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**SMALL SCALE ENTERPRISE CREDIT SCHEMES:  
Administrative Costs and the Role  
of Inventory Norms**

by

**Carl Liedholm**

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SMALL SCALE ENTERPRISE CREDIT SCHEMES: ADMINISTRATIVE  
COSTS AND THE ROLE OF INVENTORY NORMS

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## **Small Scale Enterprise Credit Schemes: Administrative Costs and the Role of Inventory Norms**

Lenders' administrative costs are a central issue in the design of credit projects for small scale enterprises.<sup>1</sup> Are these costs unduly high, and if so, how might they be reduced? Information costs frequently loom as a large component of these administrative expenses. Since working capital appears to be the most important financial need of small enterprises and inventory forms its largest component, improved information relating to inventory requirements of small enterprises could contribute to reducing the cost of lending to small scale enterprises.

In this paper, the actual administrative costs of existing small enterprise lending schemes are examined first, followed by an examination of the characteristics of low cost lending schemes. A final section develops, using primary data collected in various Michigan State University (MSU) studies, small enterprise inventory "norms" or guidelines that could assist those making loans to small scale enterprises in developing countries.

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<sup>1</sup>Many factors, in addition to administrative costs, figure in the success of small enterprise lending schemes. The most important among these would include the output response of those producers who receive the finance, their willingness to honor their debts, the cost of funds to lending institutions, and the lender's costs for risk and administration. This paper focuses only on the last item. While low administrative costs do not by themselves guarantee that a given lending project is a success, unduly high administrative costs are nearly a sufficient condition for failure.

A. Administrative Cost of Delivering Credit to Small Enterprises

Administrative costs are one of the three major components of a lending institution's outlays, the other two being their costs of funds and expenses for default risk.<sup>2</sup> Administrative costs include all expenditures related to evaluating, delivering, and recovering of loans; such expenses include wages and salaries, travel, legal services and office overhead expenses related to the lending operations.

What is the overall magnitude of the administrative costs of existing small enterprise lending schemes in developing countries? One of the first empirical studies, Saito and Villanueva's examination of financial institutions in the Philippines (1981), reported that the administrative costs of lending to "small scale industry" in the Philippines ranged from 3 to 4 percent of the value of the loans outstanding.<sup>3</sup> The size of the loans made by the institutions covered in their study, however, ranges from \$5,000 to \$1 million, and thus they were not designed to reach the lower end of the small enterprise spectrum.

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<sup>2</sup>Expenses for default risk will not be dealt with directly in this paper; for a discussion, see Kilby, Liedholm, Meyer (1984).

<sup>3</sup>Bhatt and Roe (1979) report that the administrative costs of specialized small enterprise banks in India was 2.75 percent of outstanding loans. Small scale, however, was not defined.

Are the administrative costs of lending to the smallest enterprises, which will be called "very small"<sup>4</sup> in this paper, substantially higher than those found in the Philippines? It is generally argued that administrative costs, particularly when measured as a percent of the loan value, are inversely related to the size of the loan. Many administrative activities such as the recording and disbursing of loans tend to remain the same regardless of the loan size and thus represent a relatively larger percentage component in smaller loans. Moreover, owing to the heterogeneity of the smaller enterprises and their general failure to keep records, it is frequently contended that the lender often must spend additional time and money gathering information to determine the viability of the project. Saito and Villanueva (1981) report that the administrative costs, in percentage terms, of "small" enterprise lending were six times those for "larger" enterprises in the Philippines. Does a similar result hold when one examines the loans to the very small enterprises?

There is evidence to indicate that the administrative costs of making small enterprise loans amounting to less than \$5,000 are frequently higher than those for larger loans. In a study of the Small Enterprise Development Corporation (SEDCO) in Jamaica, for example, Wilson estimated that the loan evaluation cost of a \$22,000 loan amounted to \$540, while

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<sup>4</sup>Although there is no common agreement about what constitutes "very small" and "small" enterprises, the working definitions used in this paper are as follows: "small" includes all firms with less than fifty workers, while "very small" includes only those with less than ten workers. In most countries, over 90 percent of the enterprises fall in the "very small" category, with most engaging only one or two workers (Chuta and Liedholm, 1979).



that for a \$280 loan came to an astounding \$843 (Wilson, 1981). In their recent review of 18 micro enterprise assistance programs, Smith and Tippett (1982) found that the lender's average administrative cost per loan was \$518. Since the average loan size was only \$653, the administrative costs amounted to almost 80 percent of the average loan value. The administrative cost per loan value exceeded 100 percent in six cases, ranged from 20 to 99 percent in nine cases, and was below 20 percent in the remaining three instances. These findings, however, must be interpreted with caution. The underlying cost data are, in most cases, extremely weak and frequently include a sizeable component for the technical assistance that many of these lending institutions were also providing; consequently, comparisons of these programs with those pure credit projects where good data exist must be undertaken with care.<sup>5</sup> A recent review of four Private Voluntary Organization (PVO) projects where credit and technical assistance were provided jointly indicated that administrative costs<sup>6</sup> as a percent of the loan outstanding ranged from 19 to over 100 percent (see Table 1 and Kilby and d'Zmura, 1984).

Several recent studies of credit-only projects designed to provide small enterprise loans below \$5000, however, have indicated that lower administrative costs have been achieved. A summary of the salient findings

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<sup>5</sup>Technical assistance costs and administrative costs may be partial substitutes, if technical assistance improves accounting procedures, documentation of assets, or dissemination information to entrepreneurs on what is required for a loan. See Anderson (1982, p. 936).

<sup>6</sup>The administrative costs include the technical assistance costs as well as the costs of the credit component.

Table 1: Administrative Costs of Small Enterprise Credit Schemes

Credit Organization	Country	Type	Administrative Cost per Loan	Average Loan Value	Administrative Cost (% of loan)	Arrears (% of loans outstanding)
A. Credit Only						
Krishi <sup>1</sup>	Bangladesh	Government-owned Commercial Bank	\$5.00	\$126	4.0	10.5
Agrani <sup>1</sup>	Bangladesh	Government-owned Commercial Bank	\$5.27	\$101	5.2	4.3
BKK <sup>2</sup>	Indonesia	Government	\$2.37	\$44.43	5.3	6
Janata <sup>1</sup>	Bangladesh	Government-owned Commercial Bank	\$6.60	\$125	5.3	14.5
Rupali <sup>1</sup>	Bangladesh	Government-owned Commercial Bank	\$7.33	\$119	6.2	6.2
F.D.R./Peru <sup>6</sup>	Peru	Development Bank	\$531	\$5961	9.0	8
Banco de Pacifico <sup>4</sup>	Ecuador	Commercial Bank	\$140	\$1100	13.0	7.0
D.B. Mauritius <sup>4</sup>	Mauritius	Development Bank	\$108	\$830	13.0	NA
Uttara <sup>1</sup>	Bangladesh	Government-owned Commercial Bank (cooperative)	\$31.27	\$122	25.6	12.1
Bank Money Shops <sup>3</sup>	Philippines	Commercial Bank	\$197	\$687	28.0	NA
SEDCO	Jamaica	Development Bank	\$843	\$280	275.0	NA
B. Credit and Technical Assistance						
DDF/Solidarity <sup>6</sup>	Dominican Republic	PVO	\$242	\$1267	19.1	33
IDH <sup>6</sup>	Honduras	PVO	\$561	\$1724	32.5	42
DDF/"Micro"	Dominican Republic	PVO	\$739	\$1680	44.0	42
UNO <sup>7</sup>	Brazil	PVO	\$1700	\$200	85.0	8
PfP/BF <sup>6</sup>	Burkina Faso	PVO	\$1238	\$670	185.0	23

Sources: <sup>1</sup>J. Brown (1983); the credit organizations listed (e.g., Krishi) are government-owned commercial banks; <sup>2</sup>S. Goldmark and Rosengard (1983); BKK is the Badan Kredit Kecamatan (the sub-district credit body) program in Central Java; <sup>3</sup>M. Farbmam (1981); <sup>4</sup>V. Raghaven and T. Timberg (1982); <sup>5</sup>M. Wilson (1981); SEDCO is the Small Enterprise Development Corporation; <sup>6</sup>P. Kilby and J. D'Zumura (1984); F.D.R./Peru is the Rural Development Fund Program of the Industrial Bank of Peru; DDF/Solidarity is the Solidarity Group component of the Dominican Development Foundation. I.D.H. is the Institute for Honduran Development; PfP/BF is the Partnership for Productivity Project in Burkina Faso; <sup>7</sup>J. Tendler (1983); UNO is Northeast Union of Assistance to Small Business Project.

from these recent studies is presented in Table 1. Although in several cases, the administrative costs exceed 20 percent (i.e., Uttara Bank in Bangladesh at 26%, Bank Money Shops in the Philippines at 28%, and SEDCO in Jamaica at 275%), there are others where the costs are below 10 percent.<sup>7</sup> The government run Badan Kredit Kecamatan (BKK) project in Indonesia, for example, has administrative costs of 5 percent while four of the government owned commercial banks in Bangladesh, all of whom were participating in an experimental credit program under the aegis of the Bangladesh Bank, allegedly have administrative costs ranging from 4 to 6 percent.<sup>8</sup> The average loan size in all these cases is less than \$150 and the administrative cost per loan is under \$10! Indeed, these administrative costs even compare favorably with those recently reported to exist in the "informal" financial markets in India, where administrative costs as a

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<sup>7</sup>The administrative cost of lending by commercial banks in India to very small enterprises receiving loans of less than \$1250 is reported to range from 30 to 40% of loan value (Raghavan and Timberg, 1982, p. 169). The Syndicate Bank in India also is reported to operate with administrative costs below 6 percent (Bhatt and Roe, 1979).

<sup>8</sup>For a description of the BKK project, see Goldmark and Rosengard (1983). The experimental credit program in Bangladesh, in which over 50 percent of the loans were for business activities, is described in Brown (1983). It should also be noted that to provide incentives to participate all the bank small enterprise loans were 100 percent guaranteed against default. At the end of the "experimental" scheme, however, when the guarantees and special incentives were removed, it appears that most of the banks have now ceased their small enterprise lending. The reasons for this cessation of lending need to be further examined.

percent of working funds ranged from 2.5 to 4.5 percent.<sup>9</sup> Clearly, there is now evidence that at least in several instances, the administrative costs associated with lending to very small enterprises can be kept low. Nevertheless, in all too many instances, the administrative costs associated with delivery of credit assistance to small scale enterprises have been quite high.

When administrative costs are high, they force financial institutions to require larger spreads between the rate at which they obtain their funds and their lending rates to small enterprises. How large must that spread be? The World Bank (1974, p. 24), for example, notes that the spread required for lending to large enterprises ranges from 1.5 to 3%, while that required for small enterprises might plausibly range from 4 to 6 percent. Saito and Villanueva (1981) argue that, when default risk expenses of 2 to 4 percent are added to their administrative cost estimate of 3 percent of outstanding loans, a 5 to 7 percent spread is required. Both the World Bank's and Saito and Villanueva's figures apply, as noted previously. However, to the larger end of the small enterprise spectrum. For the "very small" enterprises, Bhatt (1978) suggests that an 8 percent spread might be needed in India and a spread of 10 percent appears warranted in Bangladesh, if the banks were to break even (Brown, 1983).

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<sup>9</sup>Timberg and Aiyar (1984). The bulk of informal finance, however, goes for large scale trading enterprises; consequently these figures do not accurately reflect the administrative cost of lending to small scale industrial enterprises. Indeed, the informal lender with the highest percentage of loans to small scale industry (16%), the Shikarpuri financiers, had the highest administrative costs (4.5%).

The high administrative costs and the large "spread" that they require help explain why "financial institutions" are reluctant to lend to small enterprises. Unless they are provided funds from the government at subsidized rates, are able to substantially reduce their administrative costs, or are permitted to increase their interest rate, these institutions will not find this lending attractive.

B. Scope for Reducing Administrative Costs

What scope exists for reducing the administrative costs of lending to the smallest enterprises? Can anything be learned from examining the characteristics of those lending schemes that possess relatively low administrative costs?

There is some evidence to indicate that many of the high cost credit schemes may be using inappropriate lending procedures. The loan delivery system appropriate for lending to "modern" small, medium, and large scale enterprises is not necessarily suitable for the "very small" enterprises. The Small Enterprise Development Corporation (SEDCO) in Jamaica, for example, used the same complex and time-consuming 18 step application procedure and the same elaborate point scoring system for \$200 loans that it used for \$20,000 loans (Wilson, pp. 14-15). Even credit schemes solely focusing on "very small" enterprises frequently used similar procedures. The loan review in the Dominican Development Foundation Program for the Development of of Microenterprises (DDF) involved eight separate steps requiring up to nine or ten staff in sixteen separate site visits to each firm (Otero and Blayney, 1984). Not surprisingly, the administrative

costs, expressed as a percent of the loan value, for the loans of these institutions were quite high.

The small enterprise credit schemes with the lowest administrative costs use very different lending procedures than those described above. Indeed, their lending policies are more akin to those found in the "informal" or unregulated portions of the credit market, where simplicity and speed, based on local knowledge are central attributes.<sup>10</sup> More specifically, an examination of those "very small" enterprise lending schemes with the lowest delivery costs, reveal that they possess the following common characteristics.<sup>11</sup>

1. **Character based screening** -- most of the high cost lending schemes still rely on project feasibility and/or collateral to enable them to screen their prospective clients. Such screening procedures are time-consuming, require extensive documentation, and tend to exclude the smallest entrepreneurs who have little or no assets. In character-based screening, lending decisions are based on the lender's judgements about the reliability, capacity, and motivation of the individuals who would obtain the loan. In the lower cost schemes, loan recipients are generally

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<sup>10</sup>See Timberg and Aiyar (1984) for a discussion of attributes of the informal credit market in India.

<sup>11</sup>See also the list of "innovative" characteristics of PVO business lending schemes in Tendler (1982). Character-based lending and small initial loan levels are mentioned as well as informal group lending and unspecialized lending staffs. Note that the PVO lending schemes have rather high administrative costs (see Table 1), part of which is attributable to the technical assistance that is also provided.

recommended by local officials, who are knowledgeable about those in their villages; consequently, it is also important that there also be:

**2. Locally-based lending institutions with decentralized decision-making** -- local institutions are able to have the intimate knowledge of their clients that is central to a low cost appraisal of the entrepreneur. They also reduce the transactions costs of the entrepreneurs desiring loans by reducing their traveling as well as waiting time.

**3. Primarily working capital loans to existing enterprises or entrepreneurs** -- the information needed to assess an existing entrepreneur's request for working capital can generally be obtained with more speed and with less cost than can a new entrepreneur's request for fixed capital. In addition to these cost considerations, there is now an accumulating body of evidence indicating that the provision of working capital to existing entrepreneurs is a crucial element in the overall "success" of such lending schemes. Kilby and D'Zmura (1984), after evaluating the costs and benefits associated with several small enterprise lending schemes, conclude that working capital loans to existing entrepreneurs represent a "single missing ingredient" for most very small firms; indeed, those "very small" enterprise lending schemes providing it were found to possess benefit-cost ratios greater than one. Such a result is reinforced by the finding of most small enterprise surveys, which indicate that entrepreneur's "perceive" lack of working capital as the primary constraint facing their firms. It is also not inconsistent with the findings that working capital forms a larger component of total capital for smaller firms than for larger ones (see Kilby, Meyer, and Liedholm, 1984).

4. **Small initial loan levels** -- The initial loans are started at very low levels ranging from \$10 to \$100 for very short periods of time ranging from three to six months. Problem borrowers can be identified quickly and losses can be kept to a minimum. Repeat loans are based almost entirely on the clients' repayment record, a practice that keeps administrative costs low. The desire to obtain future loans provides a key incentive for full and timely repayment and thus less reliance is placed on collateral or administrative follow-up to ensure repayment. The repayment record of these institutions appears to have been quite good; in only one instance did the arrears exceed 10 percent of the loans outstanding. This compares favorably with the 40 percent average arrears rate for several agricultural credit projects reviewed recently by the World Bank (1975) or with other small enterprise lending programs (see Table 1).

5. **High volume of loans per loan officer and/or outlet** -- Given the small size and short duration of the loans, it is important that a reasonably high volume of loans be made to enable the lending institution to be viable. The typical loan officers in the Bangladesh and Indonesia schemes manage 200 or more loans per year while those in the higher cost schemes typically manage fewer than 50 loans per year.

6. **Interest rates high enough to cover operating costs including the cost of funds** -- If the financial institutions are to be economically viable, the interest rate must be high enough to cover all costs. In the case of both the BKK and the Bangladesh commercial banks the "spread"



exceeded 10 percent and the interest rates charged lenders were greater than 20 percent. In both countries the real rates of interest were positive; even with these relatively high interest rates, there appeared to be a large effective demand for credit.

7. **Enforced savings** -- The Bangladesh and Indonesian lending schemes both required that lenders maintain a minimum deposit balance in their institutions. Such deposits served to further link the borrowers into the formal financial market, and provided the lending institution with additional liquidity, collateral, and, most importantly, information on the borrower, which helped keep administrative costs low.

One must be somewhat cautious in making undue generalizations, however, on the basis of these low cost schemes in Asia. Different economic, social, political, and administrative environments can affect the success of any given lending program. Nevertheless, many of the salient characteristics of these schemes may be relevant in other countries, particularly if careful attention is paid to local conditions.

A common thread running through most of the low cost lending schemes is that the lenders already have intimate knowledge of their clients. Consequently, the lenders' information costs are low.

Information costs are an important determinant of the administrative costs of small enterprise lending schemes. Owing to the heterogeneity of these enterprises and their general lack of financial records,<sup>12</sup> the

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<sup>12</sup>See, for example, Chuta and Liedholm (1979).

cost of obtaining borrower information can frequently be unduly high, particularly for those financial institutions that have not previously dealt extensively with the small scale enterprises. Some of the high costs may be of a transitory nature and simply reflect the initial inexperience of many financial institutions in starting to deal with small enterprises. Loan appraisers and loan officers' judgements should improve with an increase in knowledge of specific trades, with better information on individual firms, and with the general experience they gain by lending to small enterprises for several years. Consequently, one might hypothesize the administrative costs will decline over time.

What additional information might be needed by financial institutions to enable them to increase the effectiveness with which they make loans to small enterprises and to speed the decline in administrative costs? Since the majority of small enterprise loans are for working capital (Kilby, Meyer, and Liedholm, 1984), financial institutions might require better information to enable them to distinguish rapidly the true effective demand for working capital from the specious demand that serves only to sustain temporarily a fatally-ill enterprise; this subject has been discussed somewhat in Kilby, Meyer, and Liedholm (1984).

Another information gap centers on what is the "normal" amount of inventory and working capital needed by various types and sizes of small scale enterprises. If simple profiles could be developed, they might provide a useful supplement to the character-based information already generated by those low cost schemes that focus on the smallest firms. Moreover, these profiles should prove to be important and, indeed, may play

an even more central role for those financial institutions providing larger loans to firms at the upper end of the small enterprise size spectrum where, one might argue, enterprise or project based information might be relatively more useful than character-based information. These profiles should improve the ability of lenders not only to screen their potential borrowers more efficiently and more rapidly, but also to determine their lending levels; ultimately, administrative costs should correspondingly decline.

### C. Inventory Norms for Small Scale Enterprises

How should these working capital and inventory norms be constructed? This is a controversial subject. Should the norms reflect the most efficient firm in the industry or just the average one? How narrowly should the industry be defined? To what extent should geographic or size or process variations be incorporated into the construction of these norms? No conclusive answers to these questions have yet been provided; a brief review of some initial attempts at formulating such norms, however, can be presented.

In the United States, Robert Morris Associates, a national association of bank loan and credit officers, has been compiling for over 60 years the Annual Statement Studies (1983). The Statement Studies "contain composite financial data on manufacturing, wholesaling, retailing, service and contracting firms." Balance sheets and income statements are shown for each industry, along with widely used average ratios, which are considered

to be "general guidelines not absolute norms." One of the commonly presented ratios is that of sales to inventory for each industry.

In 1974, specific inventory guidelines were also established in India as a result of the recommendations formulated by the Tandon Committee, a study group created by the Reserve Bank of India (Tandon, 1974). The Committee established both inventory and receivable norms for each of fifteen industries with a view to encourage a better management of working capital. Firms failing to comply with norms were denied credit unless they made attempts to conform to the norms, although exceptions were allowed for such unforeseen occurrences as strikes or transport difficulties. The norms, however, were derived from and applied to large rather than small scale firms.

Unfortunately, there is a paucity of data on the level and composition of working capital of small scale enterprises in most developing countries. A 1979 survey by Kennett (1979) indicated that systematic data were available only for India and then only for firms with 10 or more workers. Kilby, Meyer, and Liedholm's (1984) more recent review provides detailed sales-inventory data for small scale industries in one additional country, Sierra Leone.

New information is now available, however, from small enterprise surveys recently conducted in Honduras and Jamaica. As in Sierra Leone, small scale industries were defined as those firms with fewer than fifty workers, although the average firm surveyed was much smaller, averaging only about two workers. In these countries small manufacturing firms were interviewed twice weekly over a twelve month period about their sales,

output, costs, and profits; data on fixed capital and inventories were obtained in separate surveys conducted during the survey year.<sup>13</sup>

Armed with these data, it is now possible to construct preliminary inventory norms or guidelines for small scale enterprises in developing countries. Owing to the limitations of the underlying data on cash, short-term security and accounts receivable, it is not yet possible to construct similar norms for working capital in general.<sup>14</sup> This is not, however, a severe limitation. Inventories, which comprise raw material stocks, works in progress, and finished goods, form the largest component of working capital in all countries. Moreover, the available evidence indicates that they are relatively of more importance in developing countries (Kennett, 1979). In India, inventory comprises 60% of working capital of the small manufacturing enterprises, but in the US it amounts to only 40% (Kilby, Liedholm, Meyer, 1984).

Inventory "norms" or guidelines constructed for four major small scale enterprise types -- clothing, furniture, metal products, and bread -- in the United States, Jamaica, Honduras, and Sierra Leone are presented in Table 2. Following the practice of the Annual Statement Studies, they have been expressed in terms of the actual yearly sales to inventory ratios of

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<sup>13</sup>The Honduras survey collected information from 494 firms in 1980, while the Jamaican survey obtained information from 196 firms in 1979. In the previously mentioned Sierra Leone study, 250 enterprises were enumerated in 1974.

<sup>14</sup>Working capital consists of cash and short-term securities, accounts receivable and inventories; in accounting terminology, this would be labelled as gross working capital as opposed to net working capital, which is obtained by subtracting total current liabilities from this figure.

Table 2: Sales/Inventory Ratios for Major Small Scale Enterprise Categories in Selected Countries -- all sampled firms

<u>Enterprise type</u>	US <sup>1</sup>	Jamaica	Honduras	Sierra Leone
<u>Clothing:</u>				
Upper quartile	21	33	50	100
Median	8	16	20	33
Lower quartile	3	11	7	25
<u>Furniture</u>				
Upper quartile	13	25	50	33
Median	6	13	20	10
Lower quartile	4	10	10	7
<u>Metal Products</u>				
Upper quartile	48	33	50	100
Median	15	17	33	33
Lower quartile	7	11	14	14
<u>Bread</u>				
Upper quartile	28	100	150	150
Median	17	50	100	100
Lower quartile	9	33	50	50

Sources: US -- R.M.A., Annual Statement Studies, Robert Morris Associates, Philadelphia, 1983. **Jamaica** -- data collected during 1979 survey of 197 rural and urban firms conducted by SEDCO, UWI, and MSU. **Honduras** -- data collected during 1980 survey of 485 rural small scale industries. **Sierra Leone** -- C. Liedholm and E. Chuta, The Economics of Rural and Urban Small Scale Enterprises in Sierra Leone, African Rural Economy Paper #14, 1976.

Note: <sup>1</sup>US data for firms with assets below \$1 million; enterprise categories chosen were as follows: women's dresses (SIC 2335) for clothing; wood furniture (SIC 2511) for carpentry; machine shops (SIC 3599) for metal products; and bread (SIC 2051) for bread.

the "median" firm. To provide an indication of the variance that is not unduly influenced by outliers, two other values are presented for each enterprise type: the ratio for the median firms in the upper and lower quartiles.<sup>15</sup>

An examination of Table 2 reveals that the inventory "norms" or the median sales to inventory ratios vary markedly from country to country and from enterprise type to enterprise type. The median sales-inventory ratio ranges from a high of 100 for the Sierra Leone bread industry to a low of 6 for the U.S. furniture industry. Consequently, failure to recognize country or enterprise group differences can lead to incorrect specification of the inventory norms for enterprises in developing countries.

Several patterns, however, begin to emerge from a closer perusal of the table. There does appear to be a clear relationship, for example, between the enterprise type and the relative magnitude of the inventory-sales ratio. Bread enterprises possess the highest sales inventory ratio while furniture possesses the lowest in all four countries. Indeed, the rank order of enterprise inventory "norms" is the same in all four countries: 1) bread; 2) metal; 3) tailoring; and 4) furniture. Evidently, such characteristics as the length of the production and marketing periods and opportunities for bulk input purchases vary importantly by enterprise group.

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<sup>15</sup>These figures are calculated by first computing the actual rates for each firm in the enterprise group. The ratios are then arranged in order from highest to lowest. The figure that falls between the median and the highest firm ratio is the "upper quartile," while the figure falling halfway between the median and the lowest ratio is the "lower quartile."

The sales inventory "norms" also appear to vary with the country's level of per capita income. An examination of Table 2 reveals that, holding enterprise groups constant, the sales-inventory ratios decline as per capita incomes increase. In the clothing enterprise group, for example, the median sales-inventory ratio declines from 33 in Sierra Leone, the country with the lowest per capita income, to 8 in the U.S. Similar patterns exist for the other enterprise groups.<sup>16</sup> One plausible explanation for this observed pattern is that capital is relatively more scarce in lower income countries. Consequently, entrepreneurs in the lower income countries would be expected to tie up less of their scarce funds in inventory and thus possess higher sales inventory ratios than their counterparts in higher income countries. Indeed, in these lower income countries, retail customers frequently supply the firm with either the raw material or provide them with a cash down payment to purchase the needed raw material (see Kilby, Meyer, and Liedholm, 1984). Another related explanation is that with increases in per capita income, there is also a shift away from production-to-order (i.e., "job-shop" type activities) towards production-for-inventory ("factory-type" activities), partly because a larger and more diverse array of inventory may now be required to service a more complex set of customers' tastes and partly perhaps because entrepreneurs become more knowledgeable about how to market their products.

What other characteristics might be expected to affect these "inventory" norms? Location might be hypothesized to have an influence on inventory

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<sup>16</sup>The Sierra Leone furniture industry appears to be the one outlier to this pattern.



norms. Rural enterprises might be expected to require relatively larger inventories than their urban counterparts because of their relative isolation from regular input supplies. This posited relationship might be mitigated, however, if rural small industries require relatively fewer purchased inputs and produce relatively more to order (i.e., "job-shop") than their urban counterparts. Indeed, an earlier analysis of the Sierra Leone data, however, revealed that location was not a statistically significant factor in determining an enterprise's sales-inventory ratio (Kilby, Liedholm, Meyer, 1984).

The economic viability of the enterprise might also be expected to influence its sales-inventory ratio. Economically profitable enterprises would be hypothesized to have higher sales to inventory ratios than those that are not profitable, reflecting differences in managerial efficiency and inventory management abilities. The previously mentioned analysis of the Sierra Leone data discovered that economic profits were a statistically significant determinant of a firm's inventory-sales ratio. Firms with higher economic profit had higher sales to inventory norms. Thus, determining inventory norms for just the economically profitable firms might be a useful exercise, particularly if one felt that the relevant standard of comparison should not be the "average" but the economically profitable firm.

#### Summary

The administrative costs of lending to small scale enterprises, particularly those at the bottom of the size spectrum, frequently loom large and

often serve to discourage financial institutions from providing funds to them. Although the paper's review of the administrative costs of several existing small enterprise lending schemes has revealed numerous examples of high cost programs, several low cost schemes were also identified. The common characteristics of the low cost schemes were then delineated, many of which were found to be akin to those possessed by "informal" credit institutions. One common thread was that the low cost lenders had intimate knowledge of their potential clients.

Information costs frequently form a large component of the administrative costs of small enterprise lending schemes. Since little information exists on the amounts of working capital and inventory used by small enterprises, "inventory norms" were then developed. Using primary data collected from Sierra Leone, Honduras, and Jamaica, the inventory norms, in the form of sales-inventory ratios, were constructed for the clothing, furniture, metal products, and bread industries in these countries. Although these "norms" varied from country to country, several patterns emerged. The size of sales-inventory ratios tended to vary inversely with the country's level of per capita income; at the same time, the relative position of the sales-inventory ratios for each enterprise type remained consistent from country to country. Information on such "norms" may prove to be of value to those charged with providing working capital loans to small scale enterprises and provide a useful device for reducing lending costs.

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