24 per cent for the one case in the sample and also according to information gathered from other respondents. These cost figures are obtained as a weighted average computed over all loans for which information was available. An alternative figure is the ratio of interest paid over the year to outstanding loans at the end of the year. By this method (Table 4.11) the difference in borrowing cost is even more striking. However, there are obvious timing difficulties with this method. Also, these calculations exclude bank guarantees. When the charges on bank guarantees are considered, the average bank cost falls to 2.5 per cent.[4] There

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4. Since a bank guarantee leads to a part of the owners funds being left free for other uses, in terms of foregone opportunities it is appropriate to club bank guarantees with other formal loans even though no

was no evidence that the cost of borrowing fluctuated in the informal sector over time. However, significant inter-city and inter-group differences in the interest average cost of borrowing existed (see Table 4.11). The most striking finding is that firms borrowing from both sectors had the lowest cost of funds followed by informal borrowers.

4.3.7 Turning, finally, to trade credit, Table 4.11 reveals that trade credit is received on average for five weeks. Also, (i) category A firms receive credit for more than twice the duration of firms in category D; (ii) the number of days of credit is monotonically increasing with firm size; (iii) firms getting both formal and informal credit also received credit for longer than average; (iv) older firms also received trade credit for longer periods than newer firms (the simple correlation of date of establishment with days of credit received is -64 per cent); and (v) formal borrowers received less than average trade credit. While not much information could be obtained on the implicit interest rate on trade credit, two firms in Agra claimed discounts for cash purchases of 8 per cent -10 per cent. This however appears to be an exaggeration since the annualised cost of such credit, given an average borrowing period of 41 days (from Table 4.11) would then be between 97 per cent and 133 per cent. Trade credit would then be more expensive than 90 day loans from indigenous bankers!

4.3.8 Collateral, security and margin: Informal credit for the sample was, without exception, unsecured and without any margin requirement. However, borrowers in all cases had personal and/or long standing associations with lenders which may be looked upon

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money changes hands. Margin and collateral issues are treated later.

as implicit security. Likewise, the fact that older, established firms received more trade credit than newer firms is a manifestation of the same phenomenon. The average margin for bank credit was 25 per cent for both guarantees and other credit (Table 4.8). This varied between 0 per cent and 100 per cent. In the latter case, of course, net credit extended was zero. In at least two other cases, loans were given against bank fixed deposit receipts for larger amounts than was lent, in which case the bank only acted as a source of emergency loans which were more than 100 per cent secured. Of the remaining bank loans for which information was available (other than guarantees), 46 per cent were secured by hypothecation of stocks of raw materials, book debt or (in one case) motor vehicles. In addition, in the case of one term loan, secondary collateral by way of a land mortgage was taken. Three firms claimed to have been unable to obtain loans due to lack of collateral, and two firms were refused enhancement of their credit limit for the same reason. Finally, one firm was asked to provide 100 per cent margin for the issue of a bank guarantee.

4.3.9 Availability of credit in relation to working capital employed: A striking feature of the credit picture in this sector is that fully 58 per cent of firms are net providers of credit.[5] The corresponding figures for formal borrowers, informal borrowers, borrowers from both sectors and those who rely solely on trade finance are 75 per cent, 17 per cent, 38 per cent and 71 per cent respectively. Figures for firm-wise averages by the three groupings being considered are to be found in Table 4.12 where columns (2) and (3) give net credit received and number of days of sales covered by net credit received averaged across firms in dif-

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5. Net credit received is calculated from balance sheets as total borrowings plus trade dues less loans and advances and other debtor balances.

ferent groups. Column (2) reveals that while the sector as a whole is a net receiver of credit, on average this credit is equal to only 32 days turnover (though this figure is not statistically significant). The standard deviations in both columns (2) and (3), being large, show that the experience is quite varied. An ordinary least squares regression of the number of days of credit received showed the following:

$$\text{Net credit in days} = \underset{}{-82.87} + \underset{(1.815)}{67.85(IB)} + \underset{(2.802)}{65.85(FB)} + \underset{(2.932)}{109.90(BB)} + \underset{(4.140)}{56.28\ (\text{A category})} + \underset{(3.429)}{6.8468\ (\text{Interest cost})} - \underset{(5.210)}{1.741\ (\text{own capital})} \quad (4.674)$$

t- statistics in parentheses.

Number of observations: 62; Regression F statistic: 17.2549, R Squared: 0.6531; R-bar-squared: 0.6152; (Heteroscedasticity, and mis-specification (Lagrange multiplier test for residual serial correlation; Ramsey RESET test using squares of fitted values) rejected at the 10 per cent level). Own capital = own capital to total equity ratio. IB: Informal borrower; FB: formal borrower; BB: borrower from both sectors. (Dummy Variables).

4.3.10 The regression confirms the observation that only those obtaining credit from both sectors and A category firms who are also borrowers are net receivers of credit as a general rule. In relation to funds used for extending credit (by way of unpaid bills or security deposits) or in holding inventories, the average shortfall was for 124 days (Table 4.12). Furthermore, the worst affected firms were the smallest (D category) firms. In fact, the shortfall is related inversely to firm size. Finally, it may be added that the average period for which trade credit is given exceeds that for which trade credit is received (Table 4.11), the situation being worst for small firms. This further strengthens

the findings of this section.

4.3.11 Before leaving this section, it must be recalled that the absolute position of contractors may not be as bad as has been made out due to cash inflows from the sale of cement and steel mentioned earlier. However, the relative positions of small and large firms are likely to be as indicated

4.3.12 Reasons for approaching informal sector and respondents opinion of bank credit facilities: 65 per cent of informal borrowers cited informality as one reason for approaching informal lenders. 35 per cent cited ready availability of funds (without collateral requirements). 29 per cent cited inadequacy of bank credit and 12 per cent cited lower interest rates.[6]

4.3.13 Since all firms surveyed were at least deposit account holders with banks, responses were sought from all firms as to their evaluation of banking facilities. 58 per cent of the sample felt that bank finance was not commensurate with their needs. Among borrowers, this figure was 57 per cent. 52 per cent of firms were dissatisfied with their bank branch managers. 10 per cent cited tardy bank service as the reason for dissatisfaction and 23 per cent cited inadequate credit availability. Only one borrower had received any special service or advice from his branch manager, and this too on a matter unrelated to the business.[7] 17 per cent of firms, and not necessarily the same

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6. Percentages add up to over 100 per cent since some respondents cited more than one reason.

7. The borrower expressed complete satisfaction with his banker. The public sector bank in question was the Punjab and Sind Bank.

firms that had been refused credit facilities or credit enhancement, felt that they had received unfair treatment from their bankers relative to other customers. As shown in Table 4.8, of the banks with the greatest market share among sample firms, the most satisfactory performance was by the Punjab and Sind Bank. 4 banks shared the bottom rank in serving the needs of clients and the worst branch managers were those of the State Bank of India. While evaluating these findings, the small sample size should be kept in view.

4.3.14 Overdues and penalties: In only one case did any respondent admit to having an overdue loan and even this was claimed to be temporary. The loan was from a commercial bank. Where field staff performed cross-checks with banks, no contradictory evidence was forthcoming. No information as to penalties for overdue loans from the informal sector was available.

4.4 Uses of funds

4.4.1 Table 4.13 gives details of use of funds by contractors in the sample. Use of funds has been divided into 4 groups: fixed assets, inventories, loans and advances and investments. The most striking feature of the use of funds available to firms in this sector is that they lend heavily to the Government by way of forced loans (security deposits and unpaid bills). More than 43 per cent of their funds are tied up in this fashion. Therefore, given the meagre net credit received by these firms, it can be said that, de facto, contractors act as intermediaries (or suppliers on their own account) of loans to the Government sector. Besides constituting a clear case of funds flowing from the informal sector to the formal sector, this also provides a case of where the Government uses its monopsony position to, in effect, interlock loan and goods markets (the `good' in this case is the service of road construction contractors). If, to this, is added

the fact that banks found to be lending to the sector are all public sector banks, then, since bank lending is not a very major source of finance to this sector, a bleak picture emerges. It almost appears as if different arms of the Government come together to forcibly extract credit from firms in the sector.

4.4.2 However, not all firms are equally affected. The ratio of investments to assets is inversely related to firm category showing that large firms have a less constrained funds position. Since such investments - almost entirely in Government securities in order to benefit from saving incentives - reduce the tax burden of firms (and further add to lending to the Government by the sector bringing the total to almost two-thirds of total assets) and increase their profitability, the inability of small firms to undertake greater investments adds weight to their claim of being squeezed out of the sector.[8]

4.4.3 Turning to the classification by borrowing status, two features stand out: firms receiving credit from both formal and informal sectors hold more inventories and invest more of their funds in other assets than any other group of firms. This could be taken to suggest that a portion of the inventory was for speculative purposes and that the quantum of credit received by these firms was more than the minimum comfortable level required for their operations. Caution must be used in accepting this hypothesis since, equally, the large inventories and investments may simply be the efficient levels (given the tax code and supply

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8. A ratio of two stocks really cannot reflect the flow of fresh investments. The growth rate in investments as shown during the two years for which data was available was roughly the same for all categories of firms.

delays) made possible by their access to sufficient credit.[9] The second feature which stands out is the unusually low level of investments by informal borrowers. One explanation possible is that firms who borrow from informal markets have relatively poor information not just about bank finance but also about other legal and institutional features. This hypothesis, however, could not be verified.

4.4.4 Finally, the relation between inventories and sales may be assessed. While the average firm held 75 days of inventories, this was highly variable and showed no pattern for any group of firms. It may be worth mentioning that much of the inventory consists of food items to feed hired labour. The only other feature that is worth mentioning is that firms receiving credit from formal and informal sources had the highest average inventory level (with however a high standard deviation). Thus no corroboration or contradiction of hypotheses outlined in paragraph 4.3 is to be found.

4.5 Impact of bank regulations and the government sector on credit availability

4.5.1 As described above, the combined effect of various government arms - bank, income tax authorities and civil works authorities - is to turn road construction contractors into involuntary creditors to the government. No particular impact on informal sector credit availability to road construction contractors can be discerned.

4.6 Estimate of the total volume of informal credit to road construction activity

4.6.1 The figures in Table 4.1 can be used to derive crude es-

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9. For further discussion see section 4.7 below.

timates as to total size of informal and formal credit to road construction. However, these estimates should be treated with extreme caution, especially the estimates at the all India level. Since formal and informal credit is 2.91 per cent and 10.07 per cent respectively of the total value of production of sampled firms,[10] estimates are arrived at by taking the same proportions of total production for U.P. and Delhi and for the whole of India. On this basis informal credit is estimated to be of the order of Rs. 25 crore in Delhi and U.P. and Rs. 454 crore at the all India level as compared to formal credit of Rs. 7.11 crore and Rs. 131.04 crore respectively. Correspondingly, estimates can be obtained for the total funds outstanding with the government sector, both in gross terms and net of bank credit. From Table 4.1 these figures can be seen to be Rs 593.12 crore and Rs 440.65 crore respectively at the all India level and Rs 32.16 crore and Rs 21.21 crore respectively for Delhi and Uttar Pradesh.

4.7 Efficiency and allocative impact of the informal finance

4.7.1 No physical indicator of output being available, value of production has been used as the indicator of production. If capital output and labour output ratios are examined to assess the impact of informal finance on efficiency, the tentative conclusion which emerges is that such finance, despite its higher cost, finances relatively inefficient firms. Table 4.14 gives these ratios for firms by borrowing status. Firms relying solely on formal finance, it can be seen, have lower ratios than all other firms. No clear ranking of other categories of firms can be given. Since these ratios show a weak positive correlation (16.36 per

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10. Unlike the tables, these figures are the ratios of totals across firms rather than average firm-wise ratios.

cent) the presumption is that firms with higher ratios are inefficient even after capital - labour substitution is accounted for unless scale economies are reflected in the trend. As against this return on sales has exactly the opposite rank order as labour-output ratio. The finding that the average bank interest cost (on balance sheet borrowing) exceeds informal sector interest takes on significance in this context.

4.8 Complementarity/substitutability of formal and informal finance

4.8.1 In one respect, bank finance has no substitute even though it is not available to the bulk of firms. This is in the giving of bank guarantees, since guarantees by other parties are not acceptable for earnest money and security deposits. Likewise, the near uniformity of figures for trade credit (Table 4.7) and their low standard deviations suggest that trade credit is not easily substituted by other means of finance. With these two exceptions, informal finance appears to be, by and large, substitutable for bank finance insofar as the purpose of borrowing is taken as the criterion.

4.8.2 The distinguishing features of informal credit - speed, informality and absence of collateral requirements - are normally cited as reasons for their complementarity to bank funds. Informal finance is then seen as ideal for short term and unforeseen financial needs. However, given pre-existing overdraft facilities with banks - which many sampled firms had - this need not be the case. Thus, no overall conclusion can be drawn on the relative position of these credit sources.

4.9 Overall assessment of credit availability and distinguishing features

4.9.1 The picture that emerges of this sector is that of an ar-

chetypical financially repressed sector relying primarily on own funds and facing a formal sector credit constraint as postulated by Shaw (1973) or McKinnon (1973). There is, however, one significant difference between the McKinnon - Shaw model and firms in the sector. Since firms in the sector operate in a monopsony market (with the government as the sole buyer), firms are not simply constrained, on average, to operate within their own funds constraints but are 'forced' to extend credit to the government in tied contracts for purchase of services. Thus, it is not simply the banking sector that contributes to the financial repression of firms by restricting credit availability to them but also other arms of the government.

4.9.2 In comparing formal and informal credit availability, two striking findings, contrary to the bulk of writings on the subject, emerge. Firstly, informal credit is on average cheaper than formal credit, though informal rates are more widely dispersed than formal rates and have a higher maximum and lower minimum. Secondly, the duration of informal loans (excluding trade credit) is, de facto, longer on average than formal credit. It is possible that the interest free informal loans encountered in the sample are spurious loans reflecting deployment of 'black funds' by the owner of the business with the connivance of friends and relatives.[11] If so this would explain the controversial findings.[12]

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11. This was pointed out in conversation by Dr. Amaresh Bagchi.

12. However, it may be mentioned here that bank credit in some southern States, such as Kerala, is reported to be non-existent. Furthermore, informal credit from a group of financiers is reported to be much more important.

4.9.3 Other points of similarity and dissimilarity are as follows:

i. Banks - as the example of the bank which demanded a 100 per cent margin for an almost risk free bank guarantee shows - are overly conservative in their loan policies. Informal lenders may or may not be more risk averse since a high level of implicit security is available to them through personal relations with borrowers.

ii. Most loans by both groups are for working capital.

iii. Informal lenders do not require any margin as compared to an average margin of 25 per cent from banks.

iv. Both banks and informal lenders favour larger and older firms, though the absolute level of informal lending to small firms is higher.

v. Bank guarantees are a relatively risk free form of bank accommodation to the sector for which no substitute form of credit exists.

vi. Trade credit, due possibly to the ease with which it is available, is the most important single source of credit to the sector and appears to have no substitute.

v. The efficiency of firms financed by banks appears to be much higher than informally financed firms.

4.9.4 From the point of view of firms, two findings are of importance. Firstly, the adverse situation of the smallest firms seems to suggest that they are below the minimum size necessary to take advantage of scale economies including the provision of collateral. To recapitulate the main findings for firms in category D:

i. They are less profitable (in the sense of return on own capital employed).

ii. They receive trade credit for relatively short durations.

iii. Their inventory holding is large relative to sales suggesting indivisibilities in the purchase of raw materials.

iv. They are most dependant on internal finance and have the greatest credit shortfall.

4.9.5 Secondly, firms receiving credit from both formal and informal sectors are in a privileged minority. The main findings are:

i. They are far less dependant on own funds than other firms.

ii. Their cost of borrowing is the least.

iii. They are able to hold larger inventories relative to total assets and can use a larger part of their funds in purchasing government securities to save on taxes.

iv. The average period of trade credit received by them is the longest.

No particular exogenous characteristic of these firms could be discerned that would explain their favoured status.

4.9.6 Turning to other features of the sector worth highlighting, three items stand out. First, several firms were found to lack information as to credit facilities available from banks and perhaps, as to tax concessions and tax incentives. This contrasts with the information about informal loans volunteered by several respondents. Secondly, the near absence of professional informal financiers as suppliers of credit to this sector, deserves to be noted. Finally the wide variation in the cost of borrowing across categories of firms and cities may be taken as weak evidence of the fragmentation in credit markets which is made so much of in the literature.

4.9.7 Before leaving this section it is worth repeating that all these findings should be evaluated in the light of the relatively small sample size available for analysis.

4.10 Recommendations for reform and regulation

4.10.1 While the main thrust of this section is on ways in which banks can better serve the sector, at the outset it must be pointed out that a coordinated approach by the public works authorities and commercial banks is needed if the credit restrictions faced by the sector are to be eased. In line with the suggestions of respondents - which we endorse - the following activities may be considered by banks for enhancing credit availability to the sector.

4.10.2 First, banks in consultation with public works departments should provide bank guarantees to contractors. The scope for such guarantees is large. 25 per cent of the respondents expressed an interest in such a facility. Since bank guarantees are relatively risk free - especially if there is appropriate coordination with public works departments - the margin requirements should be kept to a reasonable level.

4.10.3 Secondly, providing credit by way of overdraft facilities or cash credit against work orders may be considered. Once again, routing of payments made by the authorities for completed work through banks should reduce the risk of default. About 20 per cent of the respondents felt the need for such a facility.

4.10.4 Thirdly, discounting of government cheques which need to be sent for outstation clearance or immediately crediting customers accounts on receipt of such cheques would also ease the financial strain on firms.

4.10.5 While the first measure above would counter-balance funds blocked in security deposits, the second and third would reduce

the net period of involuntary credit extended to the government. Both would result in improved cash flow for firms.

4.10.6 The rate of interest charged on loans and bank guarantee charges should however be at the maximum prescribed. In view of the suspected inefficiency of small firms, high interest rates would act as a partial weeding out device for inefficient firms. No special characteristic of the sector makes them eligible for interest subsidies.

4.10.7 Working capital accommodation and term loans should be given as at present on a case by case basis. However, given adequate security, efficient operating characteristics and a willingness on the part of firms to pay the maximum rate of interest, no limit on the credit facilities granted to firms need be laid down a priori.

4.10.8 Efforts on the part of branches to disseminate information on available bank credit facilities - and efforts to monitor the performance of contractors on a continuing basis - seem to be essential if the credit needs of the sector are to be better served.

4.10.9 Finally, the complaint by some firms that a record of prompt payment of loans and prudent financial management has no impact on their credit rating needs to be looked into and, if true, corrected.

TABLE 4.1

Aggregate Road Construction Activity in India

(Rs. Crore)

		1982-83	1983-84	1984-85	1985-86	1986-87	1987-88
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Gross capital formation in public sector (roads and bridges)	2555	2834	3206	3591 (P)	4023 (P)	4507 (P)
2.	Capital expenditure on roads & bridges in Uttar Pradesh		98.42	157.30	140.10 (RE)	174.35 (P)	216.97 (P)
3.	Capital expenditure on roads & bridges in the Union Territory of Delhi			15.30	14.90	24.22	27.38 (P)

Estimates of Credit for 1987-88

4.	Formal credit to sector (All India)	131.04
5.	Informal credit to sector (All India)	454.06
6.	Formal credit to sector (U.P. & Delhi)	7.11
7.	Informal credit to sector (U.P. & Delhi)	24.62
8.	Gross loans to Government sector (All India)	593.12
9.	Loans to Govt. sector Net of Bank Credit (All India)	440.65
10.	Gross loans to Government sector (U.P. and Delhi)	32.16
11.	Loans to Govt. sector Net of Bnk Crdt (U.P. and Delhi)	21.21

Notes: 1. Estimates calculated by proportionate scaling up of figures in Note 2 below.
2. Total value of production of firms in sample (average of 2 years): Rs. 396.54 lakh
Ratio of non formal credit to production : 10.0746%
Ratio of formal credit to production : 2.9089%
3. P : Projected on the basis of data for latest available 3 years.
RE : Revised Estimate.

Sources: 1. National Accounts Statistics, 1988.
2. State Government Budgets.
3. Annual Reports, Ministry of Surface Transport.

TABLE 4.2

Descriptive Statistics for Sampled Areas

Item	**Population**	Delhi	Dehradun	Agra	Meerut
1.	Population of city (1981 census) in lakh	51.67	2.21	6.94	4.17
2.	Annual growth rate 1971-81 (per cent)	2.69	2.09	1.38	2.87
3.	Population of distr-/ ict union territory (1981 census) in lakh	62.20	7.62	28.53	27.67
4.	Annual growth rate 1971-81 (per cent)	4.34	2.81	2.14	2.28
5.	Urban population (1981 census)(per cent)	92.7	48.9	38.1	31.2
6.	Area of district/ union territory (sq.km.)	1483	3088	4805	3911

Length of roads		Delhi		Uttar Pradesh	
		Surfaced	Total	Surfaced	Total
6.	Highways (km)				
	1980-81	336	297	52,436	89,353
	1982-83	326	311	54,777	91,494
7.	Urban roads (km)				
	1980-81	6,806	13,581	16,266	20,614
	1982-83	8,359	15,464	16,322	20,688
8.	6 plus 7 (km)				
	1980-81	7,142	13,878	68,702	1,09,967
	1982-83	8,685	15,775	71,099	1,12,182

Source: Central Statistical Organisation, Government of India: Statistical Abstract of India, Various Issues.

TABLE 4.3

Sample Description: Numbers Surveyed

Category	City				
	Delhi	Dehradun	Agra	Meerut	Total
A	3	3	3	1	10 (23.26)
B	2	3	Nil	4	9 (16.96)
C	1	2	5	2	10 (10.53)
D	3	1	Nil	2	6 (6.06)
TOTAL	9 (4.81)	9 (25.0)	8 (25.0)	9 (25.71)	35 (12.07)

Notes: 1. In Delhi categories are actually I, II, III and IV.
Category A: No limit on contracts
Category B: Contracts up to Rs. 15 lakh
Category C: Contracts up to Rs. 5 lakh
Category D: Contracts up to Rs. 2 lakh
2. One firm from Category A in Delhi is omitted since data were for the years 1984 and 1985. Sample thus dropped to 35 from 36.
3. Figures in brackets are percentages of population sampled.

TABLE 4.4

Average Turnover of Firms Surveyed

(Rs. lakh)

Category	City				
	Delhi	Dehradun	Agra	Meerut	All centres
A	36.65	6.63	24.82	50.0	26.38
B	10.5	13.38	-	13.25	12.68
C	6.5	1.75	8.78	4.0	6.43
D	1.0	4.0	-	5.0	3.2
Overall average	14.69	8.61	14.80	14.63	13.13

Notes: 1. 'Current' year and 'previous year' vary depending on accounting year of firms. 80% of firms had the same accounting year.
2. Number of firms with increased turnover:19
Number of firms with unchanged turnover:5
Number of firms with decreased turnover:7

TABLE 4.5

Employment and Capital/Labour Ratios of Firms

	A	B	C	D	All
E	47	21	23.1	22.8	28.7
K/E	65.05	28.78	10.3	6.05	28.78

Notes: E : Average number of workers employed.
K/E : Average total assets (in Rs.) divided by E.

TABLE 4.6

Profitability of Firms

(All figures in percentages)

	PAT/ capital	PAT/ income	EPAT capital	EPAT/ income
A: Category-wise				
A	20.41	5.39	11.69	2.69
	(14.71)	(3.24)	(18.84)	(1.84)
B	35.94	5.83	17.72	2.87
	(21.34)	(2.02)	(11.15)	(1.35)
C	47.22	7.14	23.41	3.12
	(51.64)	(1.74)	(27.52)	(1.19)
D	29.56	15.51	9.56	3.86
	(12.05)	(17.29)	(5.78)	(3.19)
All firms	34.78	7.66	16.58	3.13
	(32.99)	(8.08)	(17.69)	(1.89)
B: Borrowing Status-wise				
Formal only	38.37	5.53	21.62	3.03
	(2.31)	(1.39)	(14.26)	(1.27)
Both formal	21.11	5.91	11.96	3.04
and informal	(17.69)	(3.12)	(12.02)	(1.99)
Informal only	39.00	6.98	18.31	2.79
	(50.73)	(2.52)	(26.04)	(1.25)
Self financed	36.51	11.82	13.97	3.66
	(20.42)	(14.53)	(9.23)	(2.61)
All Borrowers	33.37	6.21	17.51	2.94
	(36.32)	(2.54)	(19.76)	(1.51)

Notes: 1. PAT : Profit after taxes.
Capital : Equity/owners capital.
EPAT : Retained earnings plus 20% of dividends/drawals.
2. All firms including 'self financed' received trade credit.
3. Figures in parentheses are standard deviations.

TABLE 4.7

Sources of Funds of Road Construction Firms

(All figures in percentage)

	Own capital and equity	Formal credit	Informal credit		
			Trade credit	Other	Total
A: By Category					
A	49.67	11.09	27.43	11.80	39.23
	(20.14)	(16.44)	(18.68)	(13.69)	(24.01)
B	62.13	7.71	25.86	4.30	30.16
	(15.360	(10.75)	(16.06)	(8.99)	(19.42)
C	65.73	4.46	21.81	8.01	29.82
	(15.75)	(12.67)	(13.13)	(11.48)	(15.78)
D	69.78	1.01	25.04	4.17	29.21
	(12.49)	(2.03)	(12.94)	(8.54)	(13.17)
B: By Borrowing status					
Formal only	60.09	15.27	22.64	N.A.	22.64
	(15.62)	(14.62)	(16.590		(16.59)
Formal and informal	18.54	13.97	20.29	17.20	37.49
	(18.00)	(17.45)	(12.81)	(13.15)	(24.25)
Informal only	60.82	N.A.	24.22	14.96	39.18
	(19.03)		(16.96)	(11.53)	(19.03)
All borrowers	58.19	8.84	22.69	10.28	32.97
	(18.51)	(14.26)	(15.69)	(12.42)	(21.12)
Self finance	69.90	N.A.	30.10	N.A.	30.10
	(13.02)		(13.62)		(13.62)
All firms	61.54	6.31	24.80	7.35	32.15
	(17.920	(12.69)	(15.54)	(11.48)	(19.20)

Notes: 1. Figures are percentages of total capital employed.
2. Standard deviations in parentheses.
3. All firms including 'self financed' receive trade credit.

TABLE 4.8

Details of Bank Credit

		Type of facility												
		Cash credit		Overdraft accounts		Term loans		Bank guarantees		All loans				
		A	D	A	D	A	D	A	D	A	B	C	D	E
I	Number of loan accounts													
	1. All banks	5	6.71	10	0.98	2	6.4	6	56.29	23	16	45.7	3.00	18.35
	2. State Bank of India	1	1.6	3	1.25	1	0.8	Nil		5	4	11.4	1.23	
	3. Canara Bank	1	25.0	1	NA	1	12.5	2	152.5	5	2	5.7	18.5	152.5
	4. Punjab and Sind Bank	1	0.05	2	None	Nil		Nil		3	2	5.7	0.05	
	5. Corporation Bank	Nil	1	1.0	Nil		1	5.0	2	1	2.9	1.0	5.0	
	6. Oriental Bank of Commerce	Nil	Nil		Nil		2	1.38	2	2	5.7		1.38	
	7. Punjab National Bank	1	0.2	Nil		Nil		Nil		1	1	2.9	0.2	
	8. Syndicate Bank	Nil		1	0.1	Nil		Nil		1	1	2.9	0.1	
	9. Not available/ others	1	N.A.	2	2.0	Nil		1	25.0	4	3	8.6	2.0	25.0
II	Margin (Average %)	25.0	20.0			25.0		27.42				25.0	24.33	
	Rate of interest (average)	16.49		15.35		12.5		1.0					16.20	2.49
III	Amount outstanding as apercentage of limit sanctioned	71.62	103.15			65.0		NA			75.42	NA		
IV	Primary security (Number of accounts)	None/personal (1) Hypothecation of stocks (3) Hypothecation of Bad debts (1) Fixed deposit receipt (1)		None/personal (6) Hypothecation of stocks (1) Fixed deposit receipt (1) NA: (2)		Hypothecation of vehicle (1) NA: (1)		None (4) NA: (2)						
V	Collateral security	None/personal (4) NA: (1)		None/personal (7) NA: (3)		Mortgage & Land (1) NA: (1)		None/personal (4) NA: (2)						

Table 4.8 (Contd.)

		Total No. of account holders	Percentage getting need based finance	Percentage satisfied with banker	Percentage feeling bank is unfair to to them	Percentage availing of other credit as well
	Number of loan accounts					
1.	All banks	35	42.86	51.7	5.7	52.9
2.	State Bank of India	16	30.8	25.0	6.0	53.3
3.	Canara Bank	5	60.0	40.0	0.0	60.0
4	Punjab & Sind Bank	3	100.0	100.0	0.0	33.3
5.	Corporation Bank	2	50.0	100.0	0.0	100.0
6.	Oriental Bank of Commerce	3	0.0	66.7	0.0	66.7
7.	Punjab National Bank	1	0.0	100.0	0.0	0.0
8.	Syndicate bank	1	0.0	100.0	0.0	100.0
9.	Not available/ others	10	50.0	50.0	10.0	70.0

Notes: 1. Rate of interest for all loans including bank guarantees.
2. "Interest rate" for bank guarantee is the annual change. Interest rates do not net out interest paid on security held with banks, if any.
3. All averages are with respect of firms for which data is available.
4. A: Number of Accounts
B: Number of Firms
C: B as a percentage of total sample
D: Average excluding Bank guarantees (Rs. lakh)
E: Average including bank guarantees (Rs. lakh).

TABLE 4.9

Salient Features of Informal Credit Received by Road Construction Firms

		Friends and relatives	Partners directors & shareholders	Multanis & shroffs	Source not available	Total informal credit
1.	Number of firms	12	1	1	4	17
2.	% of firms in sample	34.3	2.9	2.9	11.4	48.57
3.	Average rate of interest (%)	15.03	15.0	24.0	N.A.	15.89
4.	Minimum rate of interest (%)	Nil	15.0	24.0	N.A.	Nil
5.	Maximum rate of interest (%)	18.0	15.0	24.0	N.A.	24.0
6.	Percentage of short term loans	33.3	Nil	100.0	N.A.	35.7
7.	Percentage of long term loans	66.7	100.0	Nil	N.A.	64.3
7a.	of which demand loans	58.3	Nil	Nil	N.A.	50.0
8.	Average loan amount (Rs. lakh)	3.55	1.64	0.25	N.A.	3.55
9.	Collaterial & security	Nil	Nil	Nil	N.A.	Nil
10.	Percentage of loans for working capital finance	83.3	0.0	100.0	N.A.	71.4

Notes: 1. Figures are with respect to loans for which data is available.
2. Long term loans (7) : Loans outstanding for more than one year.
3. Demand loans (7a): Outstanding for more than one year.
4. Interest rates were found not to vary with duration or purpose.

TABLE 4.10

Pattern of Borrowing of Road Construction Firms

(All figures in percentage of total borrowing)

	Formal credit	Informal credit		
		Trade	Other	Total
A: By Category				
A	21.19	52.11	19.57	78.81
	(28.63)	(34.47)	(21.85)	(28.63)
B	22.71	69.50	7.78	77.29
	(27.46)	(27.57)	(15.51)	(27.46)
C	8.61	71.82	19.57	91.39
	(24.36)	(32.41)	(28.18)	(24.36)
D	5.96	83.62	10.42	94.04
	(12.03)	(22.30)	(21.83)	(12.03)
B: By Borrowing Status				
Formal only	38.65	61.36	N.A.	61.36
	(28.43)	(28.43)		(28.43)
Formal and informal	28.83	49.34	29.24	71.17
	(29.70)	(29.64)	(20.25)	(29.70)
Informal only	N.A.	65.81	34.19	100.00
		(27.33)	(27.33)	(0.00)
All borrowers	20.73	55.61	20.99	79.27
	(28.360	(29.87)	(25.34)	(28.36)
Self finance	N.A.	100.00	N.A.	100.00
		(0.00)		(0.00)
All firms	14.81	67.86	14.99	85.19
	(25.73)	(32.24)	(23.42)	(25.73)

Note: Standard deviation in parentheses.

TABLE 4.11

Interest Cost of Borrowing and Duration of Trade Credit Received and Given

Group	Interest cost (%)	Trade credit received (in days)	Trade credit given (in days)
A: By Category			
A	11.83	56.06	58.06
	(5.39)	(49.17)	(27.95)
B	16.09	32.38	40.28
	(3.71)	(27.95)	(25.42)
C	12.66	31.33	39.83
	(8.94)	(31.16)	(25.88)
D	N.A.	24.01	33.60
		(24.28)	(18.39)
B: By Borrowing Status			
Formal borrowers	15.27	27.7	36.57
	(3.59)	(18.31)	(16.68)
Formal & informal borrowers	12.30	47.48	55.21
	(5.42)	(37.61)	(33.58)
Informal borrowers	12.77	35.93	40.56
	(8.37)	(31.09)	(27.14)
All borrowers	13.38	36.94	43.80
	(6.21)	(31.16)	(27.85)
Self financed	N.A.	36.53	43.25
		(49.95)	(46.46)
All firms	N.A.	36.48	43.66
		(36.94)	(33.65)

Notes: 1. Interest cost is interest paid as a percentage of total borrowed funds.
2. Trade credit days computed as a ratio of value of production (or sales) during the year multiplied by 365 days.

TABLE 4.12

Net Credit Received by Road Construction Firms

Group	Net credit received (Rs.lakh)	No. of days of working capital	Working capital used in days	Shortfall in days (3-4)
A: By Category				
A	9.59	218.52	258.00	39.48
	(10.99)	(319.52)	(458.25)	
B	-0.34	-15.10	75.69	90.79
	(0.5)	(17.56)	(26.25)	
C	-0.05	-35.10	107.66	142.79
	(0.57)	(84.13)	(89.88)	
D	-0.26	-47.77	234.20	281.97
	(0.37)	(21.19)	(197.87)	
B: By Borrowing Status				
Formal borrowers	0.06	-12.53	68.68	56.15
	(0.86)	(27.12)	(30.68)	
Formal and informal borrower	8.31	230.13	244.31	64.18
	(10.31)	(344.61)	(454.34)	
Informal borrowers	0.78	-38.08	146.59	184.46
	(2.89)	(97.64)	(120.28)	
All borrowers	2.69	51.33	167.82	116.49
	(6.82)	(230.30)	(277.15)	
Self financed	-0.06	-22.03	141.82	163.85
	(0.52)	(35.20)	(167.36)	
All firms	2.00	32.31	158.97	123.62
	(6.03)	(201.60)	(256.75)	

TABLE 4.13

Uses of Funds of Road Construction Firms

(Percentage of total assets)

Group	Fixed assets	Inventories	Loans and advances		Investments	Inventory holding in days
			Security deposits	Total		
By Category						
A	11.60	36.05	18.60	20.33	32.02	159.88
	(10.36)	(22.95)	(20.14)	(18.42)	(21.15)	(255.46)
B	6.23	20.46	26.09	20.46	25.96	30.27
	(5.36)	(10.24)	(11.72)	(10.24)	(10.94)	(29.30)
C	10.16	16.96	26.37	16.96	19.13	31.85
	(11.20)	(8.25)	(13.90)	(8.25)	(16.01)	(21.34)
D	5.00	28.96	14.94	28.96	13.22	96.19
	(10.00)	(12.71)	(8.94)	(12.71)	(10.96)	(86.56)
By Borrowing Status						
Formal borrowers	5.39	15.39	31.65	50.46	28.75	18.97
	(4.23)	(9.67)	(7.59)	(7.15)	(12.66)	(13.77)
Formal & informal	10.73	35.77	20.65	22.41	31.10	184.40
	(9.61)	(22.78)	(19.14)	(13.70)	(17.77)	(265.80)
informal borrowers	10.49	26.64	21.52	49.12	13.76	55.47
	(11.25)	(14.69)	(12.38)	(23.76)	(13.99)	(59.56)
All borrowers	9.01	25.99	24.34	41.40	23.60	83.60
	(9.42)	(18.28)	(14.58)	(21.25)	(16.87)	(166.20)
Self financed	7.25	21.51	16.98	48.07	23.17	46.27
	(10.57)	(8.60)	(16.08)	(19.62)	(17.15)	(54.63)
All firms	8.56	24.84	22.44	43.12	23.49	74.83
	(9.76)	(16.46)	(15.32)	(21.05)	(16.94)	(146.60)

TABLE 4.14

Efficiency Indicators for Road Construction Firms

Borrowing status	Capital Output ratio		Labour Output ratio		Return on Sales (%)	
	Value	Rank	Value	Rank	Value	Rank
Formal only	0.079 (0.049)	1	1.037 (0.782)	1	5.53 (1.39)	4
Formal and informal	0.808 (1.352)	4	1.202 (0.923)	2	5.91 (3.12)	3
Informal only	0.233 (0.171)	3	3.809 (3.130)	3	6.98 (2.52)	2
All borrowers	0.349 (0.789)	N.A.	1.197 (2.279)	N.A.	6.21 (2.54)	N.A.
Non borrowers (trade credit only)	0.209 (0.303)	2	6.808 (8.070)	4	11.82 (14.53)	1
All firms	0.314 (0.710)	N.A.	3.139 (4.893)	N.A.	7.66 (8.08)	N.A.
Coefficient of variation	2.2945		1.5078			
Coefficient of correlation(%)		16.36				

Notes: 1. Capital : Inventories plus fixed assets in Rs. lakh; ranking from low to high.
2. Labour : Total employment; ranking from low to high.
3. Output : Value of production.
4. Return : Reproduced from Table 4.6: ranking from high to low.
5. All figures are averages over 2 year averages for firms.

CHAPTER 5

GARMENT EXPORTERS IN DELHI

5.1 Description of salient features and geographical dispersion of sector

5.1.1 Garment exports are emerging as India's leading export industry and have been growing at a phenomenal rate. For such an important sector, what is surprising to the outsider is the lack of statistics on even such basic items as the number of export firms or the total employment in the sector. There reportedly exists a large number of dummy companies due to the method of assignment of export quotas by the government and due to tax reasons. However, the Apparel Export Promotion Council had 6250 merchant exporters/ manufacturing exporters of ready-made garments in India on its register in April 1986.

5.1.2 Sudden rise of the industry: India's garment exports amounted to an insignificant Rs. 9 crore in 1969-70. It is a remarkable feature in the history of garment exports that these soared to Rs. 1323 crore in 1986 - a compound annual growth rate of 33.6 per cent. By 1975, India had established a firm presence in world markets, when it exported garments worth over Rs. 119 crore. By 1981-82, exports reached the level of Rs. 670 crore and in 1987 exports of ready-made garments reached an all time high of Rs. 1863 crore (estimated) contributing as much as 12 per cent to the total export basket of the country. The growth rates of exports during the most recent two years have been 25 per cent and 40 per cent respectively. For 1990 garment export target has been fixed by the government at Rs. 2500 crore.

5.1.3 The major market for Indian ready-made garment is the

U.S.A. which accounted for exports totalling Rs. 595.20 crore during 1987 (32 per cent of total garment exports). The second biggest importer is West Germany which imported goods worth Rs. 257.87 (13.8 per cent) crore during 1987 followed by the U.K. with imported goods worth Rs. 196 crore (10.5 per cent). West Europe and the EEC accounted for exports of about Rs. 850 crore (46 per cent).

5.1.4 A large part of the credit for the rapid growth of Indian garment exports goes to State Trading Corporation (STC) and to the concerted efforts made by the Apparel Export Promotion Council (AEPC), the Cotton and Woolen Textile Promotion Council (CWTPC) and the Trade Fair Authority of India (TFAI). Today, Indian garments are competing successfully with other apparel exporting nations of the world such as Hongkong, Taiwan, Korea and Singapore.

5.1.5 The multi-fibre agreement (MFA): The Multi-Fibre Agreement, a major irritant in North-South relations, is the main external factor affecting Indian garment exports. The Agreement has been specially designed to protect the textile industries of developed countries from competition with developing countries. First signed in 1973 and renewed four times since then by all major textile importing and exporting countries, the MFA is a significant departure from the General Agreement on Tariffs and Trade. The MFA allows quantitative restrictions rather than tariffs on imports from specific countries. As a result, there are no restrictions on trade in textiles among developed countries but the MFA has been used as weapon to cut imports from developing countries. The main trade inhibiting points are to be found in articles 3 and 4 of the Agreement. Under these articles, any importing country can cut the import of any specific item from a specific source if it feels that its market is being disrupted by such imports.

5.1.6 The garment export entitlement policy, 1987 (quota policy): The policy for allocation of export entitlements for garments and knitwear, popularly known as the quota policy, is based on bilateral agreements between India and various importing countries. Every year the Government of India issues a public notice laying down policies within which allotments are to be made. The quota is administered by the Apparel Export Promotion Council. Over the years, a large numbers of changes have been introduced in the policy based on feedback from the trade. The Government of India has, most recently, agreed to meet the long outstanding demand of exporters for the issue of quotas to garment exporters who succeed in exporting garments to non quota countries.

5.1.7 The major features of the new policy are a shift from quantity to value in determining entitlements based on past performance, larger quotas for manufacturer-cum-exporters and quota tendering open to all for certain country quotas where utilisation has been over 90 per cent in the previous three years. Under the new policy, in most categories, 65 per cent of the quota is based on past performance. The reason for the shift in past performance entitlement (PPE) from quantity to value is that Indian exports are hitting the limits of the quotas for most countries. The only way out is therefore by increasing the value of exports. A further 10 per cent of the quota will be distributed to manufacturer-cum-exporters (i.e., those who have at least 100 workers and 150 machines). The main reason for increasing the quotas for manufacturer-cum-exporters is to attempt to boost the quality of manufactures. Most exporters feel that the failure of the government to establish investment criteria in value terms makes the move meaningless.

5.1.8 Another two and three per cent of the quotas will be given to Centre and State corporations and those who develop exports to

non-quota countries respectively. The last twenty per cent of the quota is provided under what is called the first come, first served (FCFS) system so that new comers and small exporters get a share of the pie. The fact that 65 per cent of the quota is reserved for past performance and 10 per cent for large firms clearly constitutes an entry barrier as pointed out by Law (1981) in the context of Hongkong.

5.1.9 According to a recent study by the State Bank of India (1987) the region-wise distribution of firms is as follows:

Northern Region	3600
Western Region	1750
South Region	800
Eastern Region	100
Total	6250

The garment industry was born in Bombay but labour conflicts, coupled with the high prices of real estate drove many organised manufacturers out of the city. Though, initially, Delhi was thought to be an easier area to work out of, labour continues to be a thorny issue in these centres. In spite of this, Delhi and Bombay are the main centres for apparel exports and they alone account for more than 80 per cent of total exports made from India. City-wise shares in the value of exports made from India during the year 1985 according to the State Bank study are:

City	**Percentage**
Delhi	42.03
Bombay	39.06
Madras	10.84
Bangalore	5.38
Trichur	1.75
Calcutta	0.47

Jaipur	0.47
Total	100.00

5.1.10 There are more than 3600 registered members in and around Delhi. However, the number of active garment exporter cum manufacturers is estimated to be around 400 only. Generally, exporters have as many 3-4 firms under different names to get more quota allotments from the Apparel Export Promotion Council.

5.2 Description of sample

5.2.1 Sample characteristics: The sample selected consisted of 40 units previously surveyed by the State Bank, Delhi Circle. Only 19 of these units cooperated with field staff, and that too not to the fullest possible extent.

5.2.2 42 per cent of firms were partnerships. Private limited companies and sole proprietorships were each 26 per cent of the sample. Information on one firm was not available. The average firm was 14 years old while the oldest was 37 years old. The newest firm was one year old. Most firms (26 per cent) were manufacturers cum exporters. 16 per cent each were merchant firms and silk exporters. 26 per cent of firms reported working on a seasonal basis. On average, 69 workers were employed by a firm and the minimum and maximum number of workers were 1 and 400 respectively.

5.2.3 Table 5.2 provides details of profitability of firms with respect to own capital employed and income. Small firms may be seen to be less profitable than large firms by both indicators of profitability. This shows that, if corrections are made for the imputed wages for owner's labour time, small firms will be even less profitable. However, the sample return or capital is absolutely high compared to other industries. It is likely that

both the differential profitability of large and small firms and the high profitability in absolute term are due to the administration of the export quota policy and the quota itself. We now turn to an analysis of sources of funds.

5.3 Sources of funds and salient features of sources

5.3.1 Own funds, formal and informal borrowing: Of the total sample, all firms except one were getting bank credit facilities in one form or another, while 68.4 per cent received informal credit in addition to formal credit. Out of formal borrowers, 79 per cent were getting finance against export orders in the form of 'packing credit' while 48 per cent received packing credit and also enjoyed export bill discounting facilities. Only one firm had received a long term loan from a bank.

5.3.2 Table 5.3 gives details of the average percentage of total liabilities from various sources. The average firm may be seen to depend mainly on informal credit (41.04 per cent). Bank credit also plays a significant role and contributes 24.92 per cent of total funds. Owed funds contribute only 29.96 per cent. Informal credit includes both trade credit and other informal borrowings. If trade credit is excluded, then informal credit falls to only 7.04 per cent of total funds. Of these other informal sources, 37 per cent of firms borrowed from friends and relatives. Directors, shareholders and partners lent to a further 21 per cent of firms. Only 10 per cent borrowed from informal intermediaries (chit funds and finance corporations).

5.3.3 Table 5.3 shows that own capital is significantly more important as a source of funds for large firms than for small firms when firms are classified by total assets. The reverse is true for formal credit. It is of interest that formal credit is the least important source of funds for both categories of firms.

Trade credit, contributed 29.15 per cent and 35.75 per cent of funds for large and small firms respectively. Informal credit was the main source of funds in the case of small firms (42.60 per cent). The comfortable own funds position of large firms reflects, in this industry, the combined operations of quotas and export promotion described earlier and not credit constraints.

5.3.4 The current financial structure of firms is likely to move increasingly in the direction of reliance on own finance. In the two years for which data was available, reserves and surplus increased at an average rate of 160.58 per cent, the ratio of growth of reserves being similar for both small and large firms. However, 66 per cent of large firms but only 50 per cent of small firms showed growth in this category (58 per cent overall). Only one firm showed a decrease in reserves and surplus. If we add to these figures growth in loans from directors, shareholders, partners, friends and relatives, then, no firm for which data is available shows a decrease in the combined position from these two sources. Since it is known that many partnership and proprietary concerns show their own funds as loans from friends and relatives in order to launder black funds from concealed profits, it is possible that such "informal credit" is primarily illegal wealth. That this could be the case is made more plausible by the nature of the quota policy discussed further in section 5.

5.3.5 Purpose, duration and cost of loans: Both formal and informal sector credit was mainly for working capital finance. Only one formal borrower received a term loan from the banking sector. Due to non availability of data, the exact term structure of loans could not be ascertained. Large firms had to pay marginally more interest as compared to small firms (see Table 5.5). While firms receiving both formal and informal credit had a lower cost of borrowing than firms receiving only formal credit, this appears to be due to the fact that the former were better credit risks and not

because informal credit is cheaper than bank credit. In fact, larger firms, who are more dependant on informal borrowing (Table 5.4) have the higher cost of credit.

5.3.6 Table 5.5 also reveals that trade credit is received on average for ten weeks in this sector. Smaller firms are, however, able to get credit for longer terms as compared to large firms. This position is made even better for small firms since they provide less credit to their customers. The overall impression is that small firms receive more credit than large firms and are better served by banks, primarily because large firms are in little need of borrowings.

5.3.7 Reasons for approaching the informal sector and respondent's opinions of bank credit facilities: 40 per cent of those firms who received informal credit were interested in informal credit because, in their opinion, informal credit was easily available; 30 per cent cited less formalities as compared to bank credit; 25 per cent complained of inadequacy of bank credit; and a further 5 per cent cited the cheapness of informal credit as the reason for approaching informal credit markets.

5.3.8 In the sample, all but one unit had credit facilities with a bank. 63 per cent of firms were generally satisfied with their banker. Out of those firms which were not satisfied, 57 per cent were dissatisfied due to both delays in service and inadequacy of credit. 14 per cent cited only delays in service as the reason for dissatisfaction and 29 per cent cited other reasons for dissatisfaction. Only three firms out of the total sample felt that banks were not fair to them as compared to their treatment of other customers. Only one firm felt that more satisfactory services could be obtained from private moneylenders or other informal intermediaries. Five firms had received special services from their banks and this related to both financial aspects and manage-

ment aspects. Table 5.6 gives the statistics for customer service arranged according to the concerned nationalised bank.

5.4 Uses of funds

5.4.1 Table 5.7 provides information about the uses of fund by garment export firms. Use of funds is divided into four components: fixed assets, inventories, loans and advances and other uses. The main feature as to uses of funds visible in this table is the low proportion of funds devoted to fixed assets. Looking at the distribution by size of firm, the striking feature revealed by this table is that small firms hold inventories four times as large relative to the number of days of production compared with large firms. The reason for this is to be had in the organisation of production. While small firms rely mainly on job work done by independant cutters and tailors, larger firms have their own work force and machines. To cope with the uncertainties in securing the services of cutters and tailors, who are in high demand, small firms must maintain large inventories. This acts as a buffer in case a time bound order is received. Along with the earlier evidence, this suggests a greater reliance of small firms on credit markets.

5.5 Impact of regulatory environment

5.5.1 While the regulatory environment prevailing has no impact on the availability of informal credit to this sector, it does affect the total funds position greatly. Three items come into play here.

i. For established firms, obtaining cheap bank credit to finance confirmed export orders is routine and relatively obstacle free. In fact, there is evidence that nationalised banks actively compete with one another to increase their business in this market.

ii. Export incentives (cash compensatory support and duty drawback) against the customs levies, designed primarily to offset internal taxes on inputs, are normally paid to firms soon after they export a consignment (usually within, 30 days). This reduces the average waiting period between the shipping of goods and receipt of payment thus improving the cash flow of firms.

iii. The higher unit value which firms have to realise on export orders to qualify for allotments in subsequent years is a possible third factor. This may be explained as follows. The quota under the MFA leads to a position of excess demand for Indian garments in developed countries at free market equilibrium prices. Thus the goods tend to be sold at higher prices with a correspondingly large surplus for producers. However, to escape taxation, exporters may under-invoice their consignments with the connivance of importers overseas. The extent of under invoicing possible decreases whenever a unit value stipulation is made for the assignment of quotas with the floor price being increased every year provided export performance does not suffer.

5.5.2 The result of the three factors described above is that firms , especially large firms, are becoming 'cash rich' and have little need for outside credit. Evidence for this was presented earlier (in that reserves and surplus had shown a phenomenal growth rate). Indirectly, this also provides further evidence on the likelihood of black funds in the industry since, otherwise, it is difficult to understand why a cash rich firm would borrow at the high average rates (especially for large firms) given in Table 5.5.

5.5.3 The other, non financial, impact of government is through the quota policy. That 65 per cent of the quota is allotted on the basis of past performance and 10 per cent is allotted to large firms rather than by open tendering, shows that there is a clear barrier to entry engendered by regulation. This, of course, has an important indirect effect on the funds position of incumbent firms since their profits are thereby greatly augmented.

5.6 Estimate of total value of informal credit to garment export activity

5.6.1 The figures in Table 5.1 can be used to shed light on the total size of the informal and formal credit markets serving garment exports. Formal and informal credit respectively make up 20 per cent and 25 per cent of the total production of sampled firms. If we assume that this ratio prevails at the aggregate level as well, then informal and formal credit in 1987-88 to the sector would be Rs. 259.05 crore and Rs. 207.60 crore respectively.

5.7 Efficiency and allocative impact of informal finance

5.7.1 Since data are not available on the quantity of output, value of production has been used as the indicator of production. An examination of the capital output and labour output ratios shows two things: small firms (who get more finance through the informal market inclusive of trade credit) use less capital per unit of output but get a lower return on sales (Table 5.8).

5.7.2 Secondly, table 5.8 shows that small firms are more labour intensive than large firms in that they have a lower capital output ratio but a higher labour output ratio than large firms. This is as expected given that total finance available to them is less in quantity but more costly. We tentatively conclude that informal finance is associated with firms using more labour intensive methods of production in this sector.

5.8 The main distinguishing features

5.8.1 The main points that have emerged in the analysis may now be summarised.

i. Most loans to both small and large firms are for working capital

ii. There appears to be evidence to suggest that what appears to be`informal credit´, apart from trade credit, is, to a large extent, unaccounted funds.

iii. Firms in the sample have shown a high growth rate (161 per cent) of retained earnings. The reason for this can be traced to the quota policy followed by the Government.

iv. A large proportion of firms expressed dissatisfaction with bank credit facilities even though the credit facilities they receive are better than that received by many other productive sectors.

v. The quantum of informal credit (excluding trade credit) to the sector is marginal.

vi. The informality of informal credit was the reason cited most often by respondents for taking such credit.

vii. The quota policy and the prevailing export incentives make this sector very cash rich.

Regarding differences between the small and large firms we see that

i. Small firms are less profitable.

ii. Small firms receive trade credit for longer durations than large firms and also give credit for shorter durations.

iii. Trade credit had equal importance for both types of firms, though it makes up a larger chunk of borrowed funds for small firms.

iv. Small firms rely more on informal credit (including trade credit) than large firms.

v. Small firms are more labour intensive than large firms even though their borrowing cost is lower than the cost of large firms.

5.9 Recommendation for reform and regulation

5.9.1 In a capital poor economy it is indeed remarkable that one sector, however much it helps the export drive, should receive concessional finance to the extent that this sector does. The

question that needs to be asked is how effective this concessional finance is in boosting exports at the margin. This policy needs careful examination. Secondly, the operation of the quota system as it is run by the AEPC and other related councils clearly creates barriers to entry for new firms. This too is worth a second look. However, both these points are beyond the strict purview of this study.

5.9.2 Besides recommending more expensive bank finance to lower the social opportunity cost of the export drive or, as an alternative, recommending open bidding for a larger part of the quota, it is clear that the discrimination in favour of large firms needs to be removed in so far as the relative extent of finance is concerned. Given that this sector is cash rich and therefore not dependant to any great extent on informal finance aside from trade credit (nor even formal finance) little scope exists for further improvements in credit facilities.

TABLE 5.1

Aggregate Garment Export Activity in India

(Rs. crore)

1.	Estimated formal credit to sector All India) in 1986-87	207.60
2.	Estimated informal credit to sector (All India) in 1986-87	259.05

Notes: 1. Total export of ready-made garments is: 1038 crore. (1986-87 provisional).
2. Ratio of informal credit to production: 0.02
Ratio of formal credit to production : 0.20

TABLE 5.2

Profitability of Firms

(in percentage)

Category	Pat/Capital	Pat/Income
Large firms	54.89	9.89
	(97.53)	(15.94)
Small firms	26.97	5.72
	(51.91)	(9.93)
All firms	34.36	6.86
	(68.20)	(12.02)

Notes: 1. PAT : Profit after taxes.
Capital: Equity/owners capital.
Income : Gross income.
2. Figures in parentheses are standard deviations.

TABLE 5.3

Sources of Funds of Garment Export Firms

(All figures in percentage)

Category	Own capital and equity	Formal credit	Informal credit		
			Trade Credit	Other	Total
Large firms	37.76	22.74	29.15	7.57	36.72
	(38.15)	(18.59)	(23.32)	(9.24)	(16.28)
Small firms	27.16	25.71	35.75	6.85	42.60
	(24.05)	(22.34)	(15.05)	(9.89)	(12.47)
All firms	29.96	24.92	34.00	7.04	41.04
	(29.14)	(21.46)	(17.86)	(9.73)	(13.80)

Notes: 1. Figures are percentages of total capital employed.
2. Figure in parentheses are standard deviations.
3. Other liabilities (unclassified), if added to row totals would result in them adding to 100 per cent.

TABLE 5.4

Pattern of Borrowing of Garment Export Firms

(percentage of total borrowing)

Category	Formal credit	Informal credit		
		Trade credit	Other credit	Total informal
Large firms	32.53	40.65	26.82	64.47
	(24.48)	(25.67)	(37.34)	(31.51)
Small firms	32.60	56.72	10.68	67.40
	(26.19)	(24.20)	(16.57)	(20.39)
Only formal borrowers	40.04	59.96	0.00	59.96
	(18.57)	(18.57)	(0.00)	(18.57)
Informal and informal borrowers	30.28	50.16	19.55	69.71
	(27.17)	(26.99)	(26.89)	(26.94)
All firms	32.58	52.47	14.95	67.42
	(25.75)	(25.60)	(24.93)	(25.27)

Note: Figures in parentheses are standard deviations.

TABLE 5.5

Interest Cost of Borrowing and Duration of Trade Credit Received and Given

Category	Interest cost of borrowed funds	Trade credit received (in days)	Trade credit given (in (days)
Large firms	13.20	62.67	80.00
	(9.47)	-	-
Small firms	12.45	76.88	45.67
	(9.77)	-	-
Formal borrowers	16.48	37.50	60.00
only	(10.25)	-	-
Formal and informal	11.34	80.89	53.10
borrowers	(9.11)	-	-
All firms	12.67	73.00	54.25
	(9.69)	-	-

Notes: 1. Interest cost is interest paid as a percentage of total borrowing.
2. Standard deviations for (2) and (3) not computed due to missing data resulting in few observations.

TABLE 5.6

Bank-Wise Statistics

	Total no. of account holders	Percentage getting need based finance	Percentage satisfied with bank	Percentage feeling bank is unfair to them	Percentage availing of other credit as well
Number of loan accounts					
1. All Banks	19	79	63.16	10.53	47.37
2. Punjab National Bank	4	25.0	25.0	50.0	75.0
3. Indian Overseas Bank	3	66.67	66.67	0.0	66.67
4. Canara Bank	2	0.0	0.0	100.0	100.0
5. Not available/ others	13	92.3	69.2	8.3	30.8

TABLE 5.7

Uses of Funds of Garment Export Firms

(percentage of total assets)

Category	Fixed assets	Inventories	Loans and advances	Inventories in days
Large firms	16.87	14.57	32.32	22.01
	(12.25)	(12.66)	(25.42)	(23.07)
Small firms	10.91	37.17	41.77	82.31
	(12.12)	(24.50)	(26.51)	(100.39)
Formal borrowers only	13.71	33.29	41.40	114.35
	(10.31)	(32.84)	(37.08)	(170.89)
Formal and informal	12.11	30.54	38.61	51.62
	(12.99)	(20.71)	(22.30)	(49.18)
All firms	12.49	31.19	39.27	65.56
	(12.43)	(24.15)	(26.55)	(95.14)

Note: Other assets, not reported, include investments (less than 1 per cent) and cash and bank balances.

TABLE 5.8

Efficiency Indicators for Garment Export Firms

Category	Capital/ output Ratio	Labour/output ratio
Large firms	0.35	0.33
	(0.46)	-
Small firms	0.23	0.56
	(0.21)	-
All firms	0.28	1.15
	(0.34)	-

Notes: 1. Capital: Inventories plus fixed assets in Rs.lakh.
2. Labour : Total employment.
3. Output : Value of production
4. Standard deviatoions in parentheses.

CHAPTER 6

INFORMAL CREDIT TO THE POWERLOOM SECTOR

6.1 Introduction

6.1.1 The decentralised powerloom sector occupies an important place in textile production, particularly in manufacturing cheaper varieties of cloth for mass consumption. The production of cloth in 1985-86 in the mill sector, powerloom sector and handloom sector put together was 12998 million metres. Out of this, powerlooms in the decentralised sector produced 6222 million metres, which amounts to 48 per cent of the total cloth production. (See Table 6.1).

6.1.2 Apart from composite mills, fabric production in India takes place in separately organised handloom and powerloom weaving establishments and in hand or power operated processing and printing establishments. As opposed to composite mills which centralise spinning, weaving and finishing activities under one roof, the parallel form of production decentralises the constituent activities into separate entities. The types of activities described above, taken together, constitute the decentralised sector. During the last two decades there has been a six fold increase both in the number of powerlooms working in the decentralised sector and in the production of this sector according to a recent task force of the Ministry of Textiles which examined credit requirements for powerlooms (Government of India, 1988). Even though there was, at one time, a ban on establishment of new powerlooms, unauthorised powerloom were established. The Government has regularised such unauthorised powerlooms from time to time. During 1986-87, production in the

decentralised sector was 75 per cent of composite mill textile production whereas, in 1951, it was only 25 per cent.

6.1.3 Weaving activity in this sector is predominantly organised under the master weaver and entrepreneurial systems. In the master weaver system loom owners are provided yarn by master weavers and are required to convert the same into specified "sorts" or types of woven cloth for which fixed conversion charges are paid. Looms are largely run with family or hired labour. The entrepreneurial system, on the other hand, requires the owner to not only invest in fixed assets but also in raw materials. Fabric may be woven by entrepreneurs on a job order basis or for direct sale. The distinguishing mark of the entrepreneurial system is the involvement of owners in the business to earn commercial profit. A third type of system, less prominent and found in Uttar Pradesh is the household or cottage enterprise. In this system producers sell their output mainly to the local market. The master weaver system is dominant in Maharashtra, Madhya Pradesh and Uttar Pradesh. In Tamil Nadu it exists side by side with the entrepreneurial system.

6.1.4 Government and policy: The Government of India have laid consistent emphasis on the development and promotion of decentralised industry to satisfy the key objectives of creation of employment and income generation in rural areas within the framework of the country's economic and social development policies. The government's role has been articulated through a structure of enabling measures aimed at supporting small producers. For instance, filament fabric production was earlier reserved for powerlooms. Their dominance has been hard to break even after the introduction of complete fibre flexibility. In cotton fabrics, excise concessions were weighted in favour of production of superior varieties by powerlooms. Much government intervention has been motivated by the need to minimise capital

investment in the manufacture of this mass consumption good, so that cloth could be made available to the consuming public at affordable rates. The government has increasingly turned to powerlooms as events have shown that the mill and handloom sectors are unsuited to the task under prevailing conditions. However Little (1987) expresses the view that mill production has higher social benefits than powerloom production at plausible shadow wage rates.

6.1.5 Again, this industry could not have progressed so fast were it not for the rapid opening of the rural market during the seventies and after. Here again the role of government has been pre-eminent. Massive public investment in infrastructure improvement and in the enhancement of rural productivity has led to income generation and consequent generation of demand for clothing. In effect, the policy position has been that the technology represented by the powerlooms and related processing activity is suited to Indian conditions.

6.1.6 However, not all is well with the government's approach to powerlooms. Though some attention has been given to the question of financial arrangements for the powerloom sector, with a government committee examining the issue as early as 1964,[1] the level of funding from state agencies and formal credit agencies is still very poor in the opinion of a more recent government task force. Secondly, as recognised by the task force, decentralised cloth production entails repeated transportation of intermediate goods between units, a situation that does not occur in integrated mills. This and the weaker market position of small decentralised units entails a cost disadvantage for powerloom units with regard to yarn prices. This disadvantage is exacerbated in most cases by

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1. Ashoka Mehta Committee, Ministry of Textiles.

state and local levies resulting in an estimated 8 per cent to 10 per cent cost disadvantage for powerloom units compared to integrated mills. This disadvantage, is of course, more than compensated for by the lower overheads in powerloom production as compared to integrated mills. However, complaints by associations of powerloom entrepreneurs regarding `step-sisterly' tax treatment for powerlooms have not, so far, been heeded. It is to be seen if the situation regarding both credit and taxation improves in the light of the recent task force report.

6.1.7 Geographical dispersion: The decentralised sector is located in a range of urban places from small towns to big cities. Most location are well connected by rail or road transport to other urban centres. Upto the mid-sixties powerloom and processing activities were concentrated in the western part of the country. Prominent locations were Bhiwandi, Ichalkaranji, Malgaon and Bombay in Maharashtra, Surat and Jetpur in Gujarat and Burhanpur in Madhya Pradesh. In 1964, the Ashoka Mehta Committee estimated the total number of powerlooms manufacturing silk and cotton cloth at 1.5 lakh looms. During the last two decades there has been a rapid growth in existing locations in these States, the establishment of new locations and the spread of powerlooms to most other States as well. There are now more than 8 lakh powerlooms operating in the country in over 2.2 lakh establishments. The loomage is distributed in more than 60 centres of weaving activity. The loom population varies from a few hundreds in some centres to 1.75 lakh in Surat and 2.5 lakh in Bhiwandi (Shanbhag, 1987). Table 6.2 lists important powerloom weaving centres.

6.2 Description of the sample

6.2.1 Data for this study of informal credit was collected with the assistance of the State Bank of India from 18 powerloom units and master weavers in Surat. Though 25 units were initially

selected only 18 units cooperated. Of these, one unit did not furnish complete information. Furthermore, though an additional centre, Ahmedabad, was included in the sample design, no data could be collected there. Of the 17 units, 12 units are powerloom units and five are master weavers. Detailed discussion was also had with managers of commercial and cooperative banks, weavers associations and government officials.

6.2.2 Four powerloom units were sole proprietorships and 8 were partnership concerns. Also, 4 master weavers were proprietary and 1 was a partnership. The average powerloom unit was 10 years old, while the oldest was 22 years old. In the case of master weavers, the average unit was 5 years old. 10 powerloom units were entrepreneurial units and 2 worked under the master weaver system. On average, there were 9 workers in powerloom units and 5 in master weaver establishments. The average investment in plant and machinery was Rs 3.58 lakh for powerloom units and Rs 2.24 lakh for master weavers. The smallest powerloom unit had 6 looms while the largest had 33 looms, the average being 16. The average size of units in the sample is larger than the average for the population (8 looms). The consequence of this bias is that sampled units, being large, have more ready access to credit, especially formal credit, than is generally the case due to their superior ability to offer collateral.

6.2.3 To determine the profitability of powerloom units and master weavers, two ratios are calculated: Profit after tax as a percentage of own capital employed and profit after tax as a percentage of income. By the first ratio, it can be seen that powerloom units in the sample have a greater return to capital than master weavers (See Table 6.3). However the ratio of profit after tax to sales is higher for master weavers than for powerloom units. When corrections are made for the imputed value of family labour, the return on capital (Table 6.3, column 3) is, on

average, between 5 per cent and 6 per cent for both powerlooms and master weavers.

6.2.4 In recent years many traders in related sectors have plunged into processing activity and established processing units. Processing activity has thus grown very rapidly and earns much higher profits than powerloom weaving. A decade ago, due to less competition, the average powerloom earned a profit of 10-20 per cent on turnover even with job work (Mehta and Gandhi, 1987).

6.3 Sources of funds and salient features of finance

6.3.1 General description of credit markets for the textile sector in Surat and informal credit for powerlooms: The report of the Task Force on Credit Requirements for Powerlooms contains replies to a questionnaire sent by them to associations of powerloom units. All respondents expressed dissatisfaction with formal credit availability if an opinion was expressed at all. The common complaint was that the total quantum of bank finance was small or nonexistent. Some respondents went further to say that even units getting bank finance (usually larger units) did not receive finance commensurate with their requirements. Others mentioned cooperative finance as important. In a very few centres, marginal finance from other financial institutions was available. Among informal sources, "private parties/mahajans", moneylenders, yarn merchants and master weavers were mentioned. The incidence of pure informal lenders appears to be extensive in Maharashtra (Bhiwandi/Ichalkaranji), Kanpur and Amritsar from these responses. Master weavers are important in Surat and also in Maharashtra. In Ahmedabad, own finance appears to be the most important source of finance for powerlooms. Since, in Ahmedabad, powerlooms are primarily entrepreneurial, the impression was gained from field enquiries that units were net suppliers of credit with credit

being given for up to 150 days with a discount of 11 per cent to 12 per cent on cash sales. Unfortunately, more extensive field work could not be carried out.

6.3.2 In Surat, our enquiries revealed a wide variety of financial arrangements serving the textile sector which includes yarn merchants, powerloom units, master weavers, processing units and wholesale traders. Surat contains about 50 large buildings (locally called `markets´), each containing several hundred textile outlets and offices of powerloom and processing units, aratiyas and wholesalers, the oldest being the multi-storey Surat Cloth Market. These markets, as well as powerloom and processing units in the area, are served by several commercial banks and at least 3 cooperative banks. Furthermore, there is a well developed credit market where "private parties" give credit at between 2.5 per cent to 4 per cent per month (35 per cent to 65 per cent per annum) for 30 to 90 day periods. According to several persons interviewed, doctors, lawyers and even government officials lent in this clean bill finance market. The size of this market was variously felt to be between Rs 100 crore and 600 crore per month. Furthermore, for those with prior acquaintance with borrowers, the risk of outright default was reported to be small. The major beneficiaries of these markets were reported to be aratiyas and wholesalers with processing houses with powerloom units having lesser access to this credit. Even among such units, small units are reported to be the most disadvantaged. However, an office bearer of one association of powerloom owners reported that upto 70 per cent of association members had to depend on such loans for the finance of capital equipment purchases.

6.3.3 A recent phenomenon is the rise of equipment leasing companies in the area, predominantly serving processing houses but also powerloom units.

6.3.4 The general consensus of opinion of persons interviewed was that bank credit was only available to larger units with adequate collateral and also that credit for working capital was particularly inadequate. The same was true for credit from cooperative banks. Cooperative banks charge 15 per cent interest on loans for capital equipment purchases but usually require collateral in the way of immovable property in order to sanction loans.

6.3.5 Leasing companies finance acquisition of new capital equipment over one to four year term (with an additional delay in transfer of title to take advantage of tax provisions for depreciation). The average amount financed was reported to be 3.5 lakh per customer at an effective annual interest rate of 28 per cent per annum. The total business is estimated at between Rs 5 and Rs 10 crore annually and is growing rapidly. Equipment leasing companies give great importance to the reputation of the borrower and lend only to known parties. Since leasing companies operating in Surat raise much of their capital from formal capital markets including commercial banks, this is a case of funds being channeled from the formal to the informal credit market. We now turn to an examination of the credit experience of sampled units.

6.3.6 Own funds, formal and informal borrowing: Funds available to powerloom units and master weavers in the sample have been divided into own capital and borrowing from formal and informal markets. For both types of units informal credit has equal importance. For powerloom units, 49.09 per cent of funds is from informal sources while 46.27 per cent of master weaver's funds is from this source. Within informal credit, trade credit is more important to powerloom units (See Table 6.4). Own capitals also plays a significant role for both types of units contributing 40.90 and 44.52 per cent respectively. Formal credit has the least importance to both type of units. Table 6.4 shows the pat-

tern of borrowings for both types of units. Informal credit contributes 82 per cent of total borrowings in the case of powerloom units, while banks provide more credit to master weavers as compared to powerloom units (See Table 6.5). Turning to the number of units financed, all units surveyed receive trade credit while about two thirds receive bank credit. Bank credit is mainly for working capital. One master weaver had received a term loan.

6.3.7 Formal sector finance was entirely from banks for sampled units whereas informal credit from other sources was either from friends and relatives or deposits from partners and directors. For powerloom units, 83.82 per cent of funds comes from friends and relatives and only 16.18 per cent from directors and partners. For master weavers, 56.18 per cent comes from friends and relatives the balance coming from directors and partners. The near absence of borrowing from money lenders and shroffs in Surat is not replicated in other centres (Shanbhag, 1987 and Government of India, Ministry of Textiles, 1988).

6.3.8 Purpose, duration and cost of loans: Both formal and informal sector credit was mainly for working capital finance. Six units had, however, received long term loans from the formal sector (forming 40 per cent of formal credit to the total sample), while only one unit received a long term loan from the informal market. The term loan formed less than 1 per cent of total informal credit in the sample. The average interest rate for formal credit is 14.56 per cent whereas the average interest rate for informal credit is 12.03 per cent (Tables 6.6 and 6.7). Powerloom units had marginally higher interest cost compared to master weavers (Table 6.8). While powerlooms and master weavers getting credit from formal as well as informal market had lower interest cost compared to units receiving only credit from the informal market (See Table 6.8), given that the average informal interest

rate is lower than that of bank credit, the reversal of the finding in terms of interest cost is of interest. Since banks have stringent scrutiny procedures and collateral requirements the difference in interest cost tends to suggest differential credit worthiness of borrowers having access to bank credit. This could not be directly confirmed though evidence presented below, on credit classified by firm size, supports this hypothesis.

6.3.9 Table 6.8 reveals that powerloom units received trade credit equal on average to 53 days of sales as compared to master weavers which received credit equal on average to 51 days of sales. Even though there is not very much difference between these figures, the position is better for powerloom units since they provide less credit to their customers (Table 6.8). Powerloom units getting only informal credit received trade credit for longer than average which is, of course, a reflection of their disadvantaged status since the interest rate for trade credit exceeds their return on capital even though it is the low relative to market rates of interest.

6.3.10 Reasons for approaching informal sector and respondents opinion of bank credit facilities: 70 per cent of informal borrowers cited the ready availability of finance and lack of borrowing formalities as the main reasons for preferring informal credit. 12 per cent mentioned inadequacy of bank finance. Both cheapness and ready availability was mentioned by a further 12 per cent of respondents and 6 per cent cited cheapness, inadequacy of bank credit, ready availability of finance and fewer formalities as their reasons for taking recourse to informal credit. **Thus for 18 per cent of respondents, informal credit was not only easily available but also cheap.**

6.3.11 65 per cent of units sampled had credit facilities with a bank. Also, 75 per cent of formal borrowers were generally

satisfied with their banks. Of the dissatisfied units, one third cited delay in service and inadequacy of credit as the main reason for dissatisfaction. A further third were not satisfied because banks did not provide finance for further expansion. The remaining 33 per cent did not mention any reason for their dissatisfaction though one powerloom unit felt that the bank was "not fair to it". Two units felt that more satisfactory service could be obtained from other agencies such as private moneylenders, shroffs and cooperative banks. Two units received special services from their banks related to sales, marketing and purchase. Even this fraction is high compared to other sectors sampled by us. Finally, seven units felt that banks delay processing loan applications inordinately.

6.4 Uses of funds

6.4.1 Uses of funds have been classified into four major components: fixed assets, inventories, loans and advances and investments. For powerloom units most funds are tied up in fixed assets (43.24 per cent). They hold less inventories in relative terms compared to master weavers (Table 6.9).

6.4.2 Turning to the classification by borrowing status, both powerlooms and master weavers who were fully dependent on informal credit, devoted more resources to inventories compared to those units receiving credit from both formal and informal markets, but their investment in fixed assets was less. This ties in well with the relatively short duration of informal loans observed.

6.4.3 The average master weaver held inventories equal to thrice the number of days of sales as compared to powerloom units.

6.4.4 Credit sales by both master weavers and powerloom units tie up about 25 per cent of total capital (Table 6.9), though the

average period tends to be variable. The discount on cash sales averages 13.5 per cent and varies between 12 per cent and 14.5 per cent.

6.5 Estimate of total volume of informal credit to powerloom activity

6.5.1 The data in Table 6.1 can be used along with sample information to make a rough estimate of total informal credit to the powerloom sector. Informal and formal credit equalled 14.69 per cent and 4.03 per cent of the total value of production of the sampled firms. Estimates are calculated by taking the same proportion of total production for the whole of India. Informal credit to the powerloom sector is thus estimated at Rs 914.61 crore and formal credit at Rs 250.75 crore in 1986-87.

6.5.2 These estimates cannot be viewed as more than order or magnitude estimates. Furthermore, this credit is to both weaving units proper and master weavers. According to the Ministry of Textiles Task Force, credit requirements for the powerloom sector are between Rs 500 crore and Rs 700 crore given the current distribution of independent units and units under the master weaver system.[2] If this is turned around and taken to be the current level of credit from all sources to the sector, then our estimate is seen to exceed the task force estimate by about Rs 450 crore keeping in mind that we also include master weavers. Finally, it should be recalled that the size of the clean bills market in Surat alone is thought to be between Rs 150 crore and Rs 600 crore, though processing units and wholesalers receive the bulk of this credit. Consequently this estimate is to be treated with

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2. The actual figure given by the task force is Rs. 500 crore. But the basic figures given by them can be used - following their methodology - to get the Rs 700 crore figure.

great caution allowing for up to a 100 per cent error margin - especially In view of the sampling bias.

6.6 Efficiency and allocative impact of informal finance

6.6.1 Capital output and labour output ratios are calculated to assess the impact of informal finance on efficiency. For both powerlooms and master weavers those receiving credit from both formal and informal sectors are found to be more labour intensive than firms relying only on informal credit. Also, master weavers receiving both formal and informal credit, have a higher return on sales than these relying only on informal credit. Since, on average, units getting both formal and informal credit were larger (18 looms) than units receiving only informal credit (12 looms), economies of scale may provide the explanation for these findings with respect to both the capital output ratio and the profitability statistics. The difference in the labour output ratio would then reflect the omission of family labour from the figures used to calculate labour output ratios. Of course, the ratios though not the profitability figures are also consistent with deliberate choice of capital intensive techniques given lower informal interest rates. In either event, informal credit would appear to be associated with less productive firms or firms having relatively inappropriate production techniques in the sample of firms studied. Against this however, the fact that informal credit is available to finance second hand machines must be kept in view. No firm conclusion can therefore be drawn.

6.7 Equity impact of informal finance

6.7.1 According to the opinions of most persons with whom we have had discussions, the following conclusion appears warranted subject to the caveat that the evidence for the conclusion is not survey based: if at all smaller powerloom units receive credit, it

is from the informal sector. This and the reported importance of collateral for loans from commercial and cooperative banks tend to support the view that informal credit has a positive impact on the resource position of relatively disadvantaged units. The fact that second-hand machines are financed by informal credit is also evidence that favours this view.

6.8 Conclusions

6.8.1 This study of informal credit for powerlooms in Surat, while fairly rich in evidence from discussion with knowledgeable persons, uses a biased sample of respondents for statistical analysis and verification. Nevertheless, it would appear that the role played by informal credit to the powerloom sector in its continued growth is crucial given the relative paucity of formal credit. It may tentatively be concluded that informal credit reduces the gap in credit availability to disadvantaged units. Recommendations for reform of formal credit norms are limited to just two, given that the Task Force of the Ministry of Textiles has already made a detailed examination of the situation:

1. **Credit disbursal:** Targets in terms of units with few (say, less than 8) looms should be set.

2. **Used machines:** The formal sector should consider ways of financing the purchase second hand machines in addition to financing their modernisation.

TABLE 6.1

Aggregate Powerloom Activity in India and Estimated Credit to the Powerloom Sector

		1984-85	1985-86	1986-87
1.	Aggregate powerloom production (million metres)	5445	5886	6222
2.	Estimated aggregate value of powerloom production in India (Rs crore)	5260	5886	6179
3.	Total formal credit based on responses to Task Force Questionnaires (Rs crore)	11.22	13.56	9.12
4.	Estimate of working capital requirements based on value (Rs crore)	-	-	717
5.	Estimate of working capital requirements based on total number of looms (Rs crore)	-	-	500
6.	Estimate of formal credit: This study (Rs crore)	219.43	257.21	250.75
7.	Estimate of informal credit: This study (Rs crore)	799.87	864.65	914.61

Notes: 1. Rows (1), (2), (3) and (5) from Report of the Task Force on Credit Requirements for Powerlooms, 1988.
2. Row (4) computed from figures given by the Task Force.
3. Rows (6) and (7) based on ratios of formal credit/informal credit to value of production in the sample (ratios are 0.0403 and 0.1469 respectively).

TABLE 6.2

Production of Cloth and Salient Features of Powerloom Weaving Centre in India

(In Million Metres)

		1984-85	1985-86	1986-87
I[1]				
i.	Mill sector	3432	3376	3317
ii.	Powerloom sector	5445	5886	6222
iii.	Handloom sector	3137	3236	3449

State	Name of centre	Estimated loomage	Fibres	Varieties
II[2]				
Gujarat	Ahmedabad	16,000	Cotton, PC	Poplin, long cloth shirtings, sarees, shirtings
	Surat	1,75,000	Nylon, Polyester viscose	Sarees, shirtings, dress fabrics, suitings
Maharashtra	Bhiwandi	2,50,000	Cotton, PC, PV, polyester	Mulls, cambrics, suiting, shirtings
	Ichalkaranji	45,000	Cotton	Dhoties, cambrics, poplins
	Malgaon	40,000	Cotton	Dhoties, voiles, poplins, cambrics
Tamil Nadu	Pallipalayam	28,000	Cotton	Shirtings, check shirtings
Uttar Pradesh	Meerut	20,000	Cotton, PC	Tapestry, shirtings

Source: 1. Report of the Task Force on Credit Requirements of Powerlooms.

2. "Perspectives for Growth of Powerloom, Power Processings and the Decentralised Sector" - Dr. V. Shanbhag, C.L. Centre for Management, ATIRA.

TABLE 6.3

Profitability of Firms

(All figures in percentage)

	PAT/ capital	PAT/ income	EPAT/ capital	EPAT/ income
Powerloom units	28.01	2.55	5.60	0.53
	(23.41)	(1.95)	(4.68)	(0.43)
Master weavers	27.15	5.54	5.43	1.13
	(17.12)	(3.53)	(3.42)	(0.61)
Borrowing status wise				
Powerloom units				
Informal only	29.15	2.64	5.83	0.55
	(14.77)	(1.41)	(2.95)	(0.32)
Both informal & formal	27.43	2.50	5.49	0.52
	(26.68)	(1.95)	(5.34)	(0.48)
Master weavers				
Informal only	28.52	4.54	5.70	0.96
	(4.09)	(1.28)	(0.82)	(0.18)
Both informal & formal	26.24	6.21	5.25	1.24
	(21.80)	(4.31)	(4.36)	(0.86)

Notes: Figures in parentheses are standard deviations.
PAT : Profit after taxes.
EPAT : Estimated profit after taxes after adjusting for the imputed value of family labour by considering only 20% of gross profits as true profits.

TABLE 6.4

Pattern of Borrowing

(All figures in percentage of total borrowings)

	Formal credit	Informal credit		
		Trade credit	Other	Total
Powerloom units	18.04 (24.61)	49.97 (23.15)	31.99 (19.96)	81.96
Master weavers	23.84 (25.23)	28.02 (27.82)	48.15 (28.47)	76.17
Powerloom units				
Informal only	-	53.79 (24.76)	46.21 (24.76)	100.0
Both formal & informal	27.06 (25.78)	48.06 (22.060	24.88 (11.81)	72.94
Master weavers				
Informal only	-	36.08 (35.61)	63.92 (35.69)	100.0
Both formal & informal	39.73 (20.72)	22.64 (19.20)	37.63 (15.02)	60.27

Note: Figures in parentheses are standard deviations.

TABLE 6.5

Sources of Funds

(All figures In percentage)

	Own capital & equity	Formal credit	Informal credit		
			Trade credit	Other	Total
Powerloom units	40.90	9.95	30.91	18.18	49.09
	(28.19)	(13.62)	(17.81)	(12.23)	
Master weavers	44.52	10.07	17.08	28.19	46.27
	(34.72)	(9.95)	(20.59)	(24.10)	
Powerloom units					
Informal only	42.00	-	32.12	25.87	57.99
	(16.45)		(16.82)	(15.84)	
Both informal & formal	40.36	14.92	30.30	14.34	44.64
	(20.21)	(4.29)	(18.25)	(7.38)	
Master weaver					
Informal only	40.21	-	17.80	42.00	59.80
	(18.55)		(22.47)	(30.63)	
Both informal & formal	47.41	16.79	16.61	18.98	35.59
	(31.91)	(7.22)	(19.21)	(11.44)	

Note: Figures in parentheses are standard deviation.

TABLE 6.6

Details of Bank Credit

	Cash credit		Term loan		All loans			
	A	D	A	D	A	B	C	D
I. Number of loan accounts								
1. All banks	11	1.58	11	1.56	22	11	64.70	1.57
2. State Bank of India	4	2.12	3	1.84	7	3	17.65	3.96
3. Bank of India	2	0.70	Nil	-	2	1	5.88	0.70
4. Bank of Baroda	1	1.50	Nil	-	1	1	5.88	1.50
5. Cooperative bank	Nil	Nil	8	1.46	8	4	23.53	1.46
6. Not available/others	4	1.50	Nil	-	4	2	11.76	1.50
II. Average Rate of interest	14.68		14.51		14.56			

Total Percen-	% satis-	% feel-		
	no. of account holders	tage getting need financed	fied with banks	ing bank is un- fair to them
Number of loan accounts				
1. All banks	11	63.64	72.73	9.09
2. State Bank of India	3	66.67	66.67	0.0
3. Bank of India	1	100.0	0.0	10.0
4. Bank of Baroda	1	0.0	0.00	100.0
5. Cooperative bank	4	50.0	100.0	0.0
6. Not available/others	2	100.0	100.0	0.0

Notes: A: Number of accounts.
B: Number of firms.
C: B as a percentage of total sample.
D: Average (Rs. lakh).

TABLE 6.7

Salient Features of Informal Credit Received by the Powerloom Industry

		Friends and relatives	Partners directors & shareholders	Multanis and shroffs	All informal sources
1.	Number of firms	12	6	1	17
2.	Average interest rate (%)	12.00	Nil	16.00	12.03
3.	% short term loans	100.0	100.0	-	95
4.	% long term loans	-	-	100.0	5
5.	Average loan amount (Rs lakh)	1.17	1.08	0.15	1.09
6.	% of loans for working capital finance	92	100.0	100.0	95

TABLE 6.8

Interest Cost of Borrowing and Duration of Trade Credit Received & Given

	Interest cost (%)	Trade credit received (in days)	Trade credit given (in days)
A: By Group			
Powerloom units	14.79	53.58	40.03
	(15.12)	(42.110	(28.71)
Master weavers	13.52	51.0	56.00
	(8.11)	(0.00)	(46.47)
B: By Borrowing Status			
Powerloom units			
Informal borrowers	18.78	73.50	43.50
	(18.03)	(57.10)	(32.14)
Formal & informal borrowers	12.79	43.63	38.25
	(12.97)	(27.05)	(26.57)
Master Weavers			
Informal borrowers	17.64	51.00	33.05
	(10.75)	(0.00)	(18.0)
Formal & informal borrowers	10.77	51.00	72.33
	(3.71)	(0.00)	(52.58)

Note: Figures in parentheses are standard deviations.

TABLE 6.9

Uses of Funds

(Percentage of total assets)

	Fixed assets	Inventories	Cash	Loans & advances	Investment	Inventory holding in days
A: By Group						
Powerloom units	43.34	23.90	4.82	23.98	3.76	23.19
	(24.22)	(15.36)	(6.09)	(17.46)	(6.33)	(13.36)
Master weavers	25.00	38.88	6.09	27.36	1.96	67.46
	(25.56)	(32.32)	(4.95)	(16.36)	(1.45)	(73.45)
B: By Borrowing Status						
Powerloom units						
Informal only	37.97	27.28	8.16	24.40	2.19	27.00
	(36.83)	(15.65)	(8.96)	(23.21)	(4.22)	(15.54)
Both informal & formal	46.02	22.21	3.16	23.78	4.54	21.28
	(13.42)	(14.94)	(2.67)	(13.71)	(7.03)	(11.67)
Master weavers						
Informal only	1.40	68.49	10.04	18.74	0.80	133.53
	(1.61)	(11.16)	(4.05)	(14.55)	(0.92)	(68.17)
Both informal & formal	40.73	19.13	3.45	33.55	2.73	23.42
	(21.65)	(26.14)	(3.53)	(14.73)	(1.21)	(32.32)

Note: Figures in parentheses are standard deviations.

TABLE 6.10

Efficiency Indicators for Powerloom Units and Master Weavers

	Capital output ratio	Labour output ratio	Return on sales (%)
A: By group			
Powerloom units	0.106	0.41	2.55
Master weavers	0.087	0.35	5.54
B: By borrowing status			
Powerloom units			
Informal only	0.130	0.36	2.64
Formal and informal	0.096	0.43	2.50
Master weavers			
Informal only	0.151	0.24	4.54
Formal and informal	0.074	0.37	6.21

CHAPTER 7

INFORMAL FINANCE FOR HOUSE CONSTRUCTION

7.1 Introduction

7.1.1 The house construction sector is an important part of all economies and investment in housing is usually a major item in the total investment portfolio of a country. While this is certainly true of India, housing investment has an added urgency in India in view of the rising population and the rapid urbanisation taking place. While the total housing stock in the country stood at about 114 million dwellings in 1981 an estimated 230 million units are projected to be the requirement by the turn of the century. The investment required for this purpose in the 15 years 1985-2000 is estimated at Rs 1317 billion by the Planning Commission. Furthermore, in the period 1980-1985, the private sector contributed 89.4 per cent of total housing investment. The role played by the informal sector in contributing to this finance is consequently of great interest.

7.1.2 Non government housing in India is constructed in essentially three ways. The largest number of dwelling units are privately constructed. Other than this, houses are constructed by housing cooperatives and private developers. The distinction between the latter two routes is, however, not always clear cut, as private developers sometimes play a leading role in setting up cooperatives in order to gain access to concessional finance from banks and other apex institutions engaged in providing finance to housing cooperatives (Wadhwa, 1987).

7.1.3 In view of this, it is of interest to examine the role of

informal credit in housing finance of individuals and also of private developers for schemes which do not involve the setting up of cooperatives. While excellent information on the magnitude of informal housing finance of individuals is available from Lall (1984), information on the finances of private sector "mortgage financiers" and schemes offered by them was not readily available. Furthermore, quantitative information on developer's finances and the pattern of finance of housing projects by them was also not readily available. Accordingly, a survey of 25 housing developers and "mortgage financiers" was planned in Delhi with the help of the State Bank of India in 1988. Unfortunately no cooperation as to financial information was forthcoming from any of the firms surveyed except for three firms (two developers and one financier) who made their annual reports available. However, some qualitative information as to loan schemes and the finance of housing developments was gleaned from developers, government officials and officials of housing finance institutions.

7.1.4 As is well known in India, the scale of urban construction activity, the rapid appreciation in urban land prices and the vital part played by illegal money in many real estate transactions has attracted a large number of unscrupulous entrepreneurs to housing development and finance.[1] This must certainly underlie the lack of cooperation by some developers and financiers approached, though the limited cooperation extended by even the largest developers was unexpected.

7.1.5 In the next section, a summary of available information

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1. See, for evidence of the black economy and real estate S. Acharya and Associates (1985). For developers see Wadhwa (1987). as well as articles in newspapers. For example, see the article on the Skipper Group in the Hindustan Times, March 22, 1987.

on housing finance for individuals, mainly following Lall (1984), is made. In section 3, information obtained on developers' finances is reported. Section 4 offers some tentative conclusions.

7.2 Housing finance for individuals

7.2.1 **Lall (1984)** Surveyed a total of 720 home owners drawn on a stratified random basis from 5 urban centres in various parts of India. 83 per cent of these respondents were drawn from owners of authorised, "formal sector", dwellings and 17 per cent from owners of dwellings on unauthorised land and squatter settlements.

7.2.2 **The pattern of finance** for these home owners is given in Tables 7.1 and 7.2. As can be seen, own funds are the dominant source of finance for all categories of home owners. Informal finance, while least important overall, has relatively greater importance for owners of unauthorised and slum housing. Also, informal finance is more important than formal for two of the three lowest income groups (Table 7.2). Within informal finance, friends and relatives are the chief source of funds. About half of the sample reported renting out their house in order to finance loan repayments, while the incidence of houses constructed purely for the purpose of letting increased with income. This would suggest that poorer house owners, being unable to let out their houses after construction, were more credit constrained than richer house owners. This hypothesis is bolstered by the fact that a greater percentage of own funds to finance home acquisition was from the disposal of assets for poorer households than for richer households. A final point is that finance from both formal and informal sectors is available with greater ease for house construction rather than initial acquisition of land.

7.2.3 While about half the sample faced various difficulties in obtaining formal sector loans (Table 7.3), lack of information and lengthy procedures being the most important barriers, Lall reports that the informal sector was approached due to the usual informality, speed and low collateral requirements of informal lenders despite their high interest cost.

7.2.4 **The cost of funds** of house loans is given in Table 7.4. As can be seen, friends and relatives provided the cheapest loans on average followed by formal lenders. Indigenous bankers had effective interest rates of upto 55 per cent per annum and also the highest average interest rate. Regarding collateral, Lall reports that the value of collateral was sometimes twice the value of the loan given even for formal lenders.

7.2.5 **Details on some housing loan schemes from informal mortgage financiers** in Delhi came to light as part of the survey conducted in Delhi. While no formal security was taken, it was reported that several financiers take blank signed sheets of paper from borrowers at the time of disbursing loans while others execute formal mortgage agreements. Typical schemes are as follows:

Financier A: Loans of upto Rs 2.5 lakh are disbursed when receipts of expenditures are produced. Persons with a (confirmed) plot of land and an architechtural plan approved by appropriate authorities are eligible. Loans are repayable over upto 15 years at 14 per cent to 15 per cent (flat) per annum (i.e. about 28 per cent to 30 per cent compound).

Financier B: Similar to A except that the firm must be made the beneficiary of an endowment type life insurance policy for the amount of the loan in addition to interest.

Financier C: Finances upto Rs 10 lakh at 24 per cent per annum (flat) against a mortgage.

Developer/financier D: Has several development schemes all over India. Payment for dwelling units constructed by them has to be made in accordance with a pre-specified schedule linked to progress in the construction of the units. Upto 50 per cent of the cost is met by a 5 to 20 year loan at an interest rate of 12 per cent (flat) per annum. Title to the dwelling unit is given to the buyer only when the loan is fully repaid. All taxes at the time of transfer of the title are borne by the buyer. A 2 per cent penalty per month is levied on delayed payments and the agreement lapses if any payment (whether for the buyer's share of construction costs or for a loan repayment instalment) is not made for 3 months. In the event of the agreement lapsing, money contributed by the buyer is refundable without interest after deduction of the developer's expenses.

Developer E: Payment for a housing plot, inclusive of all development changes, can be made in equal monthly instalments over a period of 3 years. Only a 5 per cent discount is given if the entire money is paid in one initial instalment.

7.2.6 Formalities in all cases are easily completed within 24 hours. Most of the schemes outlined above show that informal finance is available only at a high cost to the borrower with borrowers facing high risk in case of unforeseen problems in keeping up with payment schedules.

7.3 Finances of developers and financing of housing development

7.3.1 Private developers in India provide housing or developed plots mainly for middle and upper income groups (Wadhwa, 1987). Few housing developments, if any, are for low income groups. It

is, in fact, doubtful if authorised dwellings which are privately constructed are affordable to the urban poor given current land prices and construction costs. The number of developers is fairly large. For example, Wadhwa (1987) reports between 200 to 300 developers in the city of Ahmedabad in 1987, with the top four developers accounting for about 10 per cent of total housing construction (about 150 to 200 housing units by each of these four developers) in Ahmedabad. The situation in Delhi is broadly similar. Finance for development projects is required for extended periods due first, to the long drawn out procedures involved in getting development plans sanctioned by various government bodies, secondly due to land acquisition costs and thirdly due to the actual cost of construction and site development. The first stage, that of getting government clearances, may take upto 5 years and "entails payment of official and unofficial dues at every stage" (Wadhwa, 1987, p. 53). Thus the major cost to the developer is that of finance (Wadhwa, 1987).

7.3.2 One way in which some developers ensure the availability of funds is by setting up dummy cooperatives as mentioned earlier. However, this activity has become increasingly difficult and is, consequently, on the decline. An alternative method of financing development projects is to obtain advance payments in instalments from buyers. This practice is widely followed. With either method of finance, it is the initial stages of a development project (upto land acquisition) for which developers require finance from sources other than customers. Increasingly, however, developers are attempting to finance developments almost to completion of construction to take advantage of appreciation in land and property values. The following description of financing of housing projects by developers is based on Lall (1984).

Initial phase (land acquisition, government approvals and provision of basic infrastructure): 25 per cent - 35 per cent of

total funds: Own funds and informal finance.

Second phase (Sale of 40 per cent to 60 per cent of plots): Buyers of plots and houses, mortgage finance against remaining plots from the informal sector.

Third phase: (Construction of houses): Buyers and suppliers credit.

7.3.3 The fact that only a portion of plots are sold during the second phase is due to the desire of the builder to take advantage of appreciation in real estate values. As can be seen from this description, informal credit is involved at every stage of the housing project but most importantly in the first stage. Informal finance for the first stage is reportedly provided on a profit sharing basis by most private financiers. Also, owners of land sometimes provide land for a share in the housing project. Thirdly, large developers reportedly plan overlapping projects so that funds received from buyers in one project can be diverted to other projects (Lall, 1986). Finally, short term bridge finance is obtained by large developers, on occasion, from the intercorporate funds market.

7.3.4 Despite the reported reliance of developers on informal finance, whether from suppliers/buyers credit or from financiers, not all developers take recourse to informal finance. The annual reports of the three large developers who provided these reports to us show the following sources of funds:

Own funds and share capital	:	70.09%, 32.05, and 0.46% respectively.
Bank borrowings	:	19.47%, 14.90% and 0.45% respectively.
Advance from buyers	:	Nil, 34.38% and 63.24%

		respectively.
Other borrowed funds and liabilities	:	10.44%, 18.67% and 35.85% respectively.

7.3.5 Of "other borrowed funds and liabilities" some is accounted for by fixed deposits from the public, raised through the formal capital market and some of the balance is trade credit. In the first two cases, there is little evidence of explicit informal loans under this head. However, the relative unimportance of bank finance - the only formal financial institution appearing in the three financial statements - and the importance of capital markets (for share capital and fixed deposits) is revealed as is the importance of advance payments from buyers.

7.4 Conclusions

7.4.1 Informal credit is clearly of some importance in promoting housing investment especially for non-formal housing. It is also of some importance to developers given their need for finance especially at the initial stage of project finance. However, the limited information in this note suggests that for prospective home owners, available informal credit (aside from friends and relatives) may be expensive and risky even if lenders do not indulge in fraudulent practices. The allocative and equity impact of informal finance is thus difficult to discern without further data.

7.4.2 There has recently been a stepping up of formal involvement in housing finance for home owners due to its high priority in national development programs. Measures include more liberal schemes by specialised housing finance institutions, the formation of a national housing bank and consequent involvement of commercial banks in housing finance and stepped up direct tax concessions for housing investment. However, none of these measures af-

fect the absence of formal support for land acquisition.

7.4.3 Secondly, Lall (1984) and Wadhwa (1987) have recommended additional formal financial support for developers in the private sector. There are some indications of increased commercial bank involvement and the possible involvement of other financial institutions in such activity, in the near future.

7.4.4 As against this, the continued growth in the value of urban real estate and of urban areas themselves continues to attract private capital including, it must be conceded, unaccounted funds. On balance, given the limited information available, it is hard to arrive at a clear prognosis of the future role of informal finance in the housing investment. It is likely, however, that informal finance will continue to play a role at the initial stages up to land acquisition both for individuals - especially those from low income groups - and developers. Similarly, it is difficult to envision advances from buyers being entirely supplanted by formal finance.

TABLE 7.1

Housing Finance of Home Owners (1983)

(Percentages)

	Sources of finance	By type of housing			
		Formal sectors housing	Unautho-rised perma-nent dwellings	Slum & squatter settle-ments	Total
1.	**Formal Finance**	20.29	10.71	2.13	19.98
	a. Specialised housing finance institutions	2.47	3.57	Nil	2.50
	b. Banks	3.07	0.84	Nil	2.99
2.	**Own Finance**	65.82	62.75	78.72	65.74
3.	**Informal Finance**	13.89	26.54	19.15	14.28
	a. Friends and relatives	13.15	17.30	8.51	9.79
	b. Indigenous bankers	0.13	4.13	2.13	0.25

Source: Compiled from Lall (1984)

TABLE 7.2

Housing Finance by Home Owners (1983)

(Percentages)

	Source of finance	By annual income group			
		0-5000	5,001-50,000	50,000-1,00,000	Above 1,00,000
1.	**Formal Finance**	7.93	22.32	8.67	15.12
	a. Specialised housing finance institutions	1.15	2.80	1.11	Nil
	b. Banks	1.30	2.98	2.60	15.12
2.	**Own Finance**	83.18	62.42	80.93	81.29
3.	**Informal Finance**	8.89	15.27	10.40	3.59
	a. Friends & relatives	8.70	14.26	10.14	3.59
	b. Indigenous bankers	0.19	0.26	0.26	Nil

Source: Compiled from Lall (1984)

TABLE 7.3

Problems with Formal Finance

	Problem	Percentage of respondents citing this as the major problem in obtaining formal finance
1.	Inadequate information	28.84
2.	Inadequate security/lack of proper guarantors	13.07
3.	Complicated and lengthy procedures	35.26
4.	High `margin´	3.04
5.	High interest cost	15.81
6.	Unsuitable repayment schedules	5.17
7.	Other reasons	1.82
8.	Percentage of total sample facing problems	45.69

Source: Adapted from Lall (1984).

TABLE 7.4

Distribution of Annual Interest Rates

(Per cent per annum)

Source	Range					Average interest rate (%)
	0-5	5.1-9	9.1-14	14.1-20	Above 20	
1. Formal sector	8.75	53.75	27.08	10.42	0.00	8.87
2. Informal sector	26.67	20.00	21.67	11.67	20.00	11.34
(a) Friends & relatives	60.00	12.00	12.00	8.00	8.00	6.82
(b) Indigenous bankers	6.67	6.67	6.67	20.00	60.00	19.20

Notes: 1. Figures except for the last column, are percentages of borrowers from the indicated source.
2. The average is estimated as the weighted average of mid points of intervals assuming a mid point of 24% for the highest interval.
3. Lall points out that the method of computation of interest rates by indigenous bankers may result in a substantially higher effective interest rate.

Source: Compiled from Lall (1984).

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