

ENTREPRENEURSHIP IN MANUFACTURING IN KENYA: CHARACTERISTICS, PROBLEMS AND SOURCES OF FINANCE

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ABSTRACT

This article examines entrepreneurship and small business manufacturer's characteristics in Kenya. Much literature on small business development in developing world countries assume informal sector activities as homogeneous in their characteristics (Morris and Pitt, 1995; Bewayo, 1995; Ekpenyong and Nyong, 1992). Thereby policy recommendations are blanket and not of great assistance. The article investigates a sample of 320 manufacturers from three industries. The objectives are to evaluate characteristics of small-scale manufacturers that make it difficult to be profitable and the problems faced which contribute to poor performance.

INTRODUCTION

Kenya's micro-enterprise manufacturing industry, popularly known as "jua kali," is dynamic. Markets, backyards, vacant lots, and side-street workrooms, women and men supply the everyday needs of local people and a few items for export, using simple tools and manufacturing techniques. Artisans work alone or with a few others in a productive structure more akin to cottage industries than to large factories. Their hard work and ingenious use of resources are striking. The Kenyan government hails these small manufacturing businesses as playing a vital role in economic growth of the country (Kenya government, 1992b).

Until the early 1960s, many economists viewed the continued existence of small-scale industries and entrepreneurship in less developed countries as justified by scarcity of capital and administrative experience. It was often argued that with economic growth, the small, traditional type of enterprise would, in one sector after another, be superseded by modern forms of large-scale production. In order to ensure an orderly transition, small industries were seen to deserve support, but mainly in sectors where modern methods could not be immediately applied. In the mid-1960s a new approach to small to medium-scale enterprise (SME) development began to emerge due to a number of factors. First, there was growing concern over low employment elasticity of modern, large-scale production. It was claimed that even with more optimal policies, this form of industrial organization was unable to absorb a significant proportion of the rapidly expanding labor force (Cherney et al., 1974; ILO, 1973).

Second, there was widespread recognition that the benefits of economic growth were not being fairly distributed, and that the use of large-scale, capital intensive techniques was partly to blame (Cherney et al., 1974). Third, empirical diagnoses showed that the causes of poverty were not confined to unemployment, and that most of the poor were employed in a large variety of small-scale production (Noormohamed, 1985).

This suggests a new role for small industries and entrepreneurship, or what has come to be labelled "the urban informal sector". Small, labor intensive industries were seen not only to increase employment, but also to increase the living standards of the poor. They were also thought to be capable of providing a new dynamic of economic growth. The new objective was not just to stop to retreat, but to promote the small-scale sector (House, 1981; Schmitz, 1982; Giamartino, 1991).

This change in approach was accompanied by a shift of focus towards a "rurally orientated smallholder" (ROSH) industrialization strategy, well articulated in Kilby (1975), Child (1976), House (1978), Noormohamed (1985), and Olofin (1990), among others. While the World Bank (1992) and others have tended to favor the ROSH implementation strategy by assigning the major role to the private sector, there are those who favor its implementation by assigning a major role to government (Olofin, 1990, Noormohamed, 1985). Assigning the major role to the private sector has its appeal in the fact that the private sector has the resources needed to implement the strategy. But the proponents of assigning the role to the government are aware that in many developing economies, government is the major mover of the economy with only a small and sometimes weak private sector. Thus, they argue that assigning such an important role to the private sector would not work. Besides, for the strategy to produce an optimal effect on the well-being of the people, the social environment has to be considered - something the private sector may not be willing to do.

Small scale enterprises contribute to the expansion of urban employment and are a provider of inexpensive consumer goods with little or no import content, serving an important pressure-releasing and welfare-augmenting function. These enterprises also contribute to long-run industrial growth by producing an increasing number of firms that grow up and out of the small-sector. The emergence of wholly modern small/medium-scale Kenyan industries is likely to be a prerequisite for any enduring industrialization.

GOVERNMENT EFFORTS TO SUPPORT SMALL-BUSINESS DEVELOPMENT

The Kenyan government's recognition of the informal sector began with the 1972 International Labor Organization (ILO) study entitled "*Employment, Income and Equality: Strategy for Increasing Productive Employment in Kenya.*" This study examined unemployment in Kenya and coined the term "informal sector." The report describes the sector as not just marginally productive but economically efficient and profit-making. The sector is small in scale and limited by simple technologies, little capital and lacks links with the formal sector. Categories of those employed include tailors, carpenters, metalworkers, cooks, masons and others. The report discounts the belief that the informal sector is stagnant, non-dynamic and a place for those who fail to secure jobs in the formal sector. The ILO mission contended

that the sector was often ignored but was thriving and could be the source of Kenya's wealth. The report made recommendations for major policy changes for the transformation of the economy. However, the recommendations were without clear mechanism for implementation and sustained change.

The ILO report was favorably received by the Kenyan government, which incorporated its proposals in the planning process. Although the government had come up with proposals for policy changes in the sector from the 1972 study, by 1980, not much had been implemented. This was attributed to the inability of the central government to exert control over the actions of municipal authorities, where most of the activities in the informal sector take place. Through the 1980s, the government stepped up its effort for support of the informal sector. A new education system was introduced with all sorts of subjects thought to be relevant to enterprise, self-employment, and self-reliance (Achola, Gray, & Kerre, 1990). This was, as the ILO mission recommended, "the preparation of students for available employment opportunities, especially in the rural areas and in the informal sector" (ILO, 1972).

From the mid-1980s, the Kenyan government's approach toward micro-enterprise development shifted from one of interventionist to one of facilitating. Interventionist is one of initiating a government assistance program or establishing a government organization to do so. Facilitating refers to placing concentration on the creation of infrastructure facilities and an economic environment in which entrepreneurs can emerge, develop and grow (Kenya Government, 1992b). There is currently considerable support for small and Jua Kali enterprise development (KREP, 1993). The sector's potential and importance have been increasingly acknowledged. This is reflected in the responsive fashion in which government policy towards the sector has changed and evolved as well as in the increased number of institutions with projects and programs in support of the sector. Some of the institutions which support projects and programs focus exclusively on enterprise assistance, others conduct a variety of other development activities in addition to their projects for development. These institutions vary considerably in size, visibility, effectiveness and efficiency. The Kenya Rural Enterprise Program (KREP) has identified over one hundred such programs and activities as of 1993. Primary program areas include: Investment incentives, Infrastructural Development, Small Scale Enterprise and Technology, Marketing support, reform of Regulation, and Finance

However, despite government efforts in Kenya to promote informal sector activity, not much progress seems to have been achieved, judging by the performance of the informal sector. Most previous studies throughout Africa treat the informal sector as essentially homogeneous in its characteristics (Morris and Pitt, 1995; Bewayo, 1995; Ekpenyong and Nyong, 1992). Recent research suggest that government policy should be more narrowly targeted to subsectors within the informal sector (Parker and Torres, 1994). This study examines survey data in order to evaluate the characteristics of small-scale manufacturers that make it more difficult for them to be profitable and the particular problems that they face which may have contributed to their poor performance.

OBJECTIVES OF THE STUDY

In order to examine these issues, the following research questions have been raised:

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1. What are the characteristics of the small-scale manufacturers with reference to the size of the enterprise, the age distribution of firms, educational background of the operators, the site characteristics, and technology of their business operation?
 2. What are their sources of funds (formal or informal institutions)?
 3. Are the characteristics of the various industries included in the informal sector similar enough for the industries to be treated by government policy makers as a single sector?
 4. How have government policies affected the development of small-scale enterprises and entrepreneurship?

CHARACTERISTICS OF SMEs IN KENYA

Defining SMEs

For the purposes of our discussions the terms "firm," "establishment," "business," and "enterprise" are used interchangeably. An "enterprise" is defined here as any income-earning activity that is not in primary agriculture or mineral production. There is no generally accepted definition of a small business because the clarification of businesses into large-scale is a subjective and qualitative judgement. In countries such as the USA, Britain, and Canada, small-scale business is defined in terms of annual turnover and the number of paid employees. In Britain, small-scale business is defined as that industry with an annual turnover of 2 million pounds or less with fewer than 200 paid employees.

In Japan, small-scale industry is defined according to the type of industry, paid-up capital and number of paid employees. Consequently, small and medium-scale enterprises are defined as: those in manufacturing with 100 million yen paid-up capital and 300 employees, and those in the retail and services trades with 10 million yen paid-up capital and 50 employees.

In Kenya, "Micro-enterprises" are those with 10 or fewer workers, "small enterprises" have from 11 to 50 workers, and "medium enterprises" have from 51 to 100 workers. Censuses indicate that micro-enterprises comprise the lion's share of enterprises in Kenya while there are a few medium enterprises (Parker and Torres, 1994). Small enterprises are almost non-existent. As well, micro-enterprises are indigenous while the medium-scale and larger manufacturing enterprises are dominated by Asian (Indian) capital. The Asian firms are very entrepreneurial but raise a different set of issues which are not covered in this study. This paper will be confined to manufacturing enterprises and takes an in-depth look at micro-enterprises.

Methodology & Survey Execution

The data for the study was collected employing face-to-face structured interviews with representatives of 320 micro-enterprises who manufacture in the Kenyan towns of Kisumu, Eldoret and Meru. A census in the industrial areas of the three towns counted 2,626 small manufacturers with 20 or fewer workers. Since only 1 percent of this population fell between 10 and 20 workers, we are ostensibly writing about firms with 10 or fewer workers. The general category of textile work, including tailoring, dressmaking, knitting, and sewing of textile products, is the largest activity group (Table 1). Woodworkers are the second largest

group and are composed of carpenters mostly making wooden furniture, supplying wooden doors and windows and doing repair work. The last category is the metalworkers producing cooking utensils, charcoal stoves, metal boxes, small hardware, metal furniture, metal door and window frames, and iron gates.

Table I
Population Data by Gender, Activity and Firm Size

| | NUMBER | PERCENT |
|----------------------------|--------------|---------------|
| Proprietor's Gender | | |
| Male | 2,124 | 80.88 |
| Female | 502 | 19.12 |
| Total | 2,626 | 100.00 |
| Type of Activity | | |
| Textiles | 1,384 | 52.70 |
| Woodwork | 714 | 27.20 |
| Metalwork | 528 | 20.10 |
| Total | 2,626 | 100.00 |
| Firm Size | | |
| 1 worker | 1,338 | 50.95 |
| 2 - 3 | 751 | 28.60 |
| 4 - 6 | 376 | 14.32 |
| 7 - 10 | 134 | 5.10 |
| 10 - 20 | 27 | 1.03 |
| Total | 2,626 | 100.00 |

The population of enterprises revealed roughly 20 percent women entrepreneurs but this hides the fact that roughly 90 percent of that figure are in the textiles trade with very few women entrepreneurs in carpentry or metalwork. This bias of women toward textiles plays on stereotypes of women as seamstresses who are barred from other areas of gainful employment. The businesses in the population considered were quite small. Fifty percent had 1 worker and another 29 percent had 2 or 3 workers. Not surprisingly, due to the youthful nature of the Kenyan population, more than two-thirds of the population were under forty.

The number of firms selected from each size stratum was estimated to ensure adequate representation by sampling strata as they are proportioned in the population. After numbering firms sequentially in each size category, we used random numbers to select business owners for interview. The proportion taken from each stratum ranges from 10.69 percent of the one-person firms to 16.42 percent of the seven-to-ten-worker firms, with an overall sample of 12.19 percent of the population (Table 2). After administration of the questionnaire, purposeful sampling (relying on expert judgement to select units "typical" of the population) was used to select 16 cases out of the population of 320 for in-depth study. The general strategy was to

identify important sources of variation in the population then select a sample reflecting that variation. These cases provided additional insights into the distinguishing characteristics of entrepreneurs, differences among trade groups, and common operating problems.

Table 2
Sampling from the Population of Enterprises by Size

| # OF WORKERS | # OF FIRMS IN SAMPLE | # OF FIRMS POPULATION | PERCENTAGE IN SAMPLE |
|--------------|----------------------|-----------------------|----------------------|
| 1 worker | 143 | 1,338 | 10.69 |
| 2 - 3 | 101 | 751 | 13.45 |
| 4 - 6 | 50 | 376 | 13.30 |
| 7 - 10 | 22 | 134 | 16.42 |
| 10 - 20 | 4 | 27 | 14.81 |
| Total | 320 | 2,626 | 12.19 |

GENERAL ENVIRONMENT - DESCRIPTION OF COUNTRY AND INDUSTRIES

Part of the British Commonwealth, Kenya is an East African nation that gained its independence in 1963. Like many other former colonies, Kenya inherited an underdeveloped economy at the time of independence. The economy was characterized by existence of large traditional sector, dependence on primary exports, heavy dependence on international trade, underdeveloped sector and other associated structural features. In more recent times, with a GNP per capita of \$385 (1993), it is categorized by the World Bank as a low income economy that is less technologically developed. Modern sector employment accounts for only 16 percent of total employment in Kenya, while over 80 percent of the Kenyan working population are in agriculture, the rural non-farm and urban informal sector (Gray, 1991). Seventy-five percent of the country's exports are primary commodities (mainly agricultural). Industrialization through the development of its manufacturing sector has been the goal of the nation since independence. However, extremely little foreign direct investment is targeted for the manufacturing sector with more emphasis until recently on inefficient import substitution than on production for export.

Kenya did better than most other Sub-Saharan countries over the last decade (1983 - 1993), however, it still was greatly affected by deteriorating terms of trade, mounting external debt, and decreasing net flows of public and private resources. Subsequently, the country entered its own turning point in its approach to development. Self employment has emerge as an important aspect in the overall development strategy.

Textiles

Generally, enterprises in this industry serve the final customer rather than other business as there were found to be few backward linkages. Firms tend to operate from traditional marketplaces and homesteads, relying on the proprietor's own savings for capital. In tailoring, the largest sub-grouping of this sector, a large proportion of firms compete head-to-head in just one or two sub-groupings. A majority of entrepreneurs in these sectors produce low quality goods meant for low income customers. Product duplication is rampant. Thus, input into production methods in terms of product design and man-hours of labor are cheap and low.

Woodwork

This is a highly diversified industry. Technology from this sector is acquired from the formal sector through adaptation and adoption. In recent years, many different kinds of locally made woodlathes and other bench and hand-saws are available. In combination with hand tools and clamps, entrepreneurs have revolutionized the design and quality of furniture, especially in the urban areas. This sector consists largely of enterprises making wooden furniture but includes charcoal, rope or twine, and baskets. The sector produces for two separate markets. The largest market comprises 90 percent of revenues and are low quality goods made for low income consumers. The remaining 10 percent are higher quality goods for more middle income consumers.

Metalwork

The metalwork industry is also very diversified and is made up of those firms that make, sell and repair metal products, either for households or for other businesses. Earlier studies of the metalwork sector found that metalworkers produced rugged manual machine tools and simple consumer durables such as bicycle carriers and hoes as well as bolts and other basic items for the building industry (House, 1981). Our study revealed production to be wide ranging including electrical machinery for the sector itself and the woodworking industry. A second group of metalworkers produced a variety of steel fabrications and other building parts (e.g., steel windows, steel gates, grills, etc.) and machinery for the agricultural service sector. A third and last group of metalworking firms commonly referred to as tinsmiths, produce a range of hand tools and consumer durables (e.g., hoes, metal boxes, *sufurias* [cooking pots], *jikos* [small stoves], etc.) for low income consumers.

CHARACTERISTICS OF SMEs BASED ON STUDY FINDINGS

In line with one of the objectives of the study, information was sought with respect to certain characteristics of the SMEs (and their operators), including the age of the business, the educational background of the owners, and site characteristics.

Table 3

Sample of Enterprise Size by Industry

| # OF WORKERS | TEXTILES | | WOODWORK | | METALWORK | |
|--------------|------------|---------------|-----------|--------------|-----------|---------------|
| | # | % | # | % | # | % |
| 1 worker | 95 | 54.29 | 33 | 33.67 | 15 | 31.91 |
| 2 - 3 | 50 | 28.57 | 37 | 37.75 | 14 | 29.79 |
| 4 - 6 | 18 | 10.29 | 20 | 20.41 | 12 | 25.53 |
| 7 - 10 | 11 | 6.29 | 5 | 5.10 | 6 | 12.77 |
| 10 - 2 | 1 | 0.57 | 3 | 3.06 | 0 | 0.00 |
| Total | 175 | 100.01 | 98 | 99.99 | 47 | 100.00 |

The sampling is further broken down to the industries of textiles (n = 175), woodwork (n = 98), and metalwork (n = 47). As can be seen from Table 3, about one-half were textile, one-third were woodworking and the remainder, one-sixth were metalwork. This is approximately the same proportion of firms found in the population.

Table 4

Years in Business of Enterprises by Industry

| YEARS IN BUSINESS | TEXTILES | | WOODWORK | | METALWORK | |
|-------------------|------------|---------------|-----------|---------------|-----------|---------------|
| | # | % | # | % | # | % |
| Less than 1 | 1 | 0.57 | 5 | 5.10 | 0 | 0.00 |
| 1 - 3 | 44 | 25.14 | 25 | 25.51 | 8 | 17.02 |
| 3 - 5 | 38 | 21.71 | 16 | 16.33 | 10 | 21.28 |
| 5 - 7 | 25 | 14.29 | 10 | 10.20 | 4 | 8.51 |
| 7 - 10 | 26 | 14.86 | 16 | 16.33 | 8 | 17.02 |
| 10 - 20 | 30 | 17.14 | 24 | 24.49 | 15 | 31.91 |
| Over 20 | 11 | 6.29 | 2 | 2.04 | 2 | 4.26 |
| Total | 175 | 100.00 | 98 | 100.00 | 47 | 100.00 |

Very few firms were a year old or less in terms of age of the business (see Table 4). Thus, the firms are not transient which is what one would find by examining enterprises in the service sector where the needed start-up capital is much smaller. Half of the firms have been in existence over five years in all categories of industries studied. The businesses were on average six years old with 15 having been in business for more than twenty years and only 6 in business for less than one year. Firms were found to be slightly older in metalwork subsector where businesses are more capital intensive. While slightly younger firms were found in the textile industry which is less capital intensive.

Educational Background

All the respondents were asked questions related to their educational background. Table 5 includes data on educational attainment of the three industries studied. Only 1 percent of the entrepreneurs in all industries having not completed primary school. About half of those interviewed had 10 years or more of formal education. The lower educational attainment in textiles reflects the high proportion of women in this industry.

Table 5
Formal Education of Owners by Industry

| YEARS OF EDUCATION | TEXTILES | | WOODWORK | | METALWORK | |
|--------------------|------------|--------------|-----------|--------------|-----------|--------------|
| | # | % | # | % | # | % |
| No Formal Ed. | 2 | 1.2 | 1 | 1.0 | 2 | 4.3 |
| 6 or Primary | 61 | 35.3 | 22 | 22.4 | 17 | 36.2 |
| 8 | 31 | 17.9 | 18 | 18.4 | 6 | 12.8 |
| 10 | 38 | 22.0 | 28 | 28.6 | 7 | 14.9 |
| 12 | 32 | 18.5 | 27 | 27.6 | 11 | 23.4 |
| 14 | 9 | 5.2 | 2 | 2.0 | 4 | 8.5 |
| Total | 173 | 100.0 | 98 | 100.0 | 47 | 100.0 |

Chi square = 14.99 df = 10 p = 0.1325

Informal Sector "SITE"

According to most previous studies, the variables related to the site of the business establishment are "the" defining characteristics of informal sector activity (McCormick, 1988; Onyango, 1992; Ouma, 1990; King and Abuodha, 1991). The literature includes the nature of the physical premise as well as the business' access to water and electricity as key variables. In this study, a dichotomy in the nature of resources available to micro-enterprises was found (see Table 6).

Approximately 35 percent of the entrepreneurs interviewed in each industry had workplaces which were open-air at the informal extreme or permanent physical establishments, that is, market stalls and shops at the formal extreme of the small business sites. The remaining 30 percent had semi-permanent establishments or worked from their homes. This dichotomy of work place site has lent validity to the concept of an informal sector distinctly separate from formal sector activities.

A Chi-Square test on the tabulated responses reveals that it is highly unlikely that firms in the industries studied are from the same distribution. In other words, the industries should be treated separately and not as one homogeneous sector. Expressed in another way, there is a systematic relationship between "site" and "industry type." This finding stands in opposition

to the blanket "informal sector" proposals which up until now have been advocated by policy makers and others who are interested in assisting entrepreneurs in this sector. The paucity of infrastructure in terms of electricity and water available to micro-enterprises is of great concern to the government of Kenya and the donor community. This concern is validated here where we find water not accessible to roughly 75 percent of the firms surveyed in all industries. This large proportion of firms without access to water rendered the Chi-square test result insignificant among these industries. We find the use of electricity to be more needed and accessible particularly to the woodworkers and metalworkers. And similar to our conclusions for the site of the enterprises, a Chi-square test indicates that the industries studied should not be treated as one homogeneous "informal" sector. Notwithstanding, the provision of basic infrastructure will surface as essential for the development of the three industries.

Table 6
Site of Business Enterprises, Access to Electricity,
And Water by Industry

| SITE | TEXTILES | | WOODWORK | | METALWORK | |
|--------------|------------|---------------|-----------|---------------|-----------|---------------|
| | # | % | # | % | # | % |
| Open Air | 70 | 40.00 | 24 | 24.49 | 20 | 42.55 |
| Semi Perm | 22 | 12.57 | 24 | 24.49 | 2 | 4.26 |
| Home | 10 | 5.71 | 3 | 3.06 | 2 | 4.26 |
| Market Stall | 28 | 16.00 | 1 | 1.02 | 2 | 4.26 |
| Shop | 45 | 25.71 | 46 | 46.94 | 21 | 44.68 |
| Total | 175 | 100.00 | 98 | 100.00 | 47 | 100.00 |

Chi square = 39.17 df = 8 p = 0

Electricity

| | | | | | | |
|--------------|------------|---------------|-----------|---------------|-----------|---------------|
| No | 145 | 82.90 | 64 | 65.30 | 25 | 53.20 |
| Lights | 13 | 7.40 | 9 | 9.20 | 2 | 4.30 |
| Machines | 17 | 9.70 | 25 | 25.50 | 20 | 42.60 |
| Total | 175 | 100.00 | 98 | 100.00 | 47 | 100.00 |

Chi square = 29.59 df = 4 p = 0

Water

| | | | | | | |
|--------------|------------|---------------|-----------|---------------|-----------|---------------|
| None | 132 | 75.40 | 75 | 76.50 | 34 | 72.30 |
| Outside | 31 | 17.70 | 19 | 19.40 | 12 | 25.50 |
| Inside | 12 | 16.90 | 4 | 4.10 | 1 | 2.10 |
| Total | 175 | 100.00 | 98 | 100.00 | 47 | 100.00 |

Chi square = 10.80 df = 4 p = 0.0943

Financing

Business financing in terms of start-up and capital for continued operation is often cited as the greatest problem for small business development. As such, in Kenya start-up capital is a barrier to entry in most entrepreneurial activities. Metalwork had the greatest average amount of start-up capital requirement reported followed by woodworking. Textiles had the smallest average start-up capital reported at only one-third and one-fourth of the other more capital intensive industries. The large standard deviation indicates the wide variation of responses. Table 7a features these results with median figures in each category. Lack of capital was cited by eighty percent of all respondents as the greatest start-up problem. Absence of machines and tools was cited by roughly half the respondents as a major start-up problem.

In addition to the start-up capital amounts, the source of start-up capital is shown in Table 7b. Here, it is clear that personal savings dominate as the primary source of capital in all industries studied. It should be noted that no one had gained their start-up capital from a formal sector source. Relatives, partners and friends were the only other responses given to inquiries about start-up capital. As the business develops and grows, additional capital is needed for expansion. It is expected that the initial sources of capital will prove to be important as sources for expansion capital.

Table 7a
Start-up Capital by Industry
(in Kenyan Shillings)

| | TEXTILES (N = 174) | WOODWORK (N = 98) | METALWORK (N = 47) |
|--------------------|-----------------------|----------------------|-----------------------|
| INITIAL CAPITAL | | | |
| Mean | 4,261 | 11,609 | 17,486 |
| Standard Deviation | 7,881 | 37,906 | 38,912 |
| Median | 2,000 | 2,800 | 2,000 |

Table 7b
Start-up Capital by Source²
(in percentage)

| | TEXTILES (N = 174) | WOODWORK (N = 98) | METALWORK (N = 47) |
|-------------------|-----------------------|----------------------|-----------------------|
| SOURCE OF CAPITAL | | | |
| Own Savings | 72.10 | 86.60 | 80.10 |
| Relative(s) | 17.00 | 11.50 | 15.40 |
| Partner(s) | 8.70 | 6.30 | 11.20 |
| Friend(s) | 6.40 | 4.20 | 11.20 |

² Several entrepreneurs had more than one source of start-up capital. At the time of the survey, the exchange rate was approximately Kshs. 50.00 to U.S. \$1.00.

This is underscored as approximately 92 percent of them elected not to apply for loans or had applied but were rejected. Only nine percent of the firms received any external funding other than from family members. Approximately half of the respondents started their businesses from meager savings. As previously stated, when entrepreneurs were asked from what sources they had requested external funds, most reported that no requests were made. Most business owners "knew" that they would not be granted a loan as they did not have collateral. One owner stated that loans "were made to rich people." Another entrepreneur felt that "there is a lot of discrimination in the provision of loans, particularly against small business entrepreneurs." However, most stated that a source of external funds would improve their businesses significantly.

Technology

Technological machine capacity in the informal sector is very low and far below the technological capacities in light industries. House (1978) and King and Abuodha (1991) document average capital stocks as a method of grasping the level of embodied technology in an industry. It would be best to look at capital labor ratios (KLRs) over the sector. KLRs give the amounts of capital used by units of labor in the sector. However, a study on technological change is a time series study and looks at changes over time.

In Table 8, relative capital stock levels of the three sectors are compared to data generated from a previous study (King and Abuodha, 1991). King and Abuodha's findings corroborate this study that capital stocks are highest in metalworking followed by woodworking. Our data indicate that metalwork, woodwork and textiles have a capital stock ratio of 3:2:1 in terms of total capitalization. The higher numbers in the previous study are believed to derive for the urban bias in machinery cost verified in King and Abuodha's study. Although capital machine levels in the industries studied are dramatically higher than in the 1970s, they are still too low to develop any meaningful industrial capacity at this stage. The industries studied have only undergone a first stage industrialization process as a result of limited electrification machinery for production (see Table 6).

Table 8
Average Capital Stock Levels by Industry
(in Kenyan Shillings)

| | 1990 | 1994 | 1994 Rental/Month |
|-----------|------------------|------------------|----------------------|
| Textiles | 26,400 (N=22) | 8,547 (N=112) | 360 (N=36) |
| Woodwork | 64,886 (N=38) | 17,752 (N=69) | 300 (N=1) |
| Metalwork | 69,076 (N=26) | 24,247 (N=20) | 1,166 (N=3) |

The study findings indicate that growth of the micro-enterprise sector is largely technology led (particularly in woodwork and metalwork). However, the industries themselves do not generate their own technological spurts, that is, moving to higher echelons of technology (Juma et al, 1993). In fact, we observe the industries studied as moving toward the exhaustion of existing technological capacity. Presently these industries use technology learned from the formal sector through adaptation and adoption. Generally, a lack of understanding of science and engineering behind the technology used was observed.

SUMMARY AND CONCLUSION

While one had to search for strengths in most of the informal sector entrepreneurs, several did emerge. First, each micro-business provides an income for the owner and his family, and, in many cases, a livelihood for his/her extended family. This fact was brought home by one of the entrepreneurs in responding to the question as to why he considered his business successful. He replied: "Anyone who can be able to provide the basic necessities to his family, ought to consider himself successful." Indeed, experience in Kenya and elsewhere in the developing countries indicates that micro-enterprises are not primarily oriented toward profit maximization. Although this may be the secondary goal, their immediate goal is to create security for their families. A limitation exist in that there does not appear to be a market for existing micro-enterprises in Kenya. None of the respondents reported to have purchased their business from another small business owner. The lack of markets for existing businesses places a severe limitation on entrepreneurship prospects in Kenya.

A second strength is the fact that most enterprises are highly mobile in terms of location. If the market becomes soft, they could at a moment's notice, move to another location. Many of the entrepreneurs (86 percent) in this study reported that they rented the premises they use. As such, their money is not tied to permanent structures (McCormick, 1993).

A third major strength is that firm owners have created needed products and services for the market, have kept costs competitive, and have attracted and trained people with the needed skills. The primary weakness of most members of the study group was lack of capital. As a direct result, most were unable to get the appropriate tools or expand their businesses. Almost all of the respondents started their businesses from own savings or loans from relatives. Approximately 92 percent of them elected not to apply for loans or had applied but were rejected. Only in one case had the business owner applied for a Kshs. 100,000 loan from the Kenya Commercial Bank and was offered only Kshs. 20,000, which she turned down because it was inadequate for her purposes. While many of the entrepreneurs were unaware of the ways in which they can go about applying for loans, those who knew how were equally frustrated that their applications are never accepted.

The most noteworthy factor in the area of business management was the absence of an aggressive marketing strategy. Moreover, most of the businesses surveyed only employed one or two components of the marketing mix: product, place, price and promotion. In most cases, the businesses produced products which were copies of others in the industry. This phenomenon was especially true of the textile businesses. One exception was the tailor who

said she tried to use a variety of designs as a marketing tool. Several of the metalworkers in the sample noted that they bought raw material in bulk and sold to several smaller operators. In a sense, they performed the production, wholesale, and retail functions in the channel of distribution. Some in the woodworking industry relied on quality and craftsmanship to differentiate their products from their competitors.

A number of opportunities exist for micro-enterprise owners to consolidate and enjoy economies of scale through joint ventures, partnerships, and so forth. Theoretically, the entrepreneurs need each other to be able to take advantages of economies of scale. Practically, however, they have to overcome gross mistrust that exists among them. Moreover, a small amount of business training would put a few entrepreneurs ahead of their competitors. The opportunity exists to differentiate products and thereby create a greater demand for their products.

Finally government policy needs to be more targeted or industry specific. Instead of having a blanket policy toward the informal sector, the government needs to develop specific policies suited to the particular characteristics of each industry. It has been shown that each industry has distinct needs that are not necessarily the same as another. For example, site infrastructure and capital stocks are not as extensive in the textile industry as was found in the metalwork industry. Another observation was that, proportionately, metalworkers are securing more loans than the other two industries studied. Thus, perhaps the government needs to devise programs that specifically address the concerns of the woodwork and textile industries in terms of training and loan procurement.

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