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INDUSTRIAL DISTRICT OR GARMENT GHETTO?

The Case of Nairobi's Mini-manufacturers

by

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ABSTRACT

Clusters of small firms doing similar activities are a common sight in urban areas of developing countries. Metal workers, mechanics, and second-hand clothes vendors gather in sectorally specific, geographically bound agglomerations. Recent research on Marshallian industrial districts suggests that such clusters could play a vital role in industrialisation.

Garment manufacturers located in two large Nairobi markets are an example of such small firm clustering. The individual businesses resemble one another enough in their relations with supply, labour, and product markets to constitute a unique firm-type within the garment industry which we call the "mini-manufacturer." The clusters exhibit some features of successful industrial districts elsewhere, but differ in important respects. The markets could be embryonic industrial districts which, if properly nurtured, would bring about a new form of industrial development in Kenya. Alternatively they may simply be ghettos where marginal businesses congregate because they have no other place to go.

This paper examines the present situation of the garment markets and assesses their potential for contributing to Kenya's industrialisation. The data suggest that the markets lie somewhere between a true industrial district and a simple sectoral agglomeration of firms. Like many LDC clusters, the garment markets exhibit weak internal and external linkages. The inter-firm specialisation and division of labour that is supposed to be key to collective efficiency is almost totally lacking. Those inter-firm linkages that exist are often informal and at a low level. Evidence on ethnicity, gender, and education point to the importance of entrepreneurs' social and professional networks, but more research on networks is clearly needed. The paper concludes by offering suggestions for ways in which government, NGOs, and the private sector might intervene to strengthen the garment markets.

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1. INTRODUCTION¹

Clusters of small firms doing similar activities are a common sight in urban areas of developing countries. Metal workers, mechanics, and second-hand clothes vendors gather in sectorally specific, geographically bound agglomerations. Recent research on Marshallian industrial districts suggests that such clusters could play a vital role in industrialisation.

Garment manufacturers located in two large Nairobi markets are an example of such small firm clustering. The individual businesses resemble one another enough in their relations with supply, labour, and product markets to constitute a unique firm-type within the garment industry which we call the "mini-manufacturer." The clusters exhibit some features of successful industrial districts elsewhere, but differ in important respects. The markets could be embryonic industrial districts which, if properly nurtured, would bring about a new form of industrial development in Kenya. Alternatively they may simply be ghettos where marginal businesses congregate because they have no other place to go.

This paper examines the present situation of the garment markets and assesses their potential for contributing to Kenya's industrialisation. The paper has six parts. Parts 2 and 3 give the theoretical and methodological underpinnings of the research. Part 4 describes Nairobi's garment industry. Part 5, the heart of the analysis, compares observed characteristics of Nairobi's garment markets with features of the typical LDC industrial cluster. The final section summarises the findings, outlines needs for further research, and discusses interventions aimed at strengthening the garment markets.

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2. THE BENEFITS OF CLUSTERING

Theory and empirical evidence suggest that clustering brings about economic gains for participating businesses and fosters overall industrial growth. The theory has its roots in Alfred Marshall's observations on the textile and metalworking regions of England, Germany, and France during the latter half of the nineteenth century (Marshall 1890). Marshall believed that the clustering of small firms of a particular industrial activity offered the possibility of inter-firm division of labour which, in turn, enabled the industry to operate more efficiently. Marshall (1919) also believed that a common set of cultural and social values could reinforce the specialised knowledge that developed within the cluster. He noted that skills and information were "in the air" in industrial districts where they helped to form a business culture that fosters entrepreneurship and technical innovation (Marshall 1900).

Industrial districts have recently returned to prominence partly because of the success of regional small firm industrial clusters in various parts of Europe (Piore and Sabel 1984; Zeitlin 1989; Storper and Walker 1989; Pyke and Sengenberger 1992) and partly as a result of a more general interest in network models of social organisation (Mitchell 1969; Williamson 1975, 1980; Thompson *et al* 1991). The European success stories have prompted researchers to examine the relevance of the model for industry in developing countries (Schmitz 1992, 1993; Spath 1992; Aeroe 1992; Rasmussen 1992; Pedersen 1993; Sverrisson 1993; Schmitz and Musyck 1993; Nadvi and Schmitz 1994).

Observers of industrial districts in advanced economies have identified two distinct routes to industrial restructuring (Storper and Walker 1989; Pyke and Sengenberger 1992). On the "high road" firms invest in multipurpose

machinery and employ skilled labour in order to stabilise their production by shifting output between different markets. Other firms take the "low road" where they achieve flexibility by minimising their investments in machinery and relying on unskilled labour that can be hired and fired at short notice. African countries have a third route (McCormick 1988; Pedersen 1993; Ongile and McCormick 1993). On the "subsistence path" tiny, often household-based enterprises operate in a semi-subsistence economy. Like their "low-road" counterparts they try to minimise costs, but they operate even more simply, finding free workspace on public land, using family labour, and keeping capital intensity low (McCormick 1988, 1991a).

Nadvi and Schmitz (1994, pp. 43-44) argue that the high-road/low-road distinction fails to capture what has occurred in LDC clusters. Most clusters, they argue, show aspects of both high and low roads, usually a combination of innovation and cheap labour. Some fall squarely into the low-road category. They found none that could be truly categorised as high-road clusters. The same criticism can, of course, be levelled against a three-part analysis. The distinctions are, nevertheless, useful in that they draw attention to important differences among small enterprises.

In probably the most comprehensive review to date of the literature on clustering in LDCs, Nadvi and Schmitz (1994) compare small firm clusters in Latin America, Asia, and Africa with the experiences of European industrial districts. Their "overriding conclusion" is that "while clustering is not an uncommon feature of industrial organisation for small- and medium-sized firms in the developing world, the consequences for inter-firm production and social relations and ultimately for sustained economic growth of the cluster as a whole is extremely mixed" (Nadvi and Schmitz 1994, p. 41). More specifically,

the draw out five main findings from the studies that have been done. First, clustering is significant to the industrial organisation of small-scale manufacturing in developing countries, particularly in Latin America and South Asia. Second, clustering has brought with it various types of inter-firm relations, ranging from total absence of cooperation to situations with extensive collaborative arrangements in production. Third, LDC clusters are often associated with some form of common social identity or social and affective network. Such shared identity provides the basis for interpersonal relations, for notions of trust and reciprocity, and for social sanctions that set boundaries on accepted competitive behaviour. Fourth, although clustering is not usually the outcome of planned intervention by the state, the state can play an important facilitative role for clusters. Finally, the growth experience of industrial clusters is internally uneven. Within a given cluster, some enterprises will grow and others will fail.

These conclusions suggest that inter-firm relations, social identity, government intervention, and growth of individual firms within the group could provide important insights into the nature and strength of a cluster. Before examining these variables in detail, we will outline the methodology used in the research.

3. METHODOLOGY

The discussion which follows draws on data gathered during a five-year study of Nairobi's garment industry. Although the study did not set out to deal with clustering, we gradually became aware that interactions among firms and individuals could be important to enterprise survival and growth. By the third phase of the research, some networking considerations were explicitly

incorporated into the data gathering. Nevertheless it is important to recognise that at this stage we lack the comprehensive view that a targeted study of clustering might provide.

3.1 Study Design

The study was conducted in three phases.² The first phase, extending from early 1989 to the end of 1990, provided baseline information on the entire garment industry in Nairobi. Researchers in the second phase, which was carried out in the second half of 1992, revisited the entire sample before focusing on what firms in the middle size ranges considered to be the main barriers to growth. The third phase addressed the issue of barriers to firm growth in greater depth. This paper draws on material gathered in all three phases.

Each phase had its own methodology. Phase one mainly used structured interview questionnaires administered to business owners in a stratified random sample of garment manufacturing firms. Phase two used an interview schedule to guide informal, probing discussions with of a small purposive subsample of entrepreneurs. Phase three combined the usual structured interviews of individual business owners with a participants' seminar that provided for an exchange of views on emerging issues and findings. At every stage of the research we searched for additional information about the industry and its firms by holding informal discussions with business owners, observing local tailors and dressmakers at work, and scouring newspapers and scholarly journals for relevant material.

3.2 Sampling and Data Collection

Phase one began with a census of individuals and groups making or selling new clothing anywhere within the Nairobi city limits (See McCormick 1989, 1993 for more details). In early 1989 six enumerators visited every commercial building in the city centre and combed markets, shopping centres, the industrial area, and residential estates looking for garmentmakers and clothing retailers. By inquiring as they entered each neighbourhood, they were able to locate many home-based businesses, though these are probably somewhat undercounted.

Firm size	Firms		Workers	
	N	%	N	%
1 person	747	33.9	747	6.4
2-3 person	909	41.3	2,145	18.5
4-6 person	413	18.8	1,962	16.9
7-10 person	68	3.1	511	4.4
11-50 persons	32	1.5	774	6.7
Over 50 persons	31	1.4	5,468	47.1
TOTAL	2,200	100.0	11,607	100.0

Source: McCormick: 1989 Census of Garment Industry in Nairobi

The census turned up 2,200 garmentmakers (see Table 1). An additional 421 businesses sold clothing at retail, but did no manufacturing (McCormick 1991b). From the clothing manufacturers, we drew a random sample of 268 firms stratified according to employment size. We chose to use employment as the measure of firm size because it is easy to apply and closely correlated to size measured in terms of capital or output (Little, Mazumdar, Page 1987).

Employment is also especially important in the Kenyan context where unemployment is high and capital costly.

Phase three focused on enterprises in the middle size ranges of the garment industry: firms with between four and 50 workers. Approximately one-quarter (23.4 percent) of the industry's firms fall into this category. In 1989 they employed 28 percent of the industry's workers (see Table 1). Between 1989 and 1992, 22 firms closed, moved away, or changed from garment production to other activities. From the remaining 68 firms we selected a stratified random subsample of 40 businesses for further interviews.

Data collection was done in two parts. The first part used an interview questionnaire to gather information on organisation of production, finance and sources of capital, markets and other linkages, and perceived business problems. The second was a half-day seminar at which participating business owners received and discussed the findings.

4. NAIROBI'S GARMENT INDUSTRY

The technology and organisation of the garment industry set Uhuru and Quarry Road Markets apart from clusters in other industrial sectors. This section describes the main features of the industry, both worldwide and as it exists in Nairobi, in an effort to put the activities in the garment markets into broader perspective.

4.1 The World Clothing Industry³

The clothing industry, part of the broader textile group, represents one of the final manufacturing steps for natural and synthetic fabrics. The industry produces many different products made in a series of separate stages

of production. The products vary widely, ranging from very standardised items like T-shirts to highly fashionable women's wear. The production process covers a broad spectrum of activities: designing, pattern making, grading, nesting and marking, cutting, sewing, inspecting, pressing, and packaging. Each stage of the production process and each product uses different factor proportions, offering different possibilities for relocation of production and the introduction of new technologies.

Economies of scale are difficult to realise in clothing manufacture. The industry generally uses highly dexterous, but low-paid operators and standardised, relatively inexpensive sewing machines. The limpness of textile fabric makes manipulation by machines extremely difficult. Consequently, even in large factories, automation is limited and human workers perform many tasks. Most successfully mechanised operations have either been integrated into textile production (for example, the manufacture of socks and stockings in knitting mills) or occur at the preparation or finishing stages. Sewing, which accounts for about 80 percent of labour costs for most products, has proved particularly difficult to mechanise. Productivity gains have been mainly due to increased machine speeds and the introduction of special-purpose machines. Buttonholers, button-fixing machines, machines set for a particular stitch like overlock, blindstitch, or bartacking, and machines that make standard garment parts like pockets or belt loops enable producers to benefit from division of labour. Although special purpose machines speed up garment manufacture, they have not altered the technology calling for roughly equal numbers of operators and machines. Microelectronics-based innovations (MRIs) such as computer-aided design systems, computerised cutters, and micro-electronically controlled sewing machines can reduce labour costs, material

wastage, and training time by up to 70 percent in some phases of production. They are, however, extremely expensive, and therefore, rare in developing countries like Kenya (Hoffman 1985).

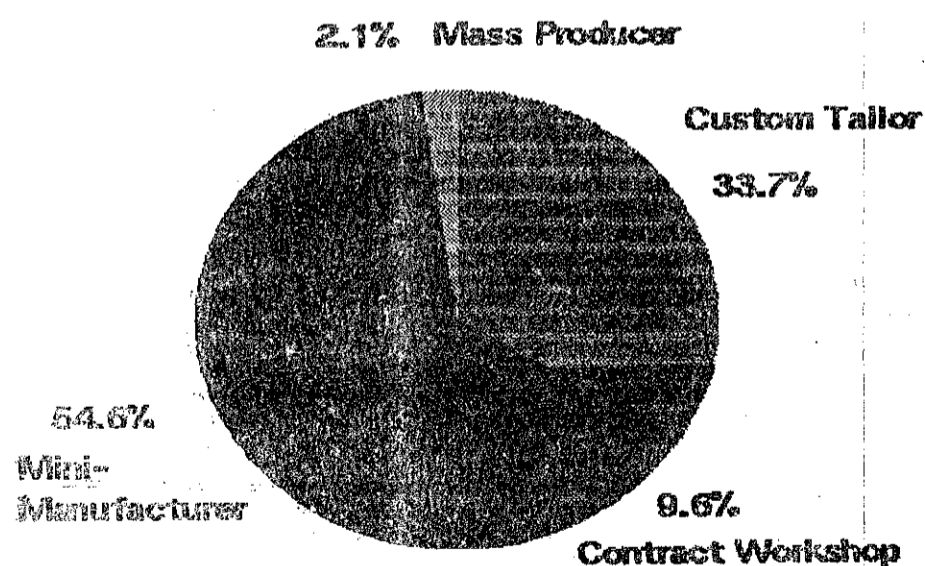
Figure 1: FIRM TYPES

<p>1. CUSTOM TAILORS</p> <ul style="list-style-type: none"> * Produce men's and women's garments to order. * Owner of the business is often a tailor who employs between two and five other skilled tailors. * Some are mainly providers of labour who require the customer to supply the cloth and, sometimes, other inputs such as buttons, zippers, or lining. * Others are fabric retailers who employ tailors as a service to their customers.
<p>2. CONTRACT WORKSHOPS</p> <ul style="list-style-type: none"> * Will make whatever a customer wants. * Produce in quantity. * Sometimes the firm supplies the cloth, sometimes the customer does. * Use little or no division of labour; cutting the cloth sometimes reserved to one person. * Skilled tailors expected to sew entire garments.
<p>3. MINI-MANUFACTURERS</p> <ul style="list-style-type: none"> * Use a scaled-down version of mass production technology. * Some specialise in high fashion garments; most produce low-priced garments. * Generally concentrate on one or two products, such as boys' school uniform shorts, women's petticoats, or men's trousers. * Use a combination of skilled and unskilled workers. * Some division of labour; e.g., cutting, assembling, finishing, and pressing.
<p>4. MASS PRODUCERS</p> <ul style="list-style-type: none"> * Manufacture standardised goods using assembly line production techniques. * Make good quality garments for the middle income market.

4.2 Types of Garment Manufacturing Firms in Nairobi

Analysis of the market relations of Nairobi's garment producers in the middle (4-50 worker) size ranges revealed four quite distinct types of firms (Ongile and McCormick 1993; McCormick *et al* 1994). Figure 1 lays out the salient features of each type.

Categorisation of firms in the subsample depended mainly on their volume of production, division of labour, and size the workforce. Overall the most common firm type is undoubtedly the custom tailor. Although available data are not sufficient to allow us to categorise all firms in the original sample, it is likely that all of the one-person firms and most of the two- and three-person firms are custom tailors. In the middle size ranges, however, firm types vary, with mini-manufacturers replacing custom tailors as the most common type. Figure 2 shows the distribution of firm types across firms with between four and 50 workers. One-third (33.7 percent) are custom tailors and more than half (54.6 percent) are mini-manufacturers. The rest are contract workshops (9.6 percent) and mass producers (2.1 percent).



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Figure 2: Distribution of Firm Types

Nearly all of the firms in the garment markets are mini-manufacturers. These firms use a scaled-down version of mass production technology and generally specialise in one or two products, such as boys' school uniform shorts, women's petticoats, or men's trousers. They may use a combination of skilled and unskilled workers. They often have some rudimentary division of labour. They may, for example, divide the manufacturing process into cutting, assembling, finishing, and pressing.

Mini-manufacturers make low quality products, using cheap raw materials and unimaginative designs. The appearance of the final product is often further diminished by lack of attention to details like matching of thread, buttons, or zips. For example, we observed red petticoats being sewn with black thread, and dark blue shorts made with light blue zippers. When questioned, entrepreneurs said that "it doesn't matter" to their customers. Price has been mini-manufacturers' competitive advantage. They fear anything, including improved quality, that might raise their costs and force them to increase prices. *Their low level customers*

Mini-manufacturers tend to sell their products to wholesalers who take them to multiple market areas. A combination of markets including Nairobi and one or more smaller towns up-country is most common (McCormick *et al* 1994). Over two-third (68.8 percent) of the African entrepreneurs who sold goods up-country included their own home area in their market. Although we did not ask business owners why they chose particular market areas, we can speculate that family networks may be a factor in their decision to sell at home.

4.3 Competition from Second-hand Clothes

Clothing sold in Kenya comes from three sources: domestic production, so-called "second-hand" clothing, and imported new clothing. Imported new clothing probably represents less than 2 percent of the market and has little impact on the domestic industry (Kenya 1990, pp. 67, 126). "Second-hand" clothing, on the other hand, competes actively with Kenyan goods. "Second-hand" clothing includes imported used clothing, used items collected locally, and miscellaneous new clothes, complete with foreign labels and price tags.

Imported used clothing, cast off by affluent, fashion-conscious consumers in the United States, Europe and Japan, makes its way through the network of charitable organisations, recyclers, rag makers, wholesalers, and used clothing exporters to importers in receiving countries. Haggblade (1990) has documented the trade for Rwanda. Kenya's distribution system is probably similar, except that until President Moi legalised importation of second-hand clothes in mid-1991, it was vulnerable to sudden losses from unexpected police crackdowns. Traders buy or barter for local second-hand clothes in middle- and upper-income neighbourhoods. The channels for the "new second-hand" items have not been documented. Some may be production overruns and seconds that could not be absorbed in producing countries. Others may be items purchased by individuals in developed countries that were given away before being worn.

5. THE GARMENT MARKETS

The garmentmaking clusters are housed in two large markets, each consisting of several concrete block buildings. The history, physical surroundings, and layout of the markets have had a significant impact on the clusters.

5.1 History of the Garment Markets

Uhuru and Quarry Road Markets were built in 1974 to replace older makeshift premises from the colonial period. The markets were initially designed as retail outlets for groceries and clothing. When open air markets for green groceries began selling similar goods at cheaper prices, often just outside the market buildings, grocery vendors could no longer compete. They gradually left the markets and were replaced by clothing retailers. Since the clothing sellers had somewhat higher profit margins and a product that does not spoil when business is slow, they could more easily afford the stall rents.

In the early days cloth dealers sold mainly second-hand clothing. When the economy was good in the late 1970s and demand for cloth was higher, businesses began making and selling new clothes. They did this despite the unsuitability of the markets for manufacturing. The markets are neither factories nor organised industrial parks. Inside they are poorly lighted and ventilated. The power supply is hardly adequate for even such light manufacturing as garment production. The markets are subdivided into small stalls of about two square metres. Three or four machines are squeezed into this small space, leaving little room for movement or storage of raw materials. Some innovative founders have built wooden upstairs rooms to house more workers and machines. The stalls' window shutters are used as display boards or cutting tables. The surroundings are little better than the market interior. Roads and car parks are inadequate. There are no banks, telephones or other supportive infrastructure to facilitate the evolution of manufacturing. Quarry Road is especially filthy and dilapidated with poor drainage and overflowing sewers.

Entrepreneurs were aware of conditions in the markets when they responded to our question about choice of location. When asked why they chose to locate in the garment market, nearly three-quarters (72.2 percent) said simply, "This was where I could get premises." The tone of resignation in their response contrasted with responses of entrepreneurs in other locations who spoke of access to their customers or convenience to their place of residence. Despite their obvious weaknesses, however, the garment markets have become booming manufacturing centres churning out thousands of garments for Kenyan consumers.

5.2 Characteristics of the Clusters

The most basic requirements of an industrial district are sectoral and geographic concentration. Yet a group of producers making the same or similar things in close proximity to each other does not guarantee economic benefits. The concentration provides opportunities for other developments such as the division of labour and specialisation among firms; the emergence of suppliers providing raw materials, components, new or second-hand machinery, and spare parts; the emergence of agents who sell to distant markets; the growth of firms providing technical, financial, and accounting services; and the formation of associations of similar producers (Schmitz 1993, p. 4). Preliminary evidence suggests that successful LDC clusters will be characterised by strong working relations among firms in the cluster, social and professional networks extending beyond the cluster, and a certain internal dynamism and resilience.

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Dr. Charles King*

5.2.1. Interfirm Relations

A major strength of industrial districts lies in the opportunities physical proximity offers for linkages among firms. Clustering facilitates vertical and horizontal relations between producing firms and makes producer-trader interrelations easier. Proximity can also promote formation of self-help organisations. Nairobi's garment markets exhibit these interfirm linkages in varying degrees. We saw some sharing of basic equipment, very limited contracting of specialised services, fairly extensive use of traders, but no sectoral associations.

Vertical subcontracting and a specialised division of labour exist in many LDC small firm clusters (Nadvi and Schmitz 1994). In some cases, a few firms provide specialised services to others in the cluster. Such basic interfirm collaboration exists to a limited degree in the garment markets. Sometimes it is as simple as lending scissors or a measuring tape. At a slightly higher level, businesses with specialised machines such as electric cutting shears or a button-holer perform certain functions for neighbouring firms. The market atmosphere, where firms operate near one another in semi-open stalls seems also to facilitate informal collaboration. Businesses reported asking colleagues for assistance with excess orders, machine breakdowns, shortage of raw materials, learning new designs, and marketing of new products (See Table 2). The small number of mini-manufacturers located outside the garment markets make meaningful statistical analysis difficult. Nevertheless, responses suggest that collaboration is taking place outside as well as inside the clusters.

Table 2: Reported Instances of Inter-firm Collaboration among Mini-manufacturers		
Form of Assistance	Affirmative Responses	
	Garment Markets %	Other Locations %
Help with excess orders	56.4	70.3
Assistance in case of machine breakdown	62.8	0
Assistance in case of raw material shortage	27.6	24.0
Assistance with designs and patterns	49.6	0
Marketing assistance	36.3	70.2

Source: Field survey, 1993.

Notes:

1. Cases are weighted to reflect the entire population of firms in the 4-50 employment range.
2. Total responses = 19 in garment markets, 3 in other locations. Chi-square statistic not significant at .05 level for any response.

Nadvi and Schmitz (1994, pp. 22-24) argue that producer-trader interrelations are especially important in LDC clusters. Noting that clustering not only encourages the emergence of specialised suppliers, but also attracts agents who sell the output to distant markets, they link the features of trader-producer linkages to the market segment to which the product is targeted. At the predominantly low-quality-low-price end of the market, such interrelations between producers and traders are generally impersonal, hierarchical, and involve little exchange of knowledge and information. When, on the other hand, quality is a determining aspect in a finished product's marketing strategy, the relationship between producers and traders becomes more collaborative, personalised, and involves elements of trust and stability.

As expected, traders are very important to mini-manufacturers for both purchases of inputs and sale of final products. Nearly three-quarters (74.2 percent) of the mini-manufacturers reported buying cloth from wholesalers. A much smaller proportion (18.0 percent) bought directly from the factory, while a few (7.8 percent) went to retail shops. The purchasing pattern for other materials was similar. The use of traders depends in large measure on firm size, though organisation also plays a role. Custom tailors and contract workshops (74.0 percent and 60.5 percent respectively) also tend to buy cloth from wholesalers, unlike the much larger mass producers who go direct to the factory.

Apart from the fact that suppliers are mostly Asian businessmen, we know very little about these cloth wholesalers or their dealings with firms in the garment markets. One aspect that clearly needs investigation is the extension of supplier credit. Only 28.6 percent of the mini-manufacturers have access to supplier credit. This is a very small proportion compared with, for example, the proportion of custom tailors receiving supplier credit. Fully 87.0 percent of the custom tailoring firms reported being able to buy materials on credit. The difference is all the more remarkable when we realise that the firms are probably dealing with many of the same wholesalers. Lack of supplier credit may be a manifestation of the association of low quality output with impersonal trading relations asserted by Nadvi and Schmitz (1994). It is also important in its own right because the ability to raise funds through borrowing or supplier credit is one of four variables distinguishing growing firms (McCormick *et al* 1994). More research into producer-supplier relations is clearly needed.

Mini-manufacturers also sell most of their output to traders. Firms report selling an average of 62.8 per cent of their products to wholesalers, compared with 18.3 percent to individuals and 18.9 percent to retailers (See McCormick *et al* 1994, p. 36). Again we know very little about these traders and their relationship with producers.

Nairobi's small-scale garment manufacturers lack effective self-help organisations. Business owners gathered at the final seminar agreed that they would benefit from forming some type of support group (McCormick *et al* 1994, p. 110). Among the functions envisioned for the group were to look into the problems of small garment manufacturers, set industry standards, and develop training programmes for employees. Although about one-third of the seminar participants attended a follow-up meeting to discuss forming a group, no concrete plans have as yet emerged. If, as Nadvi and Schmitz (1994, p. 28) argue, the effectiveness of sectoral associations is directly related to the overall development and formalisation of business practices within the cluster, we might expect Nairobi's garmentmakers to have difficulty in putting together a strong association.

5.2.2. Social and Professional Networks

The debate on industrial districts in Europe is rooted in the theory that economic relations between firms are embedded in social relations (Nadvi and Schmitz 1994). The theory has three dimensions: the belief that specific and interrelated historical, social, and cultural factors generate significantly different processes of development (Garofoli 1992); the belief that socio-cultural identities provide a basis for trust and reciprocity in inter-firm relations (Granovetter 1985, Seierup 1993); and the view that the

social milieu strongly influences and is influenced by the processes of innovation and technological change (Lundvall 1989). Our research dealt specifically with only the second of these aspects. Within the general framework of socio-cultural identities, we examined networks based on three characteristics of the firms' owners: their ethnicity, their level of education, and their gender. The three combine to determine an entrepreneur's family and professional networks.

Although Kenyans of all ethnic groups are represented in the garment industry, there are noticeable ethnic concentrations. African entrepreneurs predominate in custom tailoring and mini-manufacturing (see Table 3). Asians own half the contract workshops and all of the mass producing firms in our sample, though small sample sizes may again distort the percentages for these types. Asians, though less than one percent of the population, own more than one quarter of all garment firms. Nearly eighty percent of the mini-manufactures are members of Kenya's two largest ethnic groups, the Kikuyu and the Luo. The remainder are equally divided between Asians and member of other Kenyan communities. No Asian entrepreneurs operate within the garment markets.

Firm Type	Firms		Ethnic Group (%)			
	N	%	Kikuyu	Luo	Other African	Asian
Custom Tailor	13	33.7	30.0	20.0	30.0	20.0
Contract Workshop	4	9.6	12.5	25.0	12.5	50.0
Mini-manufacturer	22	54.6	42.1	36.8	10.5	10.5
Mass Producer	1	2.1	0.0	0.0	0.0	100.0
TOTAL	40	100.0	30.0	27.5	15.0	27.5
Percentage of Kenyan population			20.9	12.8	65.1	0.5

Source: Own survey, 1993.

Notes:

1. Cases are weighted to reflect entire population of firms in 4-50 employment range.
2. The significance of the chi-square statistic for differences in ethnicity by type of firm is .0683; the lambda statistic for dependence of firm type on ethnicity is .1429.
3. Population figures are based on 1979 Census Data (Kenya 1991).

Gender can also be the basis for networking. Most (79.2 percent) of the entrepreneurs are women. Nearly half (46.9 percent) have only a primary education or less; half (51.9 percent) have some secondary education. On average entrepreneurs in mini-manufacturing are the least educated in the industry (McCormick *et al* 1994). Women and men often belong to different social groups and maintain their social ties in different ways. Even within the same family, the social networks of male and female members may differ. Often these social networks are sex-segregated, with men belonging to primarily male networks and women to mainly female networks. Women's generally disadvantaged position in Kenyan society means that women's networks probably provide less access to power and resources than men's networks. Since nearly all of the owners of mini-manufacturing firms are female with fairly low educational attainment, we would expect their networks to be fairly weak in

working for the business.

Education largely determines a person's professional networks. These networks, which can be crucial for mobilisation of adequate managerial and technical skills, consist of colleagues, schoolmates, the former boss, and stable customers and suppliers from former jobs (Rasmussen 1992). Professional networks offer access to customers, market information, and production networks that can, in turn, lead to higher profits and better sources of finance. Those with higher levels of education will have better placed schoolmates, former workmates who have advanced to higher positions, and skills that enable them to track friends and colleagues who might be able to be of assistance to them.

All business owners use family and professional networks to some extent. The ability of the networks to provide positive support, as well as the nature of that support appear to vary according to the firm type and the ethnicity of the owner. At the high end of the spectrum are the Asian owners of mass producing businesses who can take advantage of the entrepreneurial tradition and established business and professional networks of their ethnic group. At the other is the typical mini-manufacturer: a woman with only a primary education whose chief linkages are to a peasant-farming family in a distant rural area.

Our evidence on how these networks operate is more anecdotal than statistical, but we believe that at least partially explains the different operating styles and growth potential among garment manufacturers. The family and professional networks of many Asian entrepreneurs include textile wholesalers, shop owners, bankers, other garment producers, sewing machine vendors, and a wide range of middle-income consumers. This network can be

tapped formally or informally. The entrepreneur buying fabric from a wholesaler in the family network is formally working through the solidarity group. Many times, however, the interaction is informal: a casual conversation at the club or mosque, or a discussion at a family gathering. Formal and informal access to family and professional networks gives the entrepreneur many opportunities to increase technical competence, knowledge of the product and the market, management capability, and information about relevant local or national industrial conditions. Asian networks are generally on a high level, making their effect on business performance overwhelmingly positive.

The family and professional networks of African entrepreneurs are not so uniformly supportive of business endeavours. A typical mini-manufacturer exemplifies the mixed effects of African networks. The business owner is a woman with a primary education. She came to Nairobi after she was married, but maintains very close ties with her rural home. She almost always has a young relative staying with her, either attending school or looking for employment. She may have been previously employed at a low-level job. If she is married, her husband may be a civil servant with the same or somewhat more education. Her strongest networks are with the family in the rural area and people from her home village now living in Nairobi. When she wanted to start her business, she feared the bureaucratic procedures. Like other African migrants to the city, she brought with her a mode of social and economic interactions characterised by face-to-face relations and contacts based on kinship or personal acquaintance. Thus, instead of going alone to city hall to apply for a licence or obtain a market stall our prospective entrepreneur would have looked for someone known in city hall to go on her behalf. The person may be a relative, schoolmate or somebody from the same village. In this way, the

family or professional network was used to enable a business to start. Our entrepreneur may also use the family network to find a market for her products. We have already seen that mini-manufacturers typically sell in rural markets, and that one of the destinations for their output is usually near the entrepreneur's home area.

This discussion of networks has ranged over a variety of issues. Two points bear emphasising. First, mini-manufacturers have effective networks, but their networks usually lead to rural markets where profit margins are necessarily low. Second, the garment markets have an "air" of socio-cultural identity that is lacking in some other segments of Kenyan manufacturing. Apparently stemming from the common background of workers and entrepreneurs, this identity seems to create a cohesiveness and esprit de corps in the markets.

5.2.3. Dynamism and Resilience

One of the supposed advantages of clustering is the way in which the specialisation and flexibility made possible by grouping enables individual firms and the cluster itself to survive economic declines and/or shifts in consumer tastes and preferences. In developed countries, the supposed rigidities of "Fordist" mass production have been compared unfavourably with industrial districts housing firms of different sizes and specialisations (Piore and Sabel 1984; Hirst and Zeitlin 1989).

Firm Type	Firms		Mean Employment per Firm			Mean Employment Change 1989-93
	N	%	Initial	1989	1993	
Custom Tailor	13	33.7	3.82	4.09	2.42	- 1.67
Contract Workshop	4	9.6	2.75	7.67	5.55	- 2.12
Mini-manufacturer	22	54.6	2.50	4.30	3.48	- 0.82
Mass Producer	1	2.1	24.33	42.00	47.33	+ 5.33
TOTAL	40	100.0	3.50	5.37	4.26	- 1.11

Source: Own survey, 1993.

Notes:

1. The significance of F-statistics for differences in means is .001 for initial, 1989, and 1993 employment, and .002 for employment change.
2. Cases are weighted to reflect entire population of firms in 4-50 employment range.

The period from 1989 to 1993 was difficult for Nairobi's garment industry. Not only was the domestic economy declining, but the garment industry was also buffeted by competition from second-hand clothes. The only bright spot -- the export market -- was accessible to only a small number of larger firms. It was, in some ways, the ideal time to test the supposed benefits of clustering. The data on mini-manufacturers seem at first glance to support the hypothesis that clustering helps firms to withstand economic difficulties. Like custom tailors and contract workshops, mini-manufacturers lost workers between 1989 and 1993 (see Table 4). Mini-manufacturers' employment, however, declined less than the other types, suggesting that the location of most of these firms within the garment markets might have exerted some positive influence on their performance.

Further analysis, however, appears to contradict this conclusion. A discriminant model, designed to distinguish between shrinking and growing mini-manufacturers, shows a negative correlation between location within the garment markets and firm growth. In fact, the three firms located outside the markets were growing, while most of those inside the markets were not (McCormick *et al* 1994, p. 96).

This apparent contradiction can, in fact, be reconciled. Location in the garment markets is a mixed blessing. The inter-firm linkages discussed above offer the clearest benefits, but these appear to have been superseded, at least in the recent past, by the negative features of the garment markets. Limitations on growth caused by lack of security of tenure and the inadequate physical arrangements of the markets seem, in this period at least, to have more than offset the benefits of clustering.

The garment manufacturers in the markets have no security of tenure. Stallholders have no lease. Instead their occupation of a stall depends on the payment to the Nairobi City Council of a rent or a stall fee set by the Council (The City of Nairobi By-Laws, 1948, amended to 1967, Section 3). The City Council frequently behaves in a punitive manner and in direct contradiction to the stated policies on small-enterprise development. In the recent past, hawkers have been more seriously affected by arbitrary City Council action than market stall holders, but the fact remains that a garment producer whose rent is late could be summarily evicted. Firm founders, realising their insecure position, may be unwilling to expand beyond a level where they could absorb the losses.

Conditions in the garment markets are not conducive to efficient manufacturing. It is not surprising, therefore, that mini-manufacturers show

the highest number of workers per unit of value added and the lowest total factor productivity (McCormick *et al* 1994). The relatively cheap products made by these firms undoubtedly explain some of the relationship of value added to labour. More important, however, may be their situation in premises that make efficient manufacturing nearly impossible. The lack of suitable premises may also hamper technological change among the mini-manufacturers. Specialised machines not only require more space but also need security from thieves and fires unavailable in the garment markets. The introduction of faster and more efficient machines may also be hindered by the inadequate power supply.

Product quality and design are also affected by lack of space for cutting and finishing and the poor lighting. Introduction of new designs to meet changing consumer tastes requires secrecy. In the garment markets, however, as soon as an entrepreneur introduces a new design or an entirely new product, it is copied by others, denying the innovators the benefits of their creativity. Profit margins stay uniformly low, and firms cannot grow.

6. CONCLUSIONS

This final section summarises the findings, points to needs for further research, and outlines interventions that might assist the clusters to develop.

6.1 Findings and Research Needs

Nairobi's garment markets lie somewhere between a true industrial district and a simple sectoral agglomeration of firms. Like many LDC clusters, the garment markets exhibit weak internal and external linkages. The inter-firm specialisation and division of labour that is supposed to be key to

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collective efficiency was almost totally lacking. Those inter-firm linkages that exist are often informal and at a low level. Producer-trader links appear to be important for both inputs and the sale of final products. Details of such linkages were, however, missing, making it impossible to assess the closeness of the relationship or the influence of the traders on quality, design, or innovation. Sectoral associations do not exist, though some entrepreneurs have expressed interest in forming an association.

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Evidence on ethnicity, gender, and education suggests that entrepreneurs' social and professional networks are important to their business operations. The typical mini-manufacturer is using her networks well. The problem is that most of these entrepreneurs are poorly educated African women whose networks have limited power to uplift a business. Some lead back to rural markets where competition with second-hand clothes keeps profit margins extremely low. Others encompass the lower ranks of city bureaucrats and professionals who can assist with licences or access to premises like the garment markets, but who lack the power to help a business to change significantly.

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Mini-manufacturers' businesses have exhibited a certain dynamism and resilience during the recent economic downturn. Their performance, which was slightly better than the performance of custom tailors and contract workshops, appears to be the net result of contradictory forces. On the one hand, clustering probably did produce some real benefits, especially in the area of producer-trader relations. On the other, poor conditions in the market appear to be working against efficient production and product development.

Our conclusions are limited, as already mentioned, by a study design which was not focused on clustering. New studies to test our findings and fill

in the information gaps are now needed. Such studies could follow the model suggested by Nadvi and Schmitz (1994, pp. 59-61). The most crucial needs are for a better understanding of the role of traders, both suppliers and traders in final products; a better understanding of entrepreneurs' social networks; and finally, if we are to judge the effects of clustering on firm performance, data on the efficiency implications of clustering.

6.2 Possible Interventions

Based on the information gleaned thus far, it is possible to identify a few interventions that should improve the performance of firms in the garment markets. Government, NGOs, and small and large firms in the private sector all have a contribution to make.

Evidence both from European industrial districts and LDC clusters suggests that the state, especially at subnational levels, can perform an important function in providing institutional support to industrial districts (Schmitz and Musyck 1993; Nadvi and Schmitz 1994). Despite a strong policy commitment to the furtherance of small enterprises, the Kenya government has done little to assist either individual garment producers or their business clusters (Kenya 1993). One problem seems to be lack of coordination between national policy and implementation, which is often in the hands of local authorities. The insecure tenure arrangements and poor condition of the garment markets are examples of the inability or unwillingness of local government to implement national policy (McCormick 1993; McCormick *et al* 1994). The Kenya Government needs to review laws governing African markets. The principles of periodicity and temporal conditions upon which the Nairobi City By-Laws seem to have been based no longer hold for markets such as Quarry

Road and Uhuru. In particular, the By-Laws need to be updated to include a section on the rights of stall holders. The city should also commit itself to improved maintenance of the markets.

NGOs in Kenya currently offer many services aimed at fostering small enterprise development. The findings of this research suggest that it would be fruitful for NGOs to continue their emphasis on credit and training, but with perhaps a slight change in emphasis. Mini-manufacturers have very little access to credit. The lack of banks near the garment markets also suggests that mini-manufacturers probably have few other banking services. NGOs could help by locating field offices near the garment markets to enable loan officers to become more familiar with the operations and particular problems of the mini-manufacturers. This should result in more firms gaining access to current NGO loan programmes. In the longer term, mini-manufacturers may stand to benefit from the shift on the part of some NGOs from credit delivery to more comprehensive forms of financial intermediation (Otero 1994, Robinson 1994).

Mini-manufacturers' low-quality strategy is showing signs of failing under competition from better quality, but similarly priced second-hand clothes. The clothes, which were at first available mainly in cities and large towns, have now reached the smallest rural markets. If mini-manufacturers are to alter their market strategy, they will need assistance. In particular they will require training to enable them to improve their quality without drastically increasing their costs. NGOs could assist by offering such training at times and places convenient to the entrepreneurs.

In the private sector, larger garment firms, private investors, and the small firms themselves could all play a role in strengthening the mini-

manufacturers. Larger firms can assist NGOs with training for improved quality. This would be especially appropriate if large and small firms also explore the possibility of mutually beneficial subcontracting relationships. In this event, the quality of small-firm output becomes a major concern of the subcontractor. Improving quality will probably also require better premises. In the current political and economic climate, it seems unrealistic to expect the Government to make major improvements in the garment markets. It may be possible instead to interest real estate firms or other private investors in developing suitable space for rent on commercial terms. Finally, the small firms themselves can form one or more associations that will give them greater strength in bargaining with City authorities and provide a forum for continuing to explore common problems. Our experience with the garmentmakers' seminar suggests that producers and researchers would both benefit by working together on the issues of enterprise development.

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NOTES

1. This paper was originally presented at a Workshop on Industrialisation, Organisation, Innovation and Institutions in the South held in Vienna Austria, 17-18 November 1994.
2. McCormick was the principal researcher in all three phases. She worked alone in phase one. Mary Njeri Kinyanjui and Grace Ongile collaborated in phases two and three. We gratefully acknowledge the financial support that made the research possible: Social Science Research Council (USA) for phase one, Centre for Development Research (Denmark) for phase two, and the International Centre for Economic Growth (USA) for phase three. We are also grateful to the business owners who have responded to our many questions over these past five years.
3. This section draws heavily on a summary description of the clothing industry contained in the International Labour Organisations' report on its Third Tripartite Technical Meeting for the Clothing Industry (ILO 1987) and on Cable (1987).

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