

LOCATIONAL INERTIA IN SOUTH AFRICAN CLOTHING FIRMS

Diane Flaherty
Department of Economics
University of Massachusetts
Amherst, MA 01003 USA
e-mail: chair@econs.umass.edu

The location decisions of firms, particularly in labor-intensive sectors, are a critical determinant of regional employment growth. Moreover, the type of firms that relocate or open in poor regions will determine how stable and income-generating are the new jobs. If marginal firms relocate solely because of lower wages, we would expect that the jobs created are both low pay and transitory, vulnerable to flight of capital to still lower-wage areas or countries. In contrast, new firms with more modern technology and higher skill requirements provide a firmer base for both employment growth and spillover effects that foster growth of ancillary sectors. In most literature of globalization and of regional growth, poor regions in South Africa would be identified as attractive only to 'low-road' firms, those moving because of sensitivity to wages. If this characterization is true, firm relocation is at best a short-term solution to unemployment problems in outlying areas. This paper analyzes locational decisions of firms in the South African clothing sector to evaluate possibilities for job creation. From a survey of 74 clothing firms, the determinants of both firm performance and location are examined. Results of the survey show that firms can grow in both central and outlying areas and that relocation to outlying areas is not limited to low wage, low technology firms. However, locational inertia is still strong among the more modern firms in these sectors. Implications for policy are that government support of certain types of infrastructure and inter-firm linkages may accelerate the movement of 'good' jobs to outlying areas, but that the level of support must be high to overcome resistance to relocation. Still, the payoff to regional industrial policy may be more substantial than suggested by theories that focus on wages as the main criterion for location decisions. Since modern firms can succeed in poor regions, there is more potential for upgrading skills of the labor force and for penetrating high-end markets than typically is associated with firms in low-wage regions.

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Introduction

The location decisions of firms, particularly in labor-intensive sectors, are a critical determinant of regional employment growth. The type of firms that relocate or open in poor regions will determine how stable and income-generating are the new jobs. If marginal firms relocate solely because of lower wages, we would expect that the jobs created are both low pay and transitory, vulnerable to flight of capital to still lower-wage areas or countries. In contrast, new firms with more modern technology and higher skill requirements provide a firmer base for both employment growth and spillover effects that foster growth of ancillary sectors. Most literature on globalization and regional growth would identify poor regions in South Africa as attractive only to 'low-road' firms, those moving because of sensitivity to wages. If this characterization is true, firm relocation is at best a short-term solution to unemployment problems in outlying areas. This paper analyzes locational decisions and characteristics of firms in the South African clothing sector to evaluate possibilities for job creation in outlying areas.

The first widely held theory of geographic relocation of firms posits that the dominant choice of competitive strategy in mature sectors like clothing is to move to low-wage areas. As products become more standardized and capital more mobile, routine phases of production move to where the low skill required of the mass-production techniques is matched by low wages. This contention, the central proposition of 'New International Division of Labor' (NIDL) theory of location, concludes that firms relocating to less-developed countries and areas are likely to be Fordist in their production structure, using mass-production techniques with low-skill and low-wage labor. From an NIDL perspective, South Africa as a whole and the poorer regions specifically are fertile ground for international capital of this low-road variety. Applying this paradigm to capital movements within South Africa, we would expect to find relocation to lower wage parts of South Africa by Fordist firms while more modern operations would remain in central areas.

A countervailing theoretical perspective, broadly defined here to include theories of post-Fordism, new competition and flexible specialization, argues that increased competition will force firms to focus on locations that support high levels of technology and automation. Firms following this competitive strategy will tend to locate near specialized inputs, including skilled workers, rather than near cheap labor. The preferred competitive strategy in these latter theories is diametrically opposed to the Fordist strategy based on low skills and low wages. Preferable is a strategy of flexible response to changing markets, where flexibility depends upon use of high-technology machines and skilled, autonomous workers. Functioning best when embedded in a broader system of related firms, such flexible specialization firms would tend to clump in already developed or central areas to reap economies of agglomeration. Poorer areas would then be left with backward and marginal firms.

Evolutionary theory of the firm provides a third framework for understanding location. This theory highlights 'core competencies' and incremental learning as the intra-firm behaviors crucial for competitiveness. Developing these competencies may be easier with urbanization or localization, but it also can be relatively independent of location depending upon the specific competencies involved. Hence, from an evolutionary standpoint, location decisions cannot as determinately be read off from competitive strategy as in NIDL or post-Fordist theories.

Consequences for employment in South Africa, particularly in outlying areas, are not very positive in any of these three theories. In the NIDL story, employment will indeed increase in at least some poorest countries or regions. Unfortunately the employment is both low-wage and transitory, since capital is always searching for still lower wages for the Fordist segments of its production. Further, such growth may simply be of the beggar-thy-neighbor sort, with no net increase in jobs as factories in central areas close with the expansion of employment in less-developed locations. Given the relatively low productivity of South Africa compared to other low-

wage countries, movement of production to poor regions may be very short-lived. On the other hand, the flexible-specialization strategy discards low skill workers and discounts outlying areas. The price of firm-level success in flexible specialization in the clothing industry would be a transformation so thorough that the industry would no longer have the highest employment coefficient and lowest skill requirements in manufacturing. Evolutionary theory, while locationally indeterminate to some degree, does suggest specific locational criteria that also generally bode ill for South African clothing, specifically ability to identify and take full advantage of local competencies.

Results from a survey of 74 clothing firms in South Africa find that the simple prescriptions of either the NIDL or the flexible specialization models are too unidimensional. The locational indeterminacy in evolutionary theories provides a more accurate basis for understanding movement, as it points to notable exceptions to the otherwise pessimistic conclusions about competitiveness of clothing production.

The first section of the paper briefly summarizes relevant strands of theories of firm structure and location. The second section provides an overview of the industry and describes the survey and the characteristics of the surveyed firms. A third section identifies the distinguishing characteristics of firms that have relocated or are planning to relocate and interprets these differences in light of theoretical expectations. The concluding section draws out policy implications from the survey results. The central conclusion is that more and better jobs can move into poor areas than generally thought, but realization of possibilities requires government intervention to bear some of the costs of information and relocation.

1. Theories of Firm Structure and Location

Firms locate and relocate depending upon their competitive advantage and the locational bases for achieving that advantage. In the clothing industry, rapidly changing competitive environments associated with globalization have shaped the nature of competitive advantage and hence the parameters of the location decision. Theoretically, firms are inertial or footloose because of both internal and external circumstances. Factors internal to the firm include the production process, ownership structure, design, marketing and distribution channels. External factors like the level of infrastructure, the degree of urbanization or localizationⁱ and the nature of the labor supply interact with internal characteristics of the firm to determine the location decision. As globalization has altered the internal structures of firms, sensitivity to external environments has increased, but this by no means has led to one unambiguous tendency for location. In this section, a brief review of theories of competitive strategy and location concludes with a typology of firms and their likely location decisions.

The nature of the production process is the primary link connecting theories of competitive strategy with location. Three main bases for competition are considered here, Fordist, flexible specialization and evolutionary. Each basis for competition is associated with an internal structure of the firm and, by implication, a theory of location. Chart 1 presents a stylized description of the salient features of the Fordist and the flexibly specialized firm. The chart assumes that in general Fordist firms will be less modern, dependent upon lower skill and lower wage labor. Its market niche is at the lower end and its internal division of labor is not very developed. Hence, with specific reference to clothing, a Fordist firm would have a high concentration in CMT (cut, make and trim) rather than producing a full product. The flexible specialization firm is more reliant on technology and an organization of work that fosters independence and adaptability among workers. Its internal structure is derived from its market niche, the highly changeable upper end of the market. In clothing it will design rather than simply assemble garments.

The stylized features of the production process imply locations for each type of firm. An NIDL view of globalization and location, for example, predicts that a separable production process, one

amenable to vertical disintegration by location, will hive off the Fordist activities to low-wage countries. (Frobel, Heinrichs and Kreye, 1980; Nadvi, 1994; Lipietz, 1987; Markusen, 1992; Sharpston, 1975; Stewart, J.C., 1976) Production of standardized products subject to economies of scale will search out low wages. The strong locational proposition from this perspective is that '...the general nature of regional or national economies can be 'read off' from their place within the corporate division of labor'. (Sayer, 1992, p. 94) Such firms are assumed to be footloose because the capital requirements are simple and unskilled labor is available across a range of less-developed countries and regions. Flexible specialization theories, otherwise in conflict with an NIDL approach, also focus on the imperatives of the production process, emphasizing the need for skilled labor, specialized inputs and infrastructure. (Piore and Sabel, 1984; Storper, 1992) The locational implication is that firms relying for competitive advantage on skilled labor and sophisticated direct and ancillary inputs are inherently suited for an urbanized setting and therefore less footloose.

Chart 1: Stylized Description of Fordist and Flexible Specialization Firms

	Fordist	Flexible Specialization
Age	Old	New
Product	Standardized: mass production	Specialized: variable production runs
Capital stock	Can be old	Must be modern
Worker participation	Not likely; can be inconsistent	Necessary
Multiskilling	Not likely; can be inconsistent	Necessary
Labor relations	Conflictual	Cooperative
Labor turnover	High	Low
Labor skill	Low	High
Wages	Low	High
Market segment	Mass market	Fashion market
CMT use	High	Low
Location of production	Less-developed	More-developed

Critiques of characterizations of the Fordist factory as footloose and the flexibly specialized firm as inherently inertial focus on locational parameters beyond direct labor and capital requirements. Empirical evidence motivates some elaborations of location theories, since much evidence does not support a simple association of NIDL or flexible specialization with location. Firms are much more concentrated, particularly in less developed countries, than a simple NIDL theory would suggest. (Lall, 1998, p. 56; Ietto-Gillies, 2000, p. 418; Schoenberger, 1989, p. 92; Venables, 1998, p. 3; Shelburne and Bednarzik, 1993, pp. 4-6) Moreover, the globalization of production has occurred in sectors with very limited economies of scale. (Storper, 1992, p. 62), high-technology rather than low-technology sectors have seen the largest shifts from developed

to less developed countries (Lall, 1998, p. 58) and large US and European firms in textiles, clothing and footwear 'base their location decisions primarily on their market strategies rather than production costs'. (ILO, 2000, p. 31)

Theoretically, critiques have in common a more dynamic view of competitive advantage and of the process of globalization. If we move beyond the production process *per se* and take into account other factors like ownership structure, market structure and potential for innovation, the location decision even in firms with simple production processes becomes more complex and volatile. For example, globalization of production, as predicted by NIDL theories, has indeed changed the form of ownership through penetration of foreign capital into the clothing industries of LDCs. Nonetheless, this has not lead exclusively low-wage and low-skill jobs to move to poor countries. Ownership by a large group allows a firm to bypass local sources of inputs ranging from skilled labor to information about new techniques. Location thus becomes less important, since the parent company can provide at least some of the specialized inputs otherwise provided by urbanization or localization. The firm is more footloose and location more uncertain as the location decision comes to depend upon needs the firm cannot satisfy through the resources of the group.

On the other hand, single-proprietor firms may be more dependent upon external sources of inputs and infrastructure and therefore exhibit a stronger tendency to locate in urbanized or localized environments. These two different locational decisions are independent of production process: two firms with identical processes but different ownership structures confront different locational constraints. Behavior will also vary with the type of group ownership. Firms belonging to truly multinational groups have both more resources and more modern benchmarks for all aspects of production than firms with a concentration in the home location and only a few foreign branches. The latter firms, although strictly speaking multinational, are not globalized in the sense of operating to international standards. In South African clothing, an example of the latter type of firm is the many East-Asian factories located in former homelands that are branch plants of small, family-owned parent companies. Such firms are not supported by significant financial or technical resources and therefore are more dependent upon local conditions for success. These firms tend to have a more single-minded focus on wages in the location decision and more primitive production techniques and labor practices.

Adding to the complexity of location decisions, recent changes in the competitive environment world-wide have reduced both the size and the consequences of differences in capital among countries and regions. Two of the most prominent changes in the clothing industry are the spread of automated machines and subcontracting, the locational implications of which are not entirely straightforward. Subcontracting is typically associated with 'sweatshop' production, low-wage, low-skill and low value-added production in poor areas. However, with increasing concern for quality and global homogenization of technology in clothing, firms in outlying areas are looking more like those in advanced countries. Indeed, subcontracting arrangements often specify the technology to be used by the contracting firms regardless of location. The cost of new technology may have locational implications since it favors larger firms with resources to invest in new technology. If larger firms mainly pursue decentralization as a competitive strategy, production will move on balance to outlying countries or areas. If, however, large firms have sunk costs in technological learning and economies of scale they do not wish to disturb, location may remain in developed areas. (Lall, 1998, p. 63) Location in developed or central areas is reinforced when automation reduces unit labor costs, or simply reduces the share of the wage bill in total costs, since firms then become less sensitive to wage rates as the decision criterion. In South African clothing, large firms have been both inertial and footloose, with those in and around Durban tending to decentralize to low wage areas while those in Cape Town are more inertial. As discussed below, these differences in part reflect variation in market segment or product type, but firms are also highly variable within product type.

When firms do adapt new technologies, their location decisions may change depending upon whether new technologies are deskilling or reskilling. Contrary to a simple NIDL view, reskilling is

potentially significant even when firms move to subcontracting because of both increased quality requirements and the demands of automation for more skilled workers. (Sayer, 1992; Kelley, 1989; Cavestro, 1989) The location decision then depends upon whether reskilling puts demands on the firm that can only be met in urbanized or localized environments. The firms in this sample have moved in both directions with new technology, towards deskilling and reskilling. Even reskilling does not have a strict locational outcome, however. Some of the sample firms reskilling their labor force have found central areas necessary for competitive advantage while others have found outlying areas superior. The differences depend on several characteristics of management and market niche of the firm, which affect the kind of reskilling undertaken. In part, the difference in locational decisions of Cape Town and Durban firms noted above reflects different attitudes toward reskilling.

Consequences of differences in capital have diminished along with decline in the technology gap across countries and regions. As competitive advantage has come to depend less on the type of capital employed, the role of information in general and tacit knowledge in particular has become more prominent in reducing unit cost. Evolutionary theory of the firm highlights several ways in which firms acquire and use information and tacit knowledge to construct a competitive advantage. (Nelson and Winter, 1982; Dosi, Teece and Winter, 1991; Maskell and Malmberg, 1999; Malerba, 1992; Amin and Wilkinson, 1999; Venables, 1998). Overall, locational implications of evolutionary theory are not favorable to less developed countries, which have a more difficult time in both acquisition and use of knowledge. However, both theoretically and empirically firms in poor as well as developed countries have several methods of overcoming information bottlenecks. First, there are possibilities for acquiring information from external sources. Parent companies have already been mentioned. Other sources include networks of similar firms, customers and suppliers of machinery. Network connections serve a dual purpose of stimulating information flows and improving the capacity to absorb and implement information.

Static and dynamic agglomeration economies exist even for simple activities, as industrial districts in clothing and other labor-intensive activities demonstrate. As globalization levels the capital stock and puts pressures on costs, networks as one type of agglomeration economy become more critical to realization of competitive advantage, particularly for smaller firms.ⁱⁱ To the extent that customers and suppliers are the main sources of information, however, footloose firms can achieve some of the benefits of networks without proximity to firms in the same sector. Thus, the effect of the increased role of information depends upon the way in which any given firm is linked to the sector as a whole.

Tacit knowledge has a stronger locational effect, although the specific character of the optimal location depends upon firm-specific core competencies. As Nooteboom has pointed out, 'When knowledge is tacit, strong ties, based on enduring and intensive interaction, may be needed'. (Nooteboom, 1999, p.140) Even in multinational companies, 'globalization can be seen as an information problem, requiring the mobilization and integration of 'fragmented forms of localized knowledge'. (Cohendet, Kern, Mehmanpazir and Munier, 1999, p. 225) The local thus becomes more important within the global economy and firms can be footloose only when the costs of drawing out tacit knowledge and developing firm-specific competencies in a new location are not prohibitive. Since exploitation of tacit knowledge requires trust and experience, footloose firms will bear a cost for their mobility. This is particularly true for sectors like clothing, in which the technology is relatively simple and easily standardized globally, placing the burden for competitive advantage more on firm-specific competencies.ⁱⁱⁱ

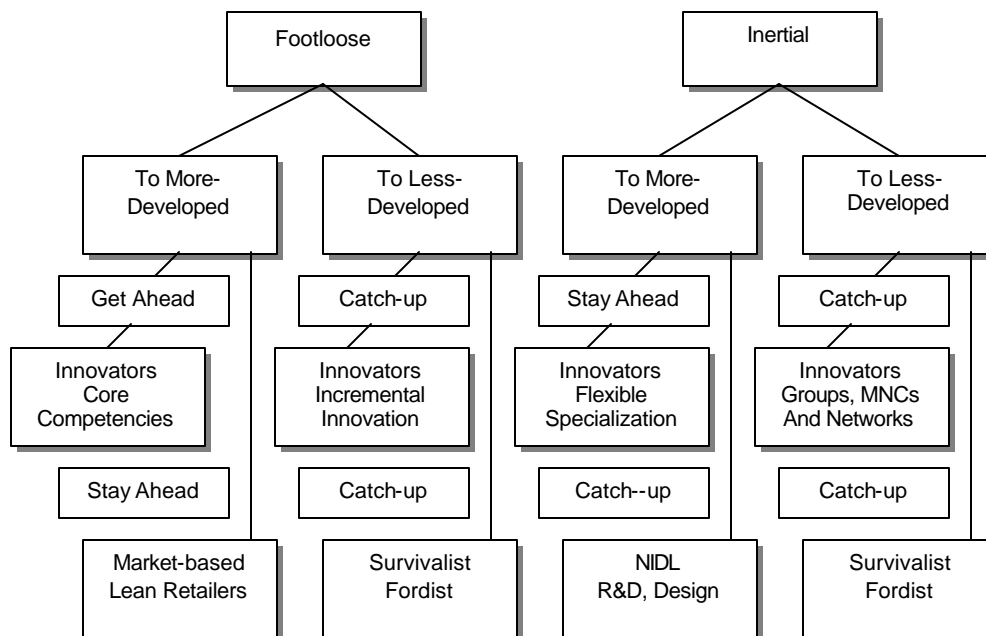
Changes in marketing and distribution globally also affect how footloose or inertial a firm can be. Conventional wisdom about the clothing sector has been that the increased volatility of fashion, even in mass market production, militates against long runs of standardized items and fosters 'lean retailing', which in turn reduces the advantages of far-flung production sites. The relatively new role of agents as providers of inputs and other services means that to some extent, retailers of clothing can now push off the risk of market volatility to agents. (Gereffi, 1994; ILO, 2000) This undermines another standard assumption of global production, that the market niche

of the product has strict locational requirements. However, the function of agents as suppliers of full packages allows lean retailing to coexist with production in distant locations. As Gibbon has found for UK clothing retailers, although there is some association between the fashion content of the garment and proximity of production, most movement of sourcing has been within a ring of more remote developing countries rather than closer to the UK. (Gibbon, 2000, p.28)

A final set of location criteria is difficult to classify but have become more important with the homogenization of production processes globally. Several studies have found that multinational companies tend to focus increasingly on factors like political stability, human rights^{iv}, personal security and standard of living for managerial personnel. (Gibbon, 2000; Gereffi 1994; Kogut, 1985; Asdorian, 1992; ILO, 2000 and Galbraith, DeNoble and Estavillo, 1990; Spalding-Masgarha, 1995) Models of location distinguishing by among firms type of product suggest that location may perform a marketing strategy, by 'branding' goods.^v (Haucap, Wey and Barmbold, 2000) These factors all would be of relevance to South Africa, where issues of political stability and security have been found significant to UK clothing retailers when sourcing product (Gibbon, 2000) and where the domestic upper-market retailers express concern for the image of production from outlying areas.

The implication of these additional locational parameters is that if low wages become less important relative to such environmental factors, firms may become more footloose as countries with higher wages but higher stability or security become more attractive. On the other hand, firms already located in stable or secure areas are less likely to follow wages alone, and therefore may be less footloose. As the sample firms demonstrate, a firm will respond more or less sensitively to environmental factors according to its experience or familiarity with other regions.

Figure 1: Typology of Firms by Mobility and Competitive Strategy



This survey of location theories suggests that criteria for location have proliferated as globalization has leveled technology across countries and brought to the fore more complex bases for competitiveness. Putting together the possible directions of movement, to and from less-developed areas, and the many motivations for movement, Figure 1 presents a typology of firms based on a set of stylized facts distinguishing footloose and inertial firms by direction of movement and competitive strategy.

Footloose firms moving back to more developed regions are of two broad types. First are those who are restructuring production to achieve core competencies and who discover that urbanized or at least localized environments are necessary to support a more streamlined production process. These firms display two kinds of mobility, first moving to more developed areas and then among these areas as requirements of the production process evolve. Firms looking for the advantages of lean retailing or other advantages of proximity are also moving to more-developed areas. These firms, particularly in clothing, are innovative not in the production process but rather in distribution and marketing arrangements. Moreover, they are particularly footloose in that they are very sensitive to shifting trade policy. Companies that have moved from very poor Asian or African countries to the Caribbean basin with changing US trade initiatives are an example from the clothing industry.

Footloose firms moving to less developed areas are also of two types, including the well-known Fordist kind of firm that follows a low road and moves according to wages.^{vi} Less recognized is the second type, the incremental innovators who may be affected by wage differentials in their location decisions but who are nonetheless not following a low road. These firms comprise the most interesting and surprising cases in the sample of South African firms.

Firms resistant to moving also vary by location and type. Those who stay in more-developed areas are highly dichotomous, including the most advanced firms, those engaging in flexible specialization or new competitive strategies,^{vii} as well as the remnants of those who have chosen an NIDL strategy, keeping only design, R&D and administrative functions in the central areas while subcontracting out other types of production. The difference between the two is that the former pursue an innovation strategy of the get-ahead type (Mytelka, 1998), while the latter are typically catching up with other NIDL firms with production facilities in low-wage countries.

Inertial firms in less-developed areas also include the usual Fordist or survivalist firm, likely the production facilities of the NIDL companies, either directly or through sub-contracting. More interesting are the innovators in the less-developed areas. The most common form of innovation is incremental, similar to that of the footloose firms relocating to less-developed areas. But firms already in less-developed areas, who are likely to have made the move originally because of wages, increasingly are using networks with other firms and with their MNC contractors to realize innovations. Innovation may be internally driven or forced upon these firms by MNC requirements, as noted above. In the South African sample, both kinds of innovators are found and both demonstrate the explanatory power of an evolutionary theory of the firm in understanding innovation.^{viii}

Figure 1 illustrates two main results of the theoretical and empirical literature on location. First, many types of firms co-exist and virtually every theory of location discussed above does find an empirical basis. Second, less-developed areas do sustain dynamic and innovative firms despite their virtual invisibility to several of the theoretical frameworks used to analyze globalization. The variety of location decisions shown in the figure is apparent in the South African firms surveyed, with a strong presence of the catch-up innovators in or moving to less-developed areas.

2. The Clothing Industry Internationally and in South Africa

The clothing industry internationally has both expanded and moved in the 1990's. Between 1980 and 1995 the value of world production of clothing rose by 59 percent,^{ix} with world output estimated at \$335 billion in 1998 (not including Africa and Oceania, which account for roughly 3 percent). (ILO, 2000, p.4) Regionally, the value of production grew in the U.S. by 67 percent and in Asia by 177 percent, while European production contracted by 13 percent. By major trading blocs, between 1980 and 1995 the ASEAN countries expanded output of clothing by 756%, MERCOSUR by 292% and NAFTA by only 46%, less than the EU growth of 55%. In the same period, the EU share of world trade in clothing fell from 48% to 26% while the Asian share rose from 27% to 46%. By 1998, the Asian share was 50%. (ILO, 2000, p. 8)

As Table 1 shows, clothing employment fell from 1980-1995 by 16.2 percent but from 1995 to 1998 showed a strong rebound with 28.9 percent growth. Employment displays the same regional pattern as output, with Asian employment growing by almost 80 percent and US and European employment contracting between 1995-1998.^x

Table 1: World Clothing Employment and Trade

	Africa	America	Asia	Europe	World	Latin America	C./E. Europe Baltic States/CIS
Change in clothing employment (%)¹							
1990-95	12.5	-11.1	-1.4	-35.2	-16.2		
1995-98	12.4	-16.2	79.1 ³	-12.2	28.9		
Share of clothing in merchandise trade (%)² 1999							
Exports	1.2	1.2	4.4	2.7		1.4	
Imports	5.6	1.5	3.6	2.5	2.7	3.2	4.6
Share of clothing in total manufacturing trade (%)² 1999							
Exports	4.0	1.6	5.3	3.3	3.5	2.3	
Imports	7.9	1.8	5.0	3.2	3.5	4.0	6.5

Sources :

1. *Labour Practices in the Footwear, Leather, Textiles and Clothing Industries*: Report for Discussion at the Tripartite Meeting on Labour Practices in the Footwear, Leather, Textiles and Clothing Industries. Geneva, 16-20 October 2000. International Labour Office.

2. World Trade Organization *International Statistics: Historical Series*

Note 3: China is not included.

Overall, the South African experience has been closer to European contraction than Asian or even African growth. By volume and type of output, large contractions occurred in nearly all market segments between 1980 and 1995: women's suits, men's jackets and rain and protective clothing all declined by from 57-85 percent. The worst period was from 1985-1990, as it was worldwide. From Table 2, production did grow in value erratically after 1990, but by 1995 production was still below the 1988 level and annual growth on average from 1995-2000 was only 2 percent. (CLOFED, 1997 Product Directory and Handbook, p. 100) By volume of production, Figure 2 indicates a fairly strong downward trend, with an accelerated drop at the beginning of 2000.

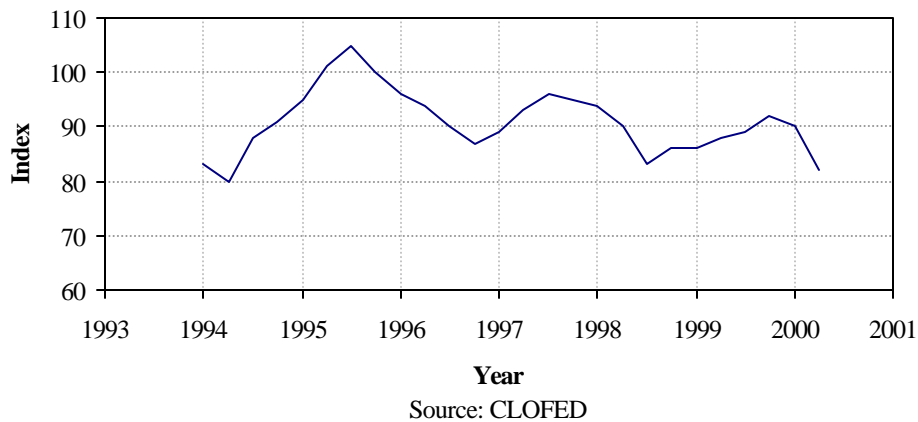
Table 2: South African Clothing Output and Trade, 1990-2000

Year	Value (million Rands)			Growth (%)		
	Output	Imports	Exports	Output	Imports	Exports
1990	6043	251	195			
1991	6412	318	359	6	27	84
1992	6364	351	470	-1	10	31
1993	7207	389	420	13	11	-11
1994	8176	483	415	13	24	-1
1995	9857	412	490	21	-15	18
1996	9774	694	626	-1	68	28
1997	10923	783	933	12	13	49
1998	10641	931	772	-3	19	-17
1999	10996	1043	1028	3	12	33
2000	10622	1337	1418	-3	28	38
Average annual growth 1990-1995				10	12	24
Average annual growth 1995-2000				2	28	26

Source: CLOFED

Contraction in volume has to some extent been offset by price increases, as a comparison of Figure 2 with Table 2 shows for the 1995-2000 period. However, price increases affect segments of the industry differently: for example, lower-end garments experienced proportionately higher price increases among women's clothing but higher-end garments for men did better in price. (Calculated from CLOFED, 1997 Product Directory and Handbook, pp. 116-117.) These relative price changes within the industry have shaped the product mix and the location of firms by putting greater competitive pressure on some segments of the industry. If increased competitive pressure determines mobility of firms, we would expect from these relative price changes that more lower-end men's garment production would move, while in women's clothing the movers would more likely be upper-end. If instead firms respond not with Fordist strategies but with flexible specialization, there would be an incentive to stay in central areas.

Figure 2: : Clothing Production Volumes (Deseasonalized, Constant 1995 Prices)



Moving from production to employment, Table 3 indicates that employment in clothing firms in Bargaining Council areas (these are central areas, excluding for example Botshabelo, Isithebe, Newcastle, Port Shepstone and Ladysmith) has declined steadily since 1990, with KwaZulu-Natal and the Eastern Province experiencing the greatest declines. From approximately 121,000 employees in 1990 the number dropped to less than 60,000 in 2001. If the Bargaining Council employment were the whole story, South Africa would be doing worse than Africa as a whole and much worse than the industry worldwide (see Table 1). However, if we compare the official statistics, which are compiled from firms in all areas of the country, with the Bargaining Council data in Table 3, we find that employment has not disappeared but rather moved to outlying and lower-wage areas.^{xi} According to official statistics, employment actually grew by more than 2 percent per year from 1995-2001, still below the world and African averages but at least better than the European growth rates.

By other measures as well the clothing industry is in difficulty. From 1985-1995 net investment in machinery and equipment as a percent of real fixed 1995 capital stock was close to 7 percent for manufacturing as a whole, but for clothing net investment was only 3 percent. (Liebenberg, 1996, pp. 15) The survey results do reveal that some clothing firms are undertaking ambitious investment programs and many innovations in the industry occur without costly new equipment. In general, however, the investment data are consistent with a low level of innovation or modernization found in the survey.

Rising imports have also contributed to the large loss of employment. The value of imports of clothing (excluding used clothing) grew by 12 percent per year between 1990 and 1995. (Table 1) By type of clothing, the largest imports are in T-shirts, hosiery, men's and boy's jackets and blazers, trousers and cotton shirts. Between 1990 and 1995, exports grew by 24 percent per year on average, leaving a large positive trade growth balance for the industry. From 1995 to 2001, however, the situation is reversed, with imports growing at 28 percent per year and exports by 26 percent. Thus, although the export performance has been overall quite steady, imports have undercut domestic market share of the industry.^{xii} There is much room for improvement in export performance as well, because the share of exports in output was still only 13 percent in 2000, not sufficient to compensate for the loss of domestic market to imports.^{xiii}

Table 3: Official and Bargaining Council Employment, 1990-2000

Year and Month	Total Bargaining Council Employees					Total	Official ² Employment	Official as % of Bargaining Councils
	W. Cape	Kwazulu Natal	Gauteng	EP	OFS/N.Cape			
January-90	54564	44623	16092	3118	2711	121108		
December-90	54267	43165	15389	3118	2462	118401	123,300	104
January-95	46980	34720	10888	2423	1432	96443	127,917	133
January-98	41874	26397	8994	1793	1262	80320	125469 ¹	156
January-99	37918	21331	8176	1415	1311	70151	134952 ¹	192
January-00	38262	19714	7517	1489	1004	67986	138394 ¹	204
January-01	34655	15693	6626	1291	1315	59580	na	na
Employment Growth (Annual %)								
1990-1995	-2.88	-4.58	-7.39	-4.68	-11.84	-4.31	1.01	
1995-2001	-4.85	-12.10	-7.91	-9.58	0.27	-7.61	2.15	

Source: CLOFED

Notes: 1. Data are for the month of March rather than January.

2. Official data are from CSS and include areas like Botshabelo, Ladysmith, Newcastle, Isithebe and Port Shepstone.

From this short description, the clothing industry was obviously beleaguered for some time before the start of the survey interviews. How serious their condition is can be seen also by comparison to the rest of South African manufacturing. Productivity of labor during the decade of 1985-1995 grew faster in clothing than in manufacturing as a whole and productivity of capital in clothing rose by 6 percent compared to a 1.5 percent drop for manufacturing. In manufacturing, growth between 1985 and 1995 was attributable mainly to capital, but clothing grew mainly from multifactor productivity growth, which is growth attributed to factors acting together and not attributable to either independently. (Leibenberg, 1996, pp. 22-23) Despite generally higher than average productivity growth, however, the profitability results have been mixed for clothing. Compared to manufacturing as a whole, value added as a percentage of sales is greater in clothing (at 47 percent compared to 33 for manufacturing as a whole) but profitability^{xiv} in manufacturing in 1995 was 12 percent, compared to approximately 6 percent for clothing.^{xv} The survey points to several possible explanations of the coexistence of relatively high labor productivity growth and low profitability, chief among which is the large loss of jobs in the industry. The multifactor productivity growth is more a function of the presence of innovative firms and does highlight positive experiences in the industry.

International comparison finds additional strengths and weaknesses of clothing relative to competitor countries. In clothing, South Africa is similar in costs to a range of developing countries like Malaysia and Mexico in a variety of garments, both fashion and basic. However, the result holds only if textile costs are excluded from total unit costs, pointing to the cost of fabric as a major barrier to competitiveness in clothing. In comparison to countries with both higher and lower quality textiles on average, South African unit textile cost is extreme. A unit of ring spun woven fabric in South Africa in 1993 was the most expensive among a set of eight countries studied, at almost \$0.80 per yard, compared to less than \$0.20 in India and just over \$0.20 in the US. Most out of line is raw material cost per unit of fabric, which was found to be twice that of developed countries like the US, Japan and Italy and almost three times that of India. (Monitor Company, *Global Advantage of South Africa Project*, April 1995, pp. 26 and 27)

The combined effect of these pressures on the clothing industry are visible in Table 4, which shows the number of firms in the main clothing producing areas of the country. The number has fallen in half since 1990, the decline accelerating sharply after 1995 with by far the largest decline in Kwazulu-Natal.

Table 4: Number of Clothing Firms, 1990-2001

Year	W. Cape	Kwazulu-Natal	Gauteng	OFS/N.Cape	Total
1990	448	445	347	8	1248
1995	404	385	268	7	1064
1996	410	420	261	7	1098
1997	379	355	239	7	980
1998	361	301	226	6	894
1999	350	214	201	5	770
2000	351	186	179	6	722
2001	324	153	171	6	654
Growth of Firms					
Annual % 1990-1995	-1.97	-2.73	-4.98	-1.00	-3.08
Annual % 1995-2001	-3.55	-13.55	-7.16	-1.83	-7.64

Source: CLOFED

The Survey Instrument and Process

The survey instrument (see Appendix A) includes both guided and open-ended questions and covers origin and history of firms, growth of output and employment, product type and market segment, market location (for both inputs and outputs), employment, labor relations and performance, investment behavior, relations with other institutions and costs of production. The survey was administered during in-person interviews with the sample firms during the period 1997-1999 with follow-up visits in 1999 and 2000. Typically, the interviewee was the owner or managing director. The interview in most cases also included an inspection of the production facilities.

For background information, interviews were conducted with industry officials, including national and regional directors of the Clothing and Textile Federation and Manufacturers' Associations and representatives of specialized bodies within these associations. Formal interviews were conducted also with representatives of the South African Clothing and Textile Workers Union (SACTWU). Planners from regional development organizations in the Western Cape and in Natal were interviewed and provided information on the state of the industries within the regions as well as on policies in place to help the industries.

3. Characteristics of the Sample Firms

The sample is purposive in that firms were included to obtain a distribution across location, size, product type and export status.^{xvi} Table 5 summarizes the distribution of the sample firms by location and type.^{xvii} By mobility, 58 percent of firms are inertial and 16 expressed intent to move, of which only 1 was moving from a less-developed to a more-developed area. Decentralized firms, those with some operations outside of central areas, comprise 47 percent of the sample and within this group, firms located wholly in outlying areas account for only 13 percent of the sample. Decentralized firms as a group, however, have only 27 percent of their production in central areas (Table 7). Compared to other studies, this level of inertia is not unusual, especially since 47 percent of firms already are decentralized. (See for example Gibbon, 2000 and Harrison, Kelley and Gant, 1996)

Table 5: Distribution of Sample Firms

	Number	Percent of Sample	Percent of Total ¹
Cape Town	20	27	6
Durban	38	51	13
Inertial	58	78	
Moving	16	22	
Decentralized²	35	47	
Only outlying³	10	13	
CMT	47	63	
Export	22	30	

Notes: 1. Calculated from the average number of firms in Cape Town and Durban, 1997-1999

2. Firms with some operations in outlying areas.

3. Firms with operations only in outlying areas.

The sample firms are divided into five groups according current location and intentions about future location. Groups are firms in Cape Town and Durban, firms not intending to move, firms intending to move and firms already decentralized, that is, with existing facilities or branches in other areas than the main facility. Table 6 provides the distribution of firms for the sample as a whole and the groups for a set of descriptive characteristics of the firms.

The table shows substantial variation across groups for some variables important to theories of location. Cape Town firms display a somewhat greater dispersion than Durban firms or the sample average, with 16 percent operating in former RIDP areas and 46 percent in other outlying areas. Thus a larger share of Cape Town firms already had opened operations outside of the central areas at the time of the interview. However, Cape Town firms also have a stronger presence remaining in the central Cape Town area (85 % of firms) than either Durban firms or the sample average. If dispersion is a source of growth, Cape Town firms might be expected to grow faster than Durban firms.

Table 6: Distribution of Firms by Characteristic and Group (% of firms)

	Full Sample	Cape Town	Durban	Inertial	Moving	Decentralized
Location of Production						
Central Areas	81	85	81	79	88	49
Former RIDP	22	16	14	19	31	43
Outlying Areas	41	56	43	34	63	57
CMT	64	65	76	59	81	51
Inertial	78	70	79	100	0	60
Growth of Output						
Positive	32	21	38	31	31	56
Negative	16	25	22	17	13	28
Growth of Employment						
Positive	18	8	24	19	6	14
Negative	39	24	43	34	56	34
Exporting	30	26	18	32	19	23
Market Segment						
Fashion	55	45	54	55	50	49
Middle	49	50	46	48	50	43
Mass Market	14	20	16	12	19	11
Problems with Workers						
Worker Participation	24	17	56	85	17	17
Multiskilling	59	19	70	78	26	23
Problems with						
Management Personnel	24	22	23	24	23	10
Input Problems						
	62	27	51	78	56	60
Distribution Channels						
Chains	74	80	73	69	88	63
Independents	51	50	51	41	44	43
Other	12	5	11	3	0	0

Source: Calculated from sample data.

Of the Durban firms, 78 percent expressed no intentions to move, while in Cape Town 85 percent are inertial. As we could expect from the nature of the industry in the two cities, the Durban group also stands out as more similar to a standardized, mass-production type of firm. Durban is more reliant on CMT than average (76 versus 64 percent of firms) and also more centered on the middle and lower ends of the market than Cape Town. If lower-end production is less competitive when in an urban area, we would expect that Durban would be growing more slowly. CMT is also typically associated with less modern production facilities and labor practices, which if true would mean that the Durban group should be less modern. Second, from an NIDL perspective the greater presence in middle and lower marker segments should mean that the Durban firms would be more likely to move, following low wages.

Measuring growth by the share of firms growing, Durban outperforms Cape Town, 38 percent of the Durban firms are growing in output and 24 in employment, compared to 21 percent and 8 percent respectively for Cape Town. This better performance, moreover, is despite the larger share of Durban firms reporting problems with workers and inputs. As the table data indicate, 51

percent of Durban firms compared to 27 percent of Cape Town firms report problems with workers and for input problems the respective rates are 51 percent versus 27 percent. The Durban firms nonetheless to a greater extent have introduced more modern labor practices, with more than twice the average share of firms using some form of worker participation (56 percent versus 24 percent) and 70 percent of firms having workers who can perform 3 or more jobs.

Overall, then, Table 6 poses several theoretical dilemmas. For example, the Durban group is more modern despite being more dependent upon CMT, undercutting the assumption that CMT means more Fordist production. Table 6 also shows that Durban firms have been and continue to be somewhat less footloose than average even though more concentrated in lower-end markets.

The composition of the decentralized group also calls into question conventional assumptions concerning firm structure and location. From Table 6 we see that the decentralized firms, those with facilities in outlying areas, are highly concentrated geographically, with only 49 percent still having operations in central areas. Contrary to either an NIDL or a flexible specialization hypothesis, they are less likely to be involved in CMT (60 percent of firms compared to the 78 percent average). As a group, they are growing much faster in output but more slowly in employment and many more report problems with workers (66 percent compared to the 39 percent average).

Differences between moving and inertial groups in Table 6 do provide some support for an NIDL interpretation of mobility. Moving firms are much more dispersed than the sample as a whole, with 63 percent of these firms already operating in outlying and 31 percent in former RIDP areas. Only 34 percent of the inertial firms, on the other hand, are already in outlying areas and 19 percent in former RIDP locations. Movers are more likely to be doing CMT work (81 percent). They are also firms that have been shedding labor to a much greater extent than average (56 percent reporting negative employment growth compared to 39 percent) even while experiencing the average share of firms with increasing output. As a group they have a high incidence of problems with workers and low incidence of worker participation or multiskilling. They are less export-oriented (19 percent exporting) than the already decentralized group and the moving firms that export are more concentrated than average in the mass-market segment.

Countervailing evidence is also clear, however. Moving firms are not more concentrated in the mass market for domestic sales, which account for the vast majority of sales (see Tables 8 and 9). In addition, although little has been said about retailing, the moving firms are to a much larger extent selling to chain stores, which have become more demanding in their price points. This may force firms to consider moving as a survivalist strategy independent of the nature of their competitive strategy or production process. Finally, the group of firms already located in outlying areas undermine a simple NIDL argument since they are less rather than more involved in CMT production. Given these conflicting results, on the basis of the distribution of firms within each group we cannot decisively attribute causes to location consistent with any one theory of location.^{xviii}

More complex patterns of location emerge from the detailed data in Tables 7-11. In Table 7 we can compare the location, structure and growth of firms in the five groups. While Table 6 gives the share of *firms* by group and location, Table 7 shows the concentration of *production*. By this measure, firms in Cape Town and Durban are roughly similar in their degree of decentralization,^{xix} with Durban having more production in outlying areas other than RIDP. Moving firms are still more decentralized, with only 65 percent of production in central areas. This suggests, as did Table 6, that the more decentralized a firm was at the time of interview the more likely it was to be considering further moves, which supports other studies that have found familiarity with an area to be the best predictor of movement (Gibbon, 2000, for example). Note, however, that there are no statistically significant differences in location of production when comparing the groups to the sample. This produces the anomaly that although only 27 percent of production is located in central areas among the decentralized group, there is not a statistically

significant difference from the sample as a whole. As discussed more fully below, the qualitative data show this group to very heterogeneous so the average is less meaningful.

Table 7: Location, Structure and Performance of Sample Firms by Group¹

	Full Sample	Cape Town	Durban	Inertial	Moving	Decentralized
Location of Production (%)						
Central Areas	69	73	70	69	65	27
Former RIDP	13	11	9	13	14	33
Other Outlying	18	15	21	18	21	39
CMT Use (% of production)						
	40	31	48	40	44	43
Age						
	28	40	23	27	31	22
Group (% of firms)						
	19	25	13	21	13	20
Employees						
	359	451	227	338	436	536
Growth of Output (% change in past 5 years)						
Positive ²	38	53	19	35	55	56
Negative ²	30	25	31	29	35	29
Average change	17	17	6	15	23	30
Growth of employment (% change in past 5 years)						
Positive ²	21	15	22	22	15	18
Negative ²	36	26	38	41	26	31
Average change	-14	-15	-12	-14	-18	-13

Source: Calculated from sample data.

- Notes: 1. Numbers in italics denote a group average different from the average for the rest of the sample that is significant at a level of 5% or less while bold italics denote a 1% or less significance level.
2. Average positive and negative growth on average for only those firms in the growth category.

Regarding firm structure, Cape Town firms are below the rest in the percent of production that is CMT, consistent with their higher share of the fashion market (see Table 9). This conforms to an NIDL view if we can assume that up-market firms are more intensive in design, automation and skilled labor, but not if decentralized firms are equally good at production of fashion garments. If the latter is true, the explanation for the Cape Town difference may lie rather in their focus on flexible specialization and/or on locational variables like familiarity, security and 'brand signaling'. Evidence so far for any location theory is weak, however, because none of the groups differs significantly from the average in share of CMT. Again, the qualitative information from the survey will help determine which explanation is a better fit with the sample.

Overall, the table shows a distinct lack of significant difference among groups. Moving firms are slightly older and notably bigger than average while inertial are slightly younger and smaller, but the inter-group differences are not significant. Groups also do not vary significantly in the amounts of growth or decline they have experienced in output and employment, with the one exception of the much stronger average rate of growth of output of the Cape Town firms that are expanding. Another anomaly is that the average positive growth rates of the moving and

decentralized groups are much higher than average but not significant. If these groups are at the same time more Fordist in their structure, there may be an association between a low-road competitive strategy and growth. Like the case of the decentralized group results on location of production, however, this may be explained also by the presence in the group of a few unusual firms, which will be discussed below.

The data in Table 7 hold some implications for location theories. For example, they bear out the expectation from NIDL theory that the older, larger firms would be more likely to move (at least some operations) and from a flexible specialization theory that inertial firms in central areas would be younger and smaller. Nonetheless, lack of statistically significant differences allow only preliminary rather than definitive support for any particular explanation of mobility.

Ownership by a corporate group, despite small absolute differences, does vary significantly among groups, with the moving group below and the inertial (and the Durban) above average. Corporate group ownership may play a role in several theories of location. It may lead firms to stay in central areas due to environmental factors like ambience if a group sends in managers from abroad, familiarity with outlying areas may be less for a group-owned than a local factory and groups may have deep pockets that allow firms to remain competitive in central areas despite high wages. The qualitative evidence is that all these factors play a role in individual firms' decisions, but environmental and familiarity factors stand out.

Groups do vary significantly by export status (in Table 8), even though the levels of exporting are very low for all groups. Inertial firms exhibit higher than average exports, while moving firms export much less than average. Decentralized firms, too, export significantly less than average. Regarding past and future exports, inertial firms expect less than average decline in exports. Interestingly, moving and decentralized groups have experienced both significantly higher than average decline *and* expansion of exports, revealing again the dichotomous nature of this group. A significantly higher level of optimism about future exports is expressed by the Cape Town and the decentralized group. (The moving group, too, expects higher exports but not to a significant extent.)

The export data in Table 8 are difficult to associate unambiguously with a theory of location. Two propositions of an NIDL perspective are relevant to the table if we can assume that globalization forces firms to compete more viciously on costs. First, looking for lower labor costs could motivate a move to decentralized areas. If firms are being pushed out of central areas due to high wages, we might expect to see intent to move associated with declining recent exports, which we do. Second, if lower wages are a condition for exporting, we would expect to find that firms already in decentralized areas are more successful exporters, but they are not. It is nonetheless true that expectations of future exports are very positive in the decentralized and moving groups, which bolsters the case for an NIDL connection between location and exports. The crucial missing link, though, is that moving firms would also have to fall into the category of Fordist rather than innovative firms, a firm-specific feature the table data cannot capture. We thus cannot rule out an alternative explanation, that the success of exporting in the decentralized group may be the result of innovative use of networks or relationships with MNCs, as Figure 1 highlights, rather than Fordism. If so, an evolutionary or perhaps flexible specialization view of export growth and mobility would be more appropriate.

Table 8: Exports by Group of Firms¹

	Full Sample	Cape Town	Durban	Inertial	Moving	Decentralized
Exports (% of sales)	6	4	5	7	2	4
Exports by destination (% of firms)						
Africa	14	5	13	14	13	13
US/Europe	16	15	13	16	19	19
Trends in exports in past 5 years (% of firms)						
Declining Exports	18	10	16	16	25	25
Expanding Exports	9	5	8	9	13	13
Expected future exports (% of firms)						
Increased	31	50	24	28	38	38
Decreased	4	0	0	5	0	0
Destination EU or US	23	35	18	21	25	25

Source: Calculated from sample data.

Note: 1. Numbers in italics denote a group average different from the average for the rest of the sample that is significant at a level of 5% or less while bold italics denote a 1% or less significance level.

The indicators of modernity in Table 9 only deepen the difficulty of establishing clear associations between group behavior and theoretical expectations. In vintage of capital by type of capital, there are no significant differences in production capital across groups. Design capital is significantly lower in the moving and decentralized firms, who therefore are less likely to use cad/cam or other techniques of flexible specialization. Whether this means the firms are Fordist cannot be determined by the table data, but there are grounds for doubt. By level of automation of capital there are no significant differences across groups and in addition, the rankings of moving and decentralized groups are closer to the Cape Town group than the lower-ranked Durban and inertial groups. These results lead away from the conclusion that mobility is associated with less modern production techniques.

Two other measures of modernity in Table 9 are the degree of worker participation and the extent of multiskilling, both of which are defining characteristics of flexible specialization and are also consistent with evolutionary theory. From the table, results are again mixed relative to linking groups to a theory of location. Worker participation is higher in inertial than moving or decentralized groups and multiskilling is greater in inertial firms as well. However, decentralized firms also have higher multiskilling, so they are not uniformly less modern in these two indicators. Note too that the firms in the central areas are not overall more modern, either, since Cape Town is only significantly above average in two and Durban in three of the of the ten measures in the table.

Table 9: Indicators of Modernity by Group of Firms¹

	Full Sample	Cape Town	Durban	Inertial	Moving	Decentralized
Vintage of capital stock²						
Production	2.20	2.38	2.00	2.24	2.17	2.52
Design	3.33	2.80	2.05	3.64	2.44	2.89
Inventory	2.52	2.83	2.35	2.33	3.17	3.07
Level of automation of capital stock³						
Production	2.19	2.63	1.97	2.20	2.33	2.41
Design	2.44	3.33	2.00	2.48	2.44	2.95
Administration	2.36	3.00	1.82	2.28	2.75	2.83
Inventory	2.48	3.00	2.24	2.19	3.50	3.00
Worker participation ⁴	0.63	0.86	0.39	0.66	0.43	0.53
Multiskilling ⁵	2.83	2.66	3.41	3.07	2.29	2.94

Notes: 1. Numbers in italics denote a group average different from the average for the rest of the sample that is significant at a level of 5% or less while bold italics denote a 1% or less significance level.

2. Rank from 4 if most modern available to 0 for more than 30 years old.

3. Rank from 4 if most automated available to 0 if not automated.

4. Rank from 4 if more than 80% of workers are able to perform 3 or more tasks 0 if none.

5. Rank from 2 if workers have control over production process (pace or content) to 0 if none.

Source: Calculated from sample data.

Considering labor and input problems of firms does provide some firmer ground for categorizing groups according to the theoretical typology. If the decentralized firms were of the Fordist type we would expect to find worse labor relations and labor problems reported by management and Table 10 shows this to be generally the case. Inertial firms are better than average in labor relations and problems, which may explain why they are not moving. Moving firms experience worse than average problems in these categories, perhaps driving them to move. Ironically, though, from the experience of the decentralized firms the movers cannot expect improvement in outlying areas. A final point on labor problems from the table is that we cannot say that urbanization is associated with better labor situations, since Cape Town overall is significantly worse than average, too. A broadly similar pattern emerges for problems with management personnel, with Cape Town and Durban reporting significantly worse problems. The exception compared to labor problems is that the decentralized firms report less serious problems in this category, a counter-intuitive result if ambience and security factors are important. The results in Table 10 on problems with inputs other than labor also repeat inter-group patterns from the earlier tables. The two urban areas are very different, inertial firms suffer significantly less serious problems, the moving firms have worse problems but the decentralized firms are not clearly better off than inertial firms.

The final set of descriptive characteristics of firms from the sample concern the distribution and marketing channels of firms. Table 11 shows that there are few significant differences among groups but the general patterns established in the earlier tables appear again. The one significant difference among groups is that exports of moving firms are highly concentrated in mass market production, which would tend to support an NIDL interpretation of mobility. Otherwise, the table identifies diversity across urban centers, with Cape Town firms somewhat

more weighted (although not statistically significantly) toward the upper-end markets in both total sales and exports and more dependent upon chain stores for distribution than Durban. The moving firms are the most dependent upon chains, which again suggests that the pressure on prices coming from chains may be a factor pushing firms toward outlying areas. Moving firms are also less concentrated in the fashion market than average or even than decentralized firms.

Table 10: Distribution Channels and Market Segment by Group of Firms¹

	Full Sample	Cape Town	Durban	Inertial	Moving	Decentralized
Distribution channels (% of sales)						
Chains	66	70	64	62	80	66
Independents	26	27	28	26	20	26
Others	10	4	9	13	<i>0</i>	8
Market segment (% of sales)						
Fashion	49	65	50	49	43	48
Middle	39	24	35	40	39	38
Mass Market	12	12	15	12	18	13
Market segment of exports (% of sales)						
Fashion	50	75	25	55	<i>0</i>	67
Middle	33	25	50	36	10	17
Mass Market	17	0	25	9	90	17

Source: Calculated from sample data.

Note: 1. Numbers in italics denote a group average different from the average for the rest of the sample that is significant at a level of 5% or less while bold italics denote a 1% or less significance level.

Taken together, the Tables 7-11 call into question several theoretical propositions about location and mobility. First, they paint a picture of more variation across urban settings than might be expected if urbanization is *per se* necessary to more modern firms. Although we could still see old and less modern firms remaining in urban areas if urbanization is necessary,^{xx} we would not expect a higher level of modernity in the decentralized firms, which does happen in the sample. Second, there is unexpectedly little significant variation between moving, inertial and decentralized groups if either an NIDL or a flexible specialization theory were relevant.

In part, these results reflect a large intra-group variation which itself undermines simple theories of location. It seems that firm-specific factors are implicated in location decisions to a greater degree than appreciated by theories focused on the requirements of the production process or external environmental factors such as average skill of the labor pool. In this respect, both NIDL and flexible specialization theories are incomplete as theories of location. If, however, we take an evolutionary view of the firm and its competitive strategy we may explain variation within the groups by the firm-specific determination of core competencies, which depend upon a number of qualitative features of the firm. The next section takes a closer look at individual firms within the group of moving and decentralized firms to assess the extent to which movement of firms to outlying areas is positive for growth of both output and employment.

Qualitative Evidence on Moving and Decentralized Firms

In this section the focus is on the anomalous firms, those that are in or moving to low-wage areas but are not Fordist, CMT or otherwise the low-road type of firm that is expected to move. These firms will provide qualitative information to address the issue of how such firms succeed despite lack of infrastructure, skilled labor, amenities for managers, proximity to customers and other assumed necessities for non-Fordist production.

Table 12 provides an overview of the categorization of firms by group according to the typology of firms in Figure 1. Footloose firms moving to outlying areas and inertial firms staying in these areas are of two types, innovators and survivalist/Fordist firms. A firm is assigned to the Fordist category if it deviates from the average in the necessary direction (see Chart 1) in modernity of capital stock, length of average production run, worker participation, multiskilling, labor turnover, reliance on the mass market and CMT use. Strong Fordist firms are those meeting five or more of these criteria, while weak Fordist satisfy 3 or 4 criteria. Firms are classified as flexible specialization following the same procedure as for Fordist firms (with the exception that strong and weak cases are put together, since the number of weak cases was only 3 for the sample as a whole).

Assignment to the innovator categories is more subjective and based solely on qualitative information from the interviews. Firms are incremental innovators if their competitive strategy is based on modification or adaptation of standard machines or procedures, including organization of work and inventory control. Firms are assigned to two sub-groups within the networks and MNC category. If their competitive strategy is based on relations with firms in their group or with an MNC, they are in the Group/MNC category. If their competitiveness derives from networks with other firms, they are in the network row in Table 12. Inter-firm relations included here are those of an industrial-district type and also those in which the firm gets information from suppliers or customers but not from within their group. If firms have used a combination of strategies, they are assigned to a category according to which is dominant. The unclassified category in the table includes an assortment of firms, none of which reported any clearly dominant strategy.

In Table 12, the total percent of decentralized firms classified as Fordist is larger than for the inertial group, but the share of strong Fordist firms among decentralized is the lowest in the table. Moreover, inertial firms are more Fordist than firms planning to move. Taken together, these results undermine an argument that mobility entrenches a division of labor across regions, with less desirable firms moving to poorer areas. Differences among groups by type of innovative competitive strategy are less clear-cut. Inertial firms are the most engaged in incremental innovation but surprisingly slightly less involved in flexible specialization and substantially less reliant on networks. Moving firms are very little dependent upon incremental innovation for their competitiveness but much more networked than the other groups and just average in flexible specialization. This group also contains a much larger share of unclassifiable firms than the others, making a broad generalization about the group less reliable.

Overall, though, Table 12 gives no grounds for viewing the outlying areas as dumping grounds for the less desirable Fordist firms. The decentralized and moving firms are at least as flexibly specialized as the inertial, which means that urbanization is not necessarily a precondition for this structure of production. The table also shows that the moving firms are more networked than other groups, so that relying for competitiveness on relationships with other firms appears not to require proximity. In effect, these firms are creating geographically-dispersed industrial districts. However, the movers do raise two concerns. First, the group is overall less innovative than other groups, since the Fordist and the non-classifiable comprise 54 percent of this group compared to 41 percent of the sample as a whole. Second, regardless of competitive strategy the movers may be moving because they are not successful in their current location, making them an unreliable source of employment in the outlying areas.

Table 12: Moving and Inertial Firms by Type (% of firms)

	Sample	Moving	Inertial	Decentralized
Strong Fordist	20	19	22	14
Weak Fordist	5	6	7	9
Incremental Innovation	26	13	29	23
Flexible Specialization	12	13	12	14
Groups, MNCs and Networks	22	31	20	20
Groups and MNCs	15	19	14	14
Networks	7	13	5	6
Not classifiable	16	31	9	20

Source: Calculated from sample data

Addressing this last issue requires an examination of the non-Fordist moving firms by type, but the numbers in each category are very small so we must rely on the case study details of individual firms to assess their status and motivation. From the interviews, the two moving firms classified as incremental innovators are both small but growing firms who are in fact moving because of wages in central areas. Despite their sensitivity to wages, however, they are not Fordist in the production structure, since both are above average in both worker participation and multiskilling. The firms are included in the incremental innovation category because they have made significant adaptations to standard machines, in the one case to improve the product and in the other to increase the efficiency of the process. Both also attribute their growth in large part to these innovations. Both firms believe that they will be able to continue the multiskilling and participatory approach in the areas to which they are moving and the basis for the belief in both firms is their experience with in-house training and promotion in their current location. They explicitly reject the notion that workers cannot be trained to higher levels and plan to do so in the new locations. Neither firm has experience in the area to which they are moving, so familiarity is not a motive for the move. They do both take an evolutionary view of the progress of their firms, however, and this allows them to see location as less important for innovation and competitiveness than firm-specific factors.

The three moving firms classified as competitive through connection to a corporate group and MNCs and the two in the networks category have little in common. Only one company is competitive due to its relation (licensing) to an MNC and two attribute their competitiveness to the support of the South African group to which they belong.^{xxi} The MNC company is bound by its agreement with the MNC to maintain strict quality standards and has chosen to reskill workers to achieve quality. Thus, the MNC has helped put the firm in a non-Fordist category, contrary to an NIDL perspective. In the case of the firms belonging to groups, both parent companies operate very much at arm's length, allowing the firms to structure production on the basis of local competencies but providing financial support. This gives the firms benefits of both an

evolutionary pattern of innovation based on drawing out local tacit knowledge and the ability to invest in equipment and training. In addition, the parent group of one firm has experience in the area to which this company is moving, and the manager reported this familiarity to be a critical factor in the decision to move.

The two networked movers are very different. One is moving from the Durban area, in which it is embedded in a network of firms producing a similar product, but it is moving to an industrial estate with similar firms and intending to reproduce its network. This firm is neither growing nor contracting, but is moving in hopes of growing with a bigger facility. The other firm, contracting at an above average rate, is moving despite highly location-specific networks and fits into the survivalist category of firms whose current competitive strategy is not successful. This case shows that concern about firms outside of the Fordist category moving for survival rather than for growth does have foundation.

The two flexibly specialized movers are neither as successful nor as sanguine about skill requirements as the incremental innovators. One of the two firms fits the profile of a survivalist firm: despite its sophisticated production technique and market niche it has lost market share and is moving as a cost-cutting measure. This firm did express concern about the labor and infrastructure available at its new location but decided that moving was still the best chance for survival. The second flexibly specialized mover was growing when it decided to move, but was also sensitive to wage increases. This firm is planning to move its more labor-intensive production to the new site and modify its capital base in the new location, using more standard machines. This firm, then, is changing both its location and in part its category, moving more toward a Fordist structure of production.

The experience of this firm and that of the contracting networked firm raise the issue of sustainability of competitive strategy with a change of location. While Table 12 and the results from earlier tables all point to the existence of non-Fordist firms outside of central areas, they give only a static picture of the innovative firms. If the moving firms fail to maintain their competitive strategy in the new location and instead revert to a Fordist or simply low-wage strategy, the NIDL theory would be given strong support. We can evaluate this possibility by looking more closely at the decentralized firms according to the categories of Table 12.

Of the eight decentralized firms in the incremental innovation category, six are growing firms (compared to only two of the eight Fordist firms in the decentralized group). These firms are very idiosyncratic in the type of incremental innovation they see as the source of their competitiveness. One firm has reduced costs mainly by evolution of an inventory-control system run by production workers that allows a Just-in-Time level of inventory in an otherwise traditional firm. Another firm gradually introduces new machinery and trains operators formerly on standard sewing machines to operate and set numerically controlled machines. The manager of this firm reported that such reskilling was the key to maintaining quality. A third firm relies on gradual extension of the responsibilities of teamwork to improve productivity and quality. Despite their varied firm-specific innovations, however, they have in common what seems to be an irreversible trajectory toward continued small innovations. Thus, their location has not stifled their ability to innovate and they are indistinguishable from the inertial incremental innovators in this regard. In fact, two of the managers noted that labor was generally more flexible in the outlying areas and specifically less resistant to reskilling.

On the other hand, the five flexible-specialization firms in the decentralized group do reinforce the possibility that non-Fordist methods are not sustainable in outlying areas. Only 1 of these firms was growing at the time of the interview and all five had higher than average reported problems with lack of skill and motivation of labor. Compared to the incremental innovators, these firms had either introduced new machinery all at one time or had started up with new machinery. In either case, the workers had to adjust all together and at the same time to new machines whereas in the incremental innovators the typical pattern is to upgrade the skills and/or machinery starting with the best workers and then gradually spreading the new technique. From

these cases, it appears that flexible specialization is more difficult to sustain in the outlying areas, since it requires a firm-wide level of technology that may be beyond the capacity of the labor force to absorb.

The five decentralized firms in the group and MNC category and the 2 in the networks category are also very mixed with respect to growth and structure. Only one of the five bases its competitiveness on a relationship to an MNC, again on the basis of licensing. As long as the license is held, this company plans to continue to operate in the same way, with a small, relatively skilled, long-term workforce. The four firms dependent upon the group for their competitiveness, like the flexibly specialized firms, tend to support the idea of unsustainability of non-Fordist strategies in outlying areas. Only two are growing and these have gradually reduced the share of design and increased the share of CMT in their production. Thus, they have become more strongly Fordist in their structure although they still attribute their competitive edge to their place in the group and their ability to realize economies of scale in purchasing and marketing. Of the two networked firms, one is included because of its strategy to link to other firms exporting a similar product. This is the only case in the decentralized group of a firm networking specifically around exports, which may be explained by the fact that this firm has a higher than average percentage of its production facilities remaining in a central area, so it is in closer proximity to other exporting firms. The other networked firm engages in production sharing with other similar firms, sending work around as capacity needs dictate. This firm relies on the networks to smooth out its production cycles and the network seems to work despite geographical separation of the members. In these last two cases, the networking arrangements seem to be stable and to assure continuation of small and relatively flexible factories.

Overall, then, the qualitative, firm-specific information in some respects modifies the conclusions drawn from the quantitative comparisons of groups. From the individual firm information, it appears that certain forms of production and certain competitive strategies may be less sustainable in outlying areas. As flexible specialization and NIDL theories argue, central areas do seem more amenable to higher-skill production processes, while firms in outlying areas attempting flexible-specialization may be reverting to more Fordist types of production. At the same time, evolutionary theory takes a prominent place in explaining how firms can survive in a decentralized geography. The firms that engage in incremental innovation, using local skills and capabilities, are not as prone to reversion to Fordism and neither are firms embedded in networks.

To sum up the qualitative information from the interviews, Fordist firms are not doing well in any location. The best performers in both moving and decentralized groups are the incremental innovators, who are growing while maintaining a non-Fordist competitive strategy. The same is true of the two MNC firms in the moving and decentralized groups, which also have in common a licensing arrangement with the MNC. The few moving or decentralized networked firms are a disparate group, within which only the two most innovative firms (the exporter and the production-sharer) are growing. The firms whose competitive strategy derives from being part of a corporate group also vary, but here a somewhat stronger pattern emerges. The two decentralized firms that are growing but moving toward a Fordist productive structure are both part of Cape Town groups, suggesting the location of the parent is important to the evolution of firms with relocation. The two moving firms that are group-owned are based in Durban. If these firms do not abandon their current, non-Fordist structure after they relocate, we would have direct evidence that the location of the parent company matters. If so, this perhaps could be attributed to different degrees of familiarity with outlying areas and ability to draw out tacit knowledge and local competencies.

Networking and group-based competitive strategies are thus only partly successful in the outlying areas. Flexible specialization seems even less suited to outlying areas. Only 1 decentralized firm in this category is growing and all report higher problems with labor. It is only the incremental innovators who perform as a group well in outlying areas. Performance of other

non-Fordist firms depends upon firm-specific variations on the basic competitive strategies and adaptations to their location.

4. Conclusions, caveats and policy implications

This survey of South African firms has shown that theoretical perspectives on firm type and location are generally too monolithic to describe satisfactorily the patterns of firm structure and strategy by location. There is much evidence from the survey that firms other than Fordist can locate and grow in outlying areas, although a flexible-specialization firm may face more obstacles than other types. Labor practices like reskilling, teamwork and multiskilling are all succeeding in both moving and decentralized firms. Small firms producing for upper-end market segments are not limited to central areas. Groups, networks and incremental innovation all have been pursued successfully by some decentralized firms, and in fact have been more successful than Fordist structures and strategies. The one consistent weak point of the moving and decentralized firms is their relative lack of exporting (although all groups export very little in absolute terms).

There are still areas of concern. Increased competitive pressure has created a crisis in the clothing industry that may be affecting the type of firms that are moving. Whereas the decentralized firms are not much different from the sample averages, the moving firms as a whole do not perform as well as the decentralized. This points to the possibility that less innovative and successful firms are moving now than in earlier years. It is also clear from the sample that with increased competitive pressure, some firms in all but the incremental innovators category have reverted to more Fordist strategies in outlying areas. Still, successful individual firms in all categories reveal ways in which policy can help sustain innovation in moving and decentralized firms.

Before discussing policy implications, however, it is important to review the many limitations of this survey. The usual warning applies about selectivity bias in that firms agreeing to be interviewed may be better or more successful firms than average. The sample size is not large and hence representativeness is an issue. Increasing the number of firms in outlying areas would help reduce the possible bias in the sample toward disproportionate inclusion of better firms in these areas. From interviews conducted with foreign-owned firms in Kwazulu-Natal but not part of this study, it is clear that Fordist firms are more typical in decentralized firms in the industry than in the sample. Informal sector firms are an increasingly important source of production, but also not included.

The small number of firms is particularly evident in the evaluation of firm performance by competitive strategy and location. One ambiguity arises from the small number (10) of firms located only in outlying areas. As a result, the decentralized group includes both facilities exclusively in outlying areas and firms with some operations remaining in central areas. Other issues arise from the nature of the clothing industry in South Africa. Wage differentials, for example, are limited by the structure of bargaining. While there are significant differences across regions in wages, intra-regional variation is low. This means that flexible-specialization firms in outlying areas may pay wages lower than Fordist firms in central areas. Although within each region there are a few firms paying higher than required or prevailing wages, the sample does not include enough of these firms to distinguish flexible-specialization from Fordism consistently on the basis of relative wages.

In addition to questions about representativeness of the sample, the size precludes quantitative assessment of many of the theoretical arguments about location. There are simply not enough firms engaged in sub-contracting for MNCs, for example, to assess the effect of a sub-contracting relationship on competitive strategy and performance. It is true that the two MNC relationships based on licensing are supportive of non-Fordist structure and firm growth, but this is not the typical MNC relationship and likely overstates the positive effects of MNCs. We find little difference between groups in problems with infrastructure, use of location for brand signaling

or even concern for security and life style of management, but may simply be missing firms with such locational issues. Retailing, too, is not sufficiently variable across groups for an assessment of the impact of distribution on firm structure and performance. This is in part merely reflective of the nature of the industry in South Africa, which like elsewhere confronts a highly concentrated retailing sector. Nonetheless, inclusion of additional firms breaking away from chain retailers would provide more evidence on whether price pressure from retailers is a significant factor in location decisions. Location of parent firms and management history also affect mobility, and in other studies accounts for much of the inertial tendency of firms. Unfortunately, there are too few moving and decentralized firms in the sample to separate out the influence of the origin of management on location. Finally, the type of product within the broad categories of market segment will affect a firm's mobility and performance but the sample is not large enough to discriminate by specific garment type.

These cautions aside, the sample does point to directions for policy toward the clothing industry. First, the most successful firms overall are the incremental innovators. These firms are not highly location-specific, hence can be encouraged to locate in outlying areas. Incremental innovation also does not derive from large-scale introduction of new machinery or depend on existing large pools of highly skilled workers and therefore does not strain scarce resources. Incremental innovators do demand, though, high levels of management initiative, creativity and information as well as some flexibility and training of workers. The current emphasis on extra-firm formal training is not particularly suited to a process of incremental innovation, since the innovation is grounded in the tacit knowledge of workers and firm-specific qualities of the innovation. Hence, support for in-house training and for dissemination of knowledge of innovations of similar firms would be more effective than industry-wide training or information.

The lack of exporting by decentralized and moving firms must also be addressed if movement to outlying areas is to foster export growth. In this respect, policy should be built around the main reasons firms give for not exporting, lack of information about markets and lack of reliable agents. Many firms reported taking advantage of government programs for marketing, but few saw results. Encouragement of direct relations with agents abroad with some government screening or indemnifying of agents would expand the possibilities for decentralized firms to export.

Within both central and outlying areas, Fordist firms will need more help. These firms have little grounds to ask for support to continue this failed competitive strategy, but transformation will require considerable investment in training of management as well as workers. Flexible-specialization firms too need support. Here policy to encourage investment and training in modern technology for design and production would help, but raising skill levels and flexibility of workers is just as compelling. This kind of intervention should not be limited to central areas, however, as the outlying areas have capacity for flexible specialization as well.

In short, the potential for diverse competitive strategies exists in the South African clothing industry, but its development calls for more firm-specific policy interventions. As the Africa Growth and Opportunities Act opens markets for South African clothing firms, the likely tendency will be to fall back onto familiar methods of production in order to respond quickly to new market opportunities. However, the old ways of production in clothing have proven to be unsuccessful in sustaining growth, even in central areas. Several analyses of South African manufacturing argue that labor productivity is the basis for industrial expansion. (See for example, Avril, et al., 1995) If so, continuation of a Fordist structure of production will have serious consequences for clothing as well as for manufacturing as a whole. Taking advantage of new market possibilities to create employment in clothing requires policy to focus on a gradual but widespread movement away from Fordist toward structures of production both more competitive and more humane. Contrary to much of the literature on location, a low-road strategy is neither necessary nor sufficient for the clothing industry anywhere in South Africa.

Endnotes

- ⁱ Following Harrison, Kelley and Gant (1996), urbanization is defined as the presence of 'a diverse complex of economic and social institutions' and localization as the presence of 'same-sector businesses and employees'. (p. 233)
- ⁱⁱ Networks are also important to flexibility because they allow firms to avoid the risk of vertical integration and asset specificity. (Storper, 1992, p.79) In this respect, large firms benefit as well from locating where network relations are strong.
- ⁱⁱⁱ Pedersen (1998) argues that in Africa, or any country with an unstable economic environment, trust and networks are particularly important as a way for businesses to protect themselves from uncertainty.
- ^{iv} Van Dijk (1998, p. 29) makes an interesting link between human rights, competitive strategy and locational effects, arguing that flexible specialization firms cannot locate in Delhi because the caste system undermines the trust and impedes the communication necessary for flexibility.
- ^v The central conclusion of this model is that because location is a signaling device to consumers '...firms that have low costs for production may consciously choose a high-cost country for production instead of a low-cost location – even if there is no difference in the level of public goods or infrastructure provided'. In effect, the firm '...leases the country's brand name'. (Haucap, Wey and Barbold, 2000, p. 81)
- ^{vi} With the increasing similarity of technology, variation in unit labor cost across regions (for similar products) is converging toward the differences in wage rates. Nonetheless, there are still anomalies due to different levels of non-wage labor costs that firms must pay. Nicaragua, for example, mandates almost 1/3 of the wage rate in benefits while in Guatemala the rate is 12%.
- ^{vii} Other strategies are also possible, such as strategic alliances, are also characteristic of firms choosing to stay in more-developed areas. Flexible specialization, however, is most representative of innovations in production as a strategy for competing without moving.
- ^{viii} Lall (1992) provides a useful summary of theory and evidence for the superiority of an evolutionary view of innovation within firms in less-developed countries.
- ^{ix} Production declines in the 1980-1985 period however. (ILO, 2000, p. 4)
- ^x There is evidence, however, that the nature of movement internationally has shifted recently. For example, movement into Asia and the Caribbean has slowed, with more movement within rather than into each region. A study of sourcing of British clothing retailers has found that most shifts in sourcing have occurred within sets of similar countries rather than to low-wage countries from high-wage. (Gibbon, 2000) Thus the scope of footlooseness seems to have changed as firms move from Morocco to Algeria, for example, or from Guatemala to Nicaragua rather than to entirely new areas.
- ^{xi} Wages in areas not covered by Bargaining Councils can be only 40% of wages in the urban areas in the clothing industry.
- ^{xii} These official statistics understate the impact of imports by what many firms and industry officials argue is a substantial amount. Illegal imports are seen to be an increasingly serious issue, particularly at the lower end of the market. Many of the surveyed firms are contributing to an industry fund to help finance customs enforcement of anti-smuggling laws.
- The duty structure for clothing and textiles, like that for most sectors of the South African economy, has been revised downward since the late 1980's. Starting in 1995, ad valorem import

tariffs were scheduled to be reduced over a 7 year period, for clothing from 84 to 40 percent, for fabric from 42 to 22 percent, for yarns from 32 percent to 15 percent and for polyester fibre from 25 to 7.5 percent. (CLOFED, 1997 Product Directory and Handbook, p. 143) At the same time, however, incentives to export were first reduced and then eliminated. The GEIS incentives (General Export Incentive Scheme) paid an estimated R32.6 million to clothing and R16.7 million to textile firms in 1995 (0.4 and 0.2 percent respectively of the value of output. (CLOFED, 1997 Product Directory and Handbook, p. 110). As part of South Africa's attempt to open its economy and join international trading agreements, GEIS incentives were ended in mid-1997 because under GATT they constitute an inadmissible countervailing subsidy for manufactured goods.

xiii This is not limited to the clothing industry. As Hirsch (1997) notes, growth of manufactured exports is an essential component of any strategy for employment growth.

xiv Profitability is measured as the ratio of net operating surplus to total output.

xv Calculated from Census of Manufacturing data.

xvi Proportionately fewer Cape Town firms are included than their share in the industry as a whole. The Cape Town industry is skewed toward very large firms, so to include smaller firms to the extent desired the sample is weighted toward Durban and its surrounding areas. Only 6 Gauteng firms were interviewed because the Gauteng region is not heavily concentrated in clothing as are Durban and Cape Town. This is a weakness in the survey, however, since the Durban and Cape Town firms by virtue of being in clothing areas can be expected to exhibit greater networking and inter-dependence than the Johannesburg firms. Thus the results for networking firms in Table 12 likely overstate the importance of this competitive strategy.

xvii Informal sector clothing production is also not counted here. According to information and impressions given by interviewees in the industry, the informal sector has grown significantly since 1995.

xviii There is also of course the issue of whether the sample is sufficiently representative for the distribution across groups to be meaningful. Nonetheless, given the distributions in Table 6, we can derive theoretical expectations to be evaluated with the results in Tables 7-12.

xix The decentralization of production may take on different theoretical castes depending upon which stages of production are decentralized. This possibility of a division of labor within the production distribution will be discussed below in the assessment of the qualitative information in the survey.

xx For example, Harrison, Kelley and Gant (1996) find that older firms are clustered in central urban areas, so that these survivors co-exist with the more modern, flexible-specialization type firms in the central location.

xxi It is important to note that other firms belong to groups (12 in total in the sample) or have relationships with MNCs (only 3 in the sample), but if they are Fordist in nature they are already included in the Fordist category. Thus only firms whose production structure cannot be classified as Fordist and who in addition attribute their competitiveness to group membership or relationship with MNC are in this category. A test of whether having a relationship to a group or an MNC increases the likelihood of being a Fordist factory cannot be done with the South African sample because so few South African firms are in or related to domestic groups or MNCs, although the number has been rising recently.

Appendix A

Survey Questionnaire Topics

Descriptive	Age, founders, source of capital, original market segment and product Form of ownership Location of production Size in sales and employees CMT use Recent growth of output and employment
Production	Main three products and relative share in total production Market niche of main three products Size of average, minimum and maximum production run for main three products Length of time to change production line Sources of non-labor inputs Problems with non-labor inputs Branding of output
Exports	Production exported and main destinations of exports Sources of information about export markets Outsourcing to foreign apparel manufacturers/retailers Use of government incentives to export Branding of exports Recent export growth Expected future export growth and destination Method of financing exports
Labor	Wages and benefits Unionization Use of temporary and/or informal labor Skill composition of work force Multiskilling Training requirements and procedures Source of labor Productivity level and standards Worker participation Problems with workers
Capital	Vintage and level of automation of capital stock Source and age of new machinery Method of financing new machinery Methods of maintaining machines Adaptation or modification of machines Reskilling or deskilling with new machines

Management	<ul style="list-style-type: none"> Management history and training Basis of competitiveness Labor relations Shop-floor organization of labor and production Relations with industry associations Sources of information regarding new technology, markets and products Job ladders and internal mobility Problems with managerial personnel
Industry	<ul style="list-style-type: none"> Integration with other firms, suppliers, distribution networks. Trade policies and constraints Infrastructure requirements and resources
Costs	<ul style="list-style-type: none"> Breakdown of costs of production for three main products Total cost vs. wholesale price of product Transportation costs Taxes

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