A Closer Look at the New Filière:

The Establishment Surveys in Roanne and Cholet

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A CLOSER LOOK AT THE NEW FILIÈRE: THE ESTABLISHMENT SURVEYS IN ROANNE AND CHOLET

A new apparel filière is emerging in France, based on a supply chain model in which French clothing manufacturers depend more and more closely on the strategic actions taken by a retail sector that is becoming more concentrated. While the economic power to define the structure of the filière has shifted from manufacturers to retailers, there are also many new opportunities for partnership arrangements involving supplier networks, replenishment practices and product deliveries that have led to closer relations among apparel firms and between different sectors in the *filière*.

As part of this evolution, manufacturers and subcontractors have assumed many functions once performed by retailers. There is also a new emphasis on fashion design, rapid response production, and the organization of global production networks by within the French apparel industry.

Understanding the constraints imposed upon, and the opportunities offered to, the French apparel industry by the new filière requires detailed information on the strategic behavior of the firms in the filière. In order to gather such micro level data, we conducted field research designed to collect data from a group of firms that would be representative of the current apparel industry. Interviews with firms were designed to collect systematic information on business practices, as well as qualitative information. In addition, interviews were held with a sample of national retailers representing the principal segments of the retail-clothing sector.

We chose two apparel regions, Roanne in the Rhone-Alps part of eastern France and Cholet in the Pays de la Loire area of western France, because we had conducted previous research in the regions and knew that they provided a reasonable cross-section of experience of the apparel industry in France. Roanne is the leading region for knitwear located 80 kilometers from Lyon and Cholet is the leading region for woven clothing located in the Pays de Loire (directly south of Angers - Nantes, 360 kilometers from Paris). Woven products, however, are becoming a growing part of Roanne's apparel activity. There is relatively little textile production in Cholet while the knitwear industry in Roanne is closely integrated with the production of the knitted material.

These two regions were built on distinctly different organizational premises, as well as producing different types of products. Roanne is the older of the two regions and is dominated by small, highly skilled and specialized, contractors. Cholet is a more entrepreneurial region that has traditionally prospered from serving new emerging markets in the sixties and seventies (such as children's products) and some niche markets more recently. Both must now adapt to just-in-time flexible production, the growing use of foreign sourcing of production, and product design based on continuous style change.

Methodology

In the late eighties and again at the beginning of the nineties we surveyed about 40 firms in these two regions.[1] For this project, we surveyed 46 plants in October and December of 1996 and conducted selective follow-up surveys in 1997-98.[2] Remaining in contact with the industry over more than a decade gives us a longitudinal perspective on the effects of changing global supply chains on the apparel industry in the regions.

The research consisted of both intensive interviews with managers and executives and the administration of an abbreviated version of a large production and logistics questionnaire developed by the Harvard Center For Textile and Apparel Research (HCTAR) for its study of the U.S. apparel industry (Abernathy, Dunlop, Hammond, Weil 1999). We have supplemented this data with information provided through discussions with the major French industry associations of the filière (CTCOE, Gencod and Editex). A detailed description of the firms participating in our study is provided in the Appendix to this report.

Our data suffers from several limitations. First, Cholet and Roanne specialize in the production of women's and children's' wear and there is only a minor representation of men's wear production. However, this is a not a major concern because the men's wear sector in France has been shrinking in importance relative to women's and children's wear, which are where the future of the French garment industry lies. For

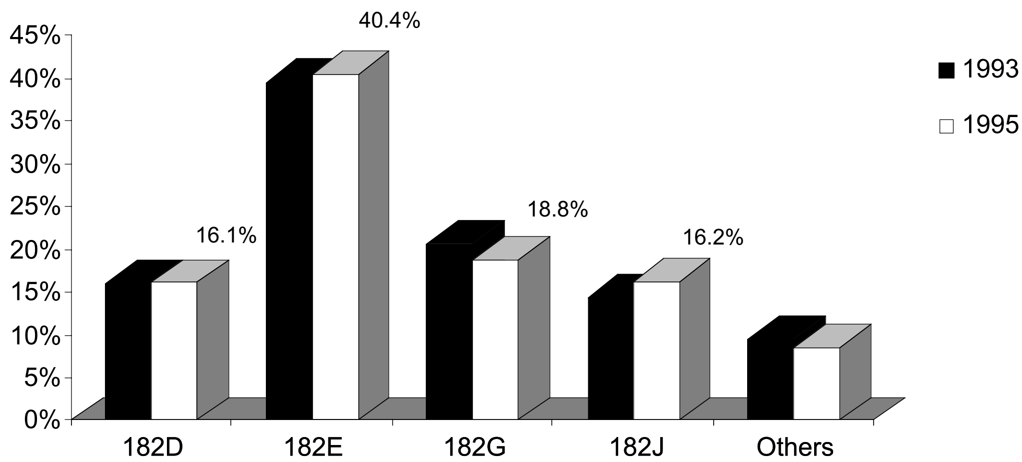
[1] The two past surveys have been published, Rérat Besucco and Gomel, 1989, and Courault, 1991.

[2] For a complete presentation of the survey, see the report for the Ministry of Labor (*Les transformations de l'emploi et la recomposition de la filière textile française*, March 1997) and paper for the ILO-IIES workshop "Employment and emerging of the supply chain model: the French case" (May 1997).

example, men's and boy's garments combined accounted for only 16% of current production in 1995 (Figure 1).

<u>Figure 1</u>

% Turnover per sector in French Apparel market structure



182D : Men's and boys ready wear

182E : Women's and girl's ready to wear

182G : Underwear apparel

182J : Other articles

<u>Data</u> : Results from the " *Enquête annuelle d'entreprise* ", SESSI (Ministry of Industry), for firms employing 20 people and more.

A more serious problem is that the formal data questionnaire derived from the U.S. HCTAR project was unsuited to capture many of the flexible quick-response practices of the small manufacturers and subcontractors that increasingly comprise the core of the French industry. The HCTAR questionnaire is well designed to study the business practices used by larger firms with supply relationships built around basic and basic fashion products. However, it is not suited to explore the practices of smaller firms whose business, in the French case, consists mainly of product design, the manufacturing of samples and very small batches of short-life cycle fashion products, and managing foreign outsourcing. These are the functions that increasingly characterize the French clothing industry.

The overall importance of small and medium-size firms in the French apparel industry, and the changing nature of their business strategies, limited our ability to develop quantitative materials that were fully comparable to those collected by HCTAR in the United States and by the counterpart study of the UK. Where it was possible to make comparisons, the distinctive and important role of the small enterprise sector in France leads us to make different interpretations of findings that appear somewhat similar to those in the United States.

This report, therefore, relies more heavily on the qualitative interview materials, than on survey data, in reaching its conclusions. To cross-check our findings, however, we conducted additional follow-up interviews with a sub sample of firms that seemed to us "most representative" of the experience of apparel firms of different sizes and serving different types of product markets. Despite the usual limitations of the qualitative surveys, the research with these "most representative" firms give us added confidence that our findings provide a reasonable approximation of the current developments that characterize those parts of the French industry that have the strongest prospects for survival.

The Case Studies of the Filière in Roanne and Cholet

The transformation of the apparel industry in both regions is being dictated by developments in the retail-clothing sector. Our survey suggests that there are strong forces for integrating apparel firms with retailers within the supply chain, but at the same time there are abundant examples of firms that remain outside the core of this transforming *filière*. How the transformation will occur and what forms it will take remain uncertain.

The experiences of Roanne and Cholet are similar. Although the two regions have specialized in different types of products, they had similar organizational structures in the past consisting of important local manufacturers surrounded by numerous small and medium size firms that were either contractors or independent producers. Both regions have seen substantial declines in employment and substantial changes in the occupational composition of the industry as foreign outsourcing has grown. New requirements for just-in-time production at the lowest possible price are also common in both regions. Finally, both regions have a sector of traditional firms that have survived largely by outsourcing production and serving the shrinking market of independent retailers.

The old relationships between manufacturers and contractors also emphasized continuity. Whether the relationship involved manufacturers working with highly-specialized contractors, as in Roanne's knitwear industry, or with contractors that supplemented the production of manufacturers in Cholet's woven garment industry, contracting relationships used to be stable season after season. The supply chain is now more complex and it is continually in flux. With more emphasis on niche markets for samples and smaller mid-season orders, production relationships depend on meeting the delivery schedules and price points demanded by retailers for a specific product at a particular point in time. This has made contracting relationships more opportunistic and less permanent.[3] Of the two regions, Cholet has been more successful in this modernization process.

This section compares the experience of these two regions to illustrate the choices that the apparel industry has faced in recent years. It focuses on the dilemma of how firms can become more integrated - how the supply chain with France can be strengthened at a time when the filière is expanding so rapidly at the international level.

Roanne

Roanne is an old textile and clothing center that was once dominated by textile industrialists whom opposed allowing other kinds of industry into the region in order to minimize competition for labor. Historically, it depended on Lyon's specialization in silk spinning and weaving (helped locally by the wide implementation of the Jacquard weaving tools). After the silk period, synthetic fabrics were successful for a long time and the region still has a lot of synthetic silk and other chemical fabric factories. Today, Roanne is a center for knitting and the manufacturing of knitwear. However, since 1985 there has been a growing woven apparel presence.

[3] For instance, firms used to modify their subcontracting practices: sometimes they stabilized their contracting with some firms and remained attached to them through diverse control tools, but nowadays some prefer change every time to try to catch the right firm which offer a good quality for a good price. It means stabilizing their contracting process no longer interests them. There is no clear evidence from these many diverse practices.

The apparel and textile zone in Roanne superficially resembles an Italian industrial district, similar to the district of Carpi (the world capital of knitting in Italy). It has the same type of workforce with handicraft skills and wide experience in the knitwear industry. It contains a very diversified group of firms, most of them being very small and highly specialized. There are roughly 400 apparel and knitting plants, most of which are very small (less than 10 employees) specialized contractors with a strong craft tradition. The largest fifty firms employ about 70 or 80 per cent of the industry's workforce and only about 150 firms are significant enough to belong to an industry association.[4] The prevalence of small firms reflects the technology of knitwear production. Knitted fabric goes through a number of stages before it can be assembled into apparel. A single operator does each stage and the production process is decentralized to firms that traditionally specialize in one or two techniques.

In the past, Roanne's firms produced either for independent retailers or mass market retailers, both of whom were steady customers. However, in 1990, these markets began to dry up as large retailers gained market share from independent retailers at the same time that they were turning to foreign sources for much of the clothing traditionally supplied by Roanne.

The industry responded in two distinct ways. Some firms passively sought to retain their independence as mass manufacturers by dealing with independent retailers that were still buying domestic products. These firms have seen their markets continue to decline and most of those that have survived have substituted foreign supplies for most of the domestic production that used to occur in Roanne.

A second set of firms responded more actively to the changing markets by drawing upon Roanne's long-established strengths in knitwear production and the prevalence of small, specialized firms. These firms shifted from mass production for mass markets to flexible production for a new set of niche markets being created by large retailers. Most of the large retail chains order samples and designs for low and middle range products from these firms and the region has become the leading sampling area of

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[4] Knitting requires a lot of different treatments before ready for use as an input for garment production. As each activity is highly specialized because of the fragmented structure of the production process, there are five different local producers associations. None of them are able to give the precise number of their members, because of the shifting structure of the process itself.

France. These retailers currently place their large orders with foreign suppliers, although they will also reorder small batches of a limited set of products from Roanne suppliers.

Along with this focus on samples and small batches is a tendency to engage in product design and development, either through direct participation in style creation, product design and strategy, or in the improvement of the quality and design of established products. This creates a growing need for a multi-skilled workforce that includes people working on design, product development, and marketing, as well as a broad technical mastery of product manufacturing. Foreign sourcing of production by these suppliers has also meant a need for employees who can handle the commercial and sales end of the industry.

The Roanne region however, has lagged in training for the new skills that are needed by the new lean retailing filière. It was only with the recent (1996) *MUTEX* program that the industry in this region has begun to seriously address its training needs[5]. *MUTEX* is a training program that covers 50 firms and 2,000 workers and focuses both on enlarging workforce skills and reinforcing managerial capacity.

There remains dualism among the firms in Roanne between those who hang on to the traditional methods and those who have modernized. In either case, however, most large batch manufacturing activities have left the region and are unlikely to return. The future balance between manufacturers who retain their independence from other firms in the region by choosing to specialize in foreign outsourcing and those that have switched to flexible and collaborative small batch production of samples for lean retailers remains difficult to predict.

Cholet

Cholet is a newer apparel region that specializes in garments made of woven fabric. It began to develop in the late thirties and experienced growth in new firms as recently as the 1960s and 1970s, when it specialized in footwear as well as apparel. The region specializes in children's and women's wear, but also produces a small amount of men's wear. Both manufacturers and contractors in Cholet tend to make the same woven

[5] This program was adopted in November 1996, through a grant given by the Labor Ministry. It is mainly supported through public funds and partly through private, professional and European funds. Its initial results were thoroughly examined via an evaluative survey (see Courault and Parat, 1998).

products, so that there is less of the product specialization between large and small firms than is found in Roanne.

The decline of the apparel industry in Cholet has been very dramatic. Two decades ago, there were more than a hundred firms employing about 20,000 people, including eight firms with between 500 and 900 workers. Today this number has decreased to about eighty firms with a total of 12,000 to 14,000 employees[6]. The large manufacturers have outsourced two thirds to three-quarters of their total production, including that of subcontractors, in less than a five-year period.

These trends are particularly apparent in six of the largest firms in Cholet that we have been studying since 1990 *(Albert, Biderman, Catimini, Groupe Salmon Arc-en-Ciel, Gaston Jaunet and Jacques Jaunet).* At their peak in the late seventies, these plants employed 7,000 to 8,000 employees and generated an additional 3,500 to 8,000 jobs through an extensive subcontracting network in the region. Ten years later, outsourcing has reduced the workforce in these six manufacturers by three-fourths to about 1,800 and there has been a comparable cutback in the use of subcontractors[7].

Only two of the most successful firms of the seventies have survived, both of which are specialized in children's wear and have a strong reputation for quality. Although most of their production is still outsourced to low cost countries, these traditional manufacturers have succeeded in relocalizing some of their production and rebuilding some of their local employment. They have succeeded in large part because they have emphasized the expansion of their traditional supply networks with independent retailers and are producing more fashionable products.

While traditional manufacturers have nearly disappeared from Cholet, a number of their former subcontractors are prospering. These subcontractors suffered considerably in

[6] The precise estimation of firms and work force is very difficult because of the volatility of the many small firms in the region. There are no up-to-date public data at the regional level that correspond to the apparel industry classification, or that cover small firms, and industry estimates are unreliable because many small firms do not belong to the local trade associations. Our estimates are rough, but they reflect the relative importance of each region.

[7] The firms considered are Albert, Biderman, Catimini, Groupe Salmon Arc-en-Ciel, Gaston Jaunet and Jacques Jaunet (better known under its brand name Newman): one has nearly disappeared, three have been sold to foreign or external groups, only two remain independent.

the late eighties from the huge delocalization of production by manufacturers and their recent success provides useful lessons about how small firms must adapt to the new filière.

Some subcontractors have aggressively searched for new customers and new market niches among lean retailers. Second, they have enlarged the range of products that they offer. Thirdly, they provide new services that meet the multiple demands of chains, retailers, producers and designers. Unlike the narrow specialization of contractors in Roanne, those in Cholet emphasize the breadth of products that they can produce and have the flexibility to respond to a wide range of new market niches. This reorganization has involved learning how to engage in product design and development, to specialize in making first samples and sample of collections, to market their products.

In addition, Cholet contractors have identified what type of supplier is attractive to different parts of the filière -- mass retail chains, manufacturers, and designers. They have learned new marketing and commercial skills, and have reinforced their design and product development capacities so that they can make samples and sample collections. This allows them to compete for types of business that are increasingly being subcontracted by various retail groups.

These modern contractors have also stimulated growth in a dense network of smaller subcontractors that are operated by their former employees and located close by. This combination of proximity, sharing of a common labor pool, and familiarity with the products and quality standards of the Cholet region have reproduced the kinds of efficiencies associated with Italian industrial districts.

These changes have altered the nature of work and production in Cholet. Modernizing their production process and promoting the continual development of products have required new skills and more emphasis on teamworking, both of which are the keys to flexibility and responsive production. There is a strong need for greater breadth of skill linked to quality control, design, and product development. The delocalization of manufacturing also brings with it new requirements for managing foreign sourcing, maintaining product quality at a long distance, and developing the information linkages required to ensure timely deliveries and efficient logistics.

The firms in Cholet that intensified their training were the most successful in this modernization process. Being the most advanced in terms of training policies, they were the first to promote multi-skills among their workforce. Training has in fact gone beyond the level required for flexibility. It includes redesigning the logistics system and the continued participation in the design phase of production. This has also meant providing new services to retailers, redesigning the production process and dividing it between long and short runs.

The survival of these firms, however, remains precarious. Cholet contractors have avoided the complete delocalization of their production, but the jobs that survive are increasingly related to technical functions of design, marketing, and outsourcing, rather than manufacturing of apparel. The bigger contractors (those with more than one hundred employees) seem more fragile than the smaller ones (less than 50 employees), because they tend to concentrate on middle range products where competition is most severe and their size has made it harder for them to adapt to the changes being dictated by the filière.

Lessons From the Two Regions

Roanne and Cholet provide useful examples of the many changes that small and medium-sized firms have made within the apparel industry. Traditional network relationships among suppliers have weakened, and there has been considerable change in the position of contractors within the filière. Many manufacturers are no longer producing their own goods, but serve as coordinators of external production. Similarly subcontractors do not function in the same way as they once did, except for the fashion producers. What is left for them is a small, but strategically important role as sample makers or product designers in the development of collections.

These changes have had an enormous impact on the level of employment in both regions. Overall, employment is only about one-quarter of previous levels. There are very few large companies with any production operations in these regions and their total employ only between 200 and 300 workers. The largest medium-size companies with manufacturing plants in the two regions employ fewer than 100 workers. Only about 10% of the total sales of these companies, however, are still manufactured in France and production workers account for only 15-30% of total employment in these companies.

Two factors stand out as contributing to strong performance among the more successful small and medium-sized firms in the two regions: "quality product policy" and effective training policy. These work best when they are part of an overall management strategy to identify markets where the firm has some competitive advantage and then to build upon these advantages. Size and product are far less important than the capacity to compete by developing and improving upon specialized design, production and commercial activities.

The New Dualism

As large firms have downsized or disappeared and surviving firms have responded to the new competitive conditions of the industry, distinctions between manufacturers and contractors and between large and small firms in the industry have diminished. However, a new dualism is emerging between firms that have a clear vision and strategy for adapting to the future and those that remain a prisoner of the past organization of the industry. Now that there is no longer any mass manufacturing, contributing to the development of products (product design, fashion and quality) appears to be the first step in effective survival strategies.

This new dualism involves three distinct groups of suppliers. On the one hand are the creator or designer manufacturers that have integrated forward into retailing and the traditional producers that also concentrate on design, but lack the resources to create their own retail chains. This group also includes the sub-contractors who have moved aggressively to work with large retailers in markets for samples and small batch replenishment. On the other hand are the traditional manufacturers and contractors that remain tied to independent retailers. The markets for the latter group are declining most rapidly as mass retailers gain market share from the independent sector.

The first group of manufacturers is relatively small, the second is not as important as it was ten years ago, and the third is the largest. The sub-contractors are a mixed, but large group.

Creater/Designer Firms and Forward Integration Into Retailing

This group of manufacturers has strengthened its situation enormously by expanding into a product creation process in high quality fashion markets. Many of the firms we surveyed have hired large numbers of experimental designers and have established product images based on both style and the quality of manufacturing. These design efforts are often supported by investments in computerized design and product development processes.

But the success of these producers is also due to their ability to stabilize and expand demand for their products by setting up their own retail chains. Forward integration into retailing has compensated for the huge decline of the independent retailers that were previously their regular clients. These firms are competing with chains mainly in low and middle range of fashion products, but they are also developing brand name products for fashion forward markets that are building their overall image for quality. Two firms in Cholet specializing in children's wear and two in Roanne in knitted women's wear are good examples of this strategy.

Independent Producers

This second group of firms works on product design and on upgrading its product quality. It tries to supply both the few remaining independent retailers of quality products and large-scale retailers. These firms that supply independent retailers operate in a lower fashion range market than the creator/designer firms. They do not have their own branded products and have little control over their markets. A large number of Roanne manufacturers are in this category and much fewer in Cholet. They produce samples and the production work they receive is irregular. They do little contracting, except for some highly specialized jobs, and the local contractors they used to employ have been replaced by outsourcing to North Africa, Asia and Eastern Europe. In both regions, these firms are in decline.

Traditional Suppliers of Independent Retailers

This third group remains committed to manufacturing, rather than design. Some specialize in production of samples and initial collections; others do some mass production. Their traditional customers are independent mass discount stores, mail order firms and small chains in the low and medium product range.

The decline in independent retailers however, has cut back their orders. They are seeking other markets and becoming more dependent on orders from jobbers, but their future is not promising. These firms are gradually disappearing in Cholet and those that remain are precarious. The situation in Roanne is more difficult to assess because these firms are both knitting producers and jobbers for retailers.

Other Contractors

In addition to these three groups is a large set of contractors that were once manufacturers, but who have been obliged to abandon manufacturing. Some are becoming suppliers of different value-added services to the *filière* while others have become jobbers. The most successful tend to combine their business skills as manufacturers with a new capacity for flexibility.

The Conduct and Performance of Apparel Firms

Given the disappearance of large apparel firms and the predominance of small and medium-size firms that provide a volatile mix of goods and services, both in Roanne and Cholet and more generally in France, it is difficult to develop quantitative measures that accurately reveal the extent of changes in the conduct and performance of the industry. For example, we frequently found during our interviews in Roanne and Cholet that the survey instrument designed to provide comparable information to that collected by HCTAR in the United States was not well-suited to analyzing the business practices of smaller firms.

Instead, we have compiled a database drawn from 20 relatively large business units that more closely resemble the types of business units surveyed by HCTAR in the United States. These business units consist of the largest firms in Roanne and Cholet, the parent companies of the smaller firms in Roanne and Cholet, and a group of national manufacturers and contractors with which we have previously conducted research. We believe that this sample is broadly representative of the trends in trends in the large-scale sector of the industry that produces basic and basic fashion products. However, it underestimates the extent to which the shift towards clothing design and the production of samples and small batches of new or replenishment products have substantially increased the speed and flexibility of the medium and small size enterprises that now account for the largest share of domestic clothing production.

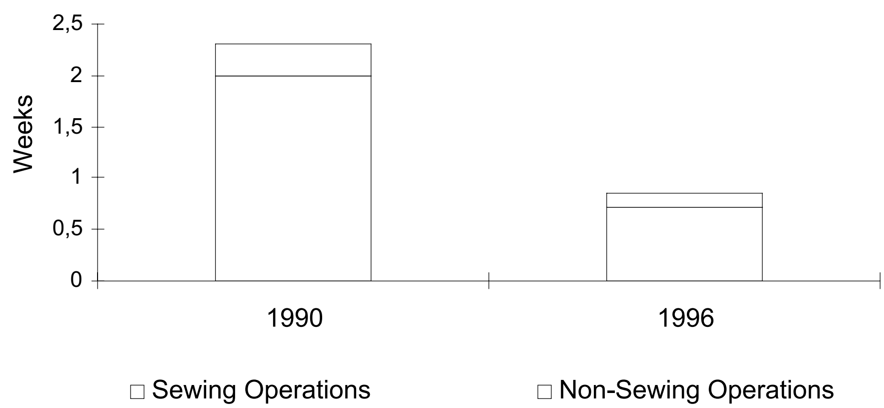
Throughput Times and Lead Time Performance

One result of the restructuring of the industry has been the ability to accelerate throughput times and reduce lead times for products. This improvement is in direct response to pressures for faster delivery times by retailers and has required more flexible forms of work organization, such as teamwork. Interviews show that single garment and team production have entirely replaced Tayloristic practices and that there are increasing numbers of multi-skilled workers. [8] For example, throughput times among surviving firms have fallen from almost two and a half weeks in 1990 to less than one week in 1996 (Figure 2).

Figure 2

Throughput Times in Team-Based Systems

(in weeks)



Data : Author's calculations. Means are based on unweighted averages for business units in the sample.

However, these results must be somewhat tempered by the fact that the size of orders has fallen during the same period, (for instance from 5,000 to 10,000 in the late eighties to 1,000 or less in 1996) as the outsourcing of larger orders to foreign suppliers

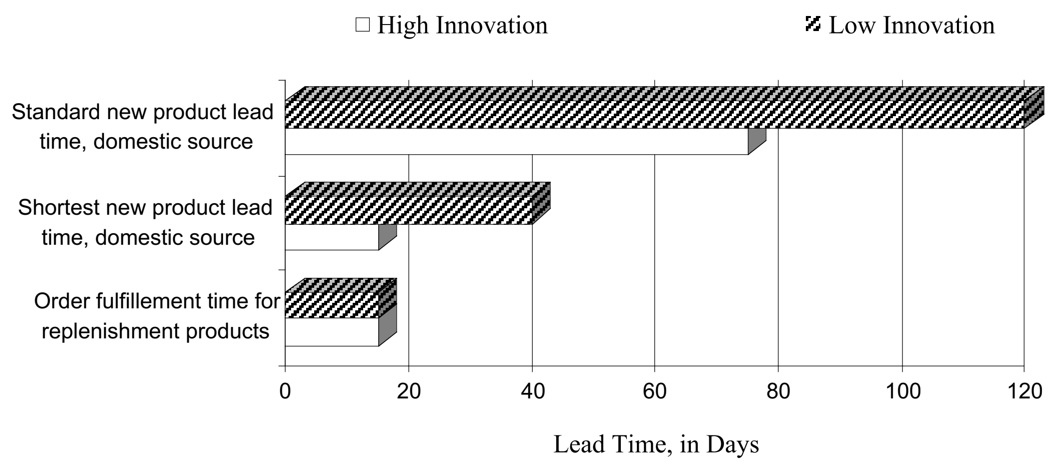
[8] National data also suggest that the amount of training observed in Cholet and Roanne is above the national average.

has grown. A number of our respondents in Cholet reported that the throughput time for products manufactured in eastern European or Mediterranean countries is 2 –21/2 weeks for medium-sized batches (5,000 to 15,000) and the transportation time being 2-3 days

A second way of looking at faster throughput is to look at lead times between when a producer receives an order and when it is delivered to the retailer. In Figure 3, we report lead times for high innovation firms, defined as frequent adopters of modern information technologies and flexible work practices, and low innovation firms that retain more traditional organizational and managerial practices. The first lead time is reported for new, basic fashion products; the second for new fashion products; and the third for replenishment of basic fashion products.

Figure 3

Lead Time Performance, Manufacturer to Retailer, 1996



Data: Author's calculations. Means are based on unweighted averages for business units in the sample.

In all cases, high innovation firms show shorter lead times than those of low innovators. For new products, these data show quite long lead-time performances, (three to four months for basic products), but they are much shorter for fashion products ("*actualization*") and shortest for replenishment products. The shortest lead-time for new fashion products is under three weeks and this speed can also be met for replenishment products when the fabric is available. Our interviews also suggest that firms that are most strongly integrated with retailers have shorter lead times than those that are largely independent of retailers.

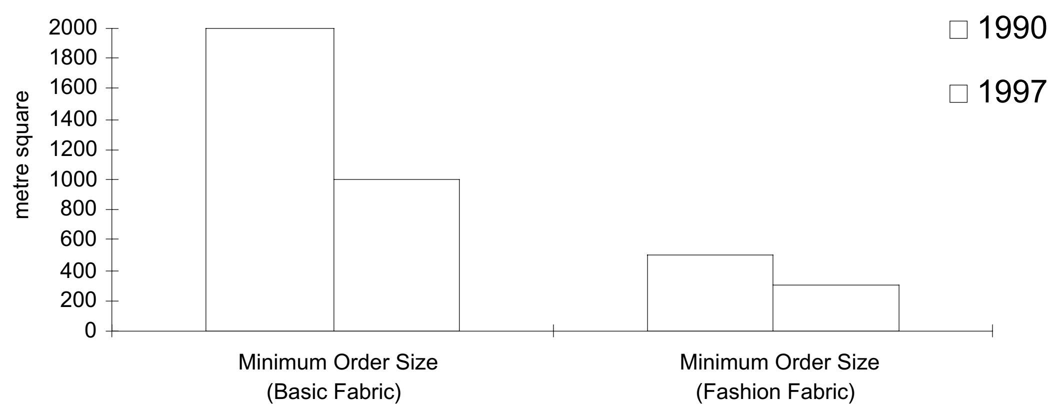
Relations With Textile Suppliers

Reducing lead times depends, in part, on the availability of fabric supplies. The replenishment times reported in Figure 3 for example, depend on fabric being available. The move towards shorter lead times for smaller orders has been helped in France by both faster supplies of textiles and the willingness to supply smaller orders of fabric (Tables 4 and 5). Between 1990 and 1996, textile producers reduced the minimum size for orders by half for basic fabrics (from 2,000 m_ to 1,000 m_) and by almost as much for fashion fabric (from 500 m_ to 300m_). Minimum lead-times for deliveries were reduced to 3 weeks from 5 for basic fabric and to 2 weeks instead of 3 for fashion fabric.

Figure 4

Minimum Order Quantities, Textiles

(in square meters)

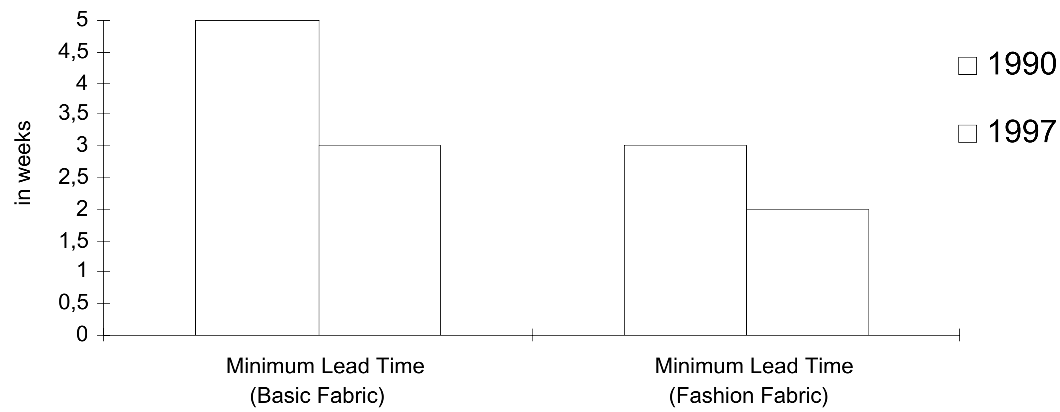


Data : Author's calculations. Means are based on unweighted averages for business units in the sample.

Figure 5

Minimum Lead Time, Textiles

(in weeks)



Data : Author's calculations. Means are based on unweighted averages for business units in the sample.

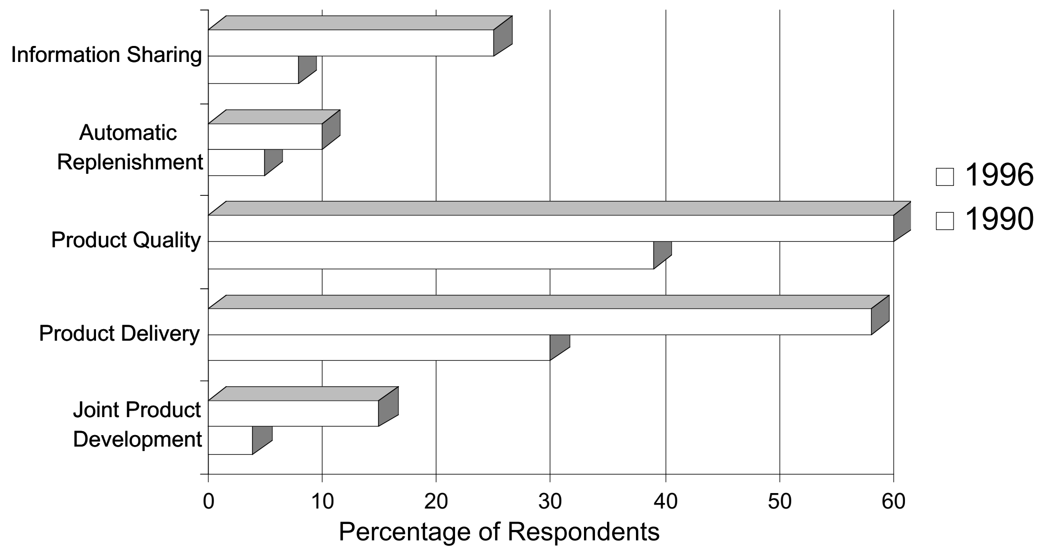
Manufacturer and Retailer Relationships

Some of the reduction in throughput and lead times comes from the shifting composition of domestic production in France from mass production to samples and small batches. Nevertheless, large-scale retailers have been placing pressure on their suppliers for just-in-time deliveries of these products in order to allow more flexibility in the range of styles and the level of inventories carried.

Such "flexible" retailing often works best where suppliers and retailers cooperate to speedup the supply process. Cooperative partnerships were formed with the majority of producers in Roanne and Cholet, but they tend to focus on services such as product quality, labeling, and delivery speeds, rather than on the close EDI relationships that are often found in such partnerships in the United States (Figures 6 and 7).

<u>Figure 6</u>

Nature of Supplier - Manufacturer Partnerships, 1990 - 1996

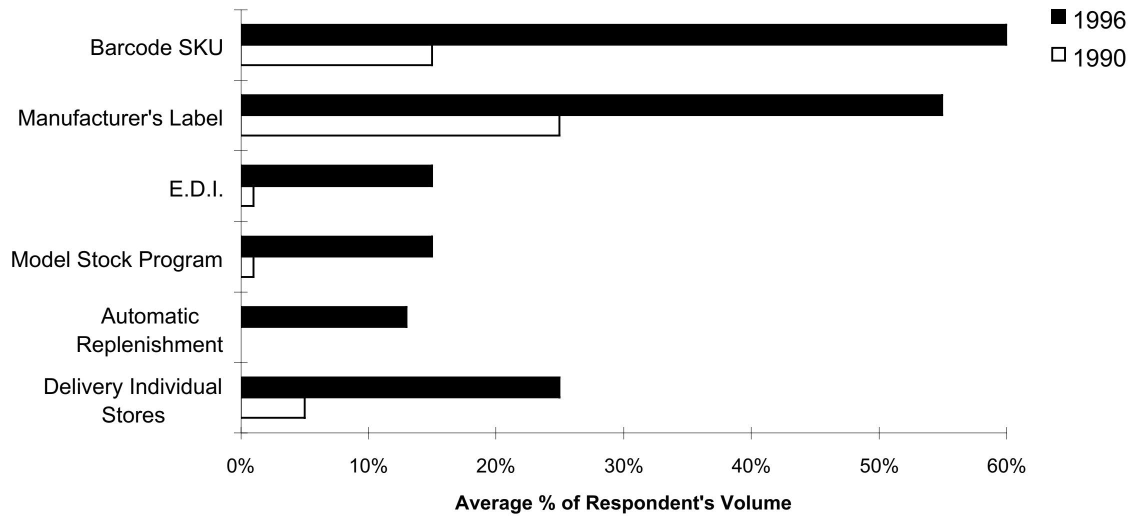


<u>Data</u> : Author's calculations. Means are based on unweighted averages for business units in the sample.

While partnership activities (weighted by sales) increased across-the-board between 1990 and 1996, information sharing (25 %), joint product development (15 %) and automatic replenishment (10 %) were relatively uncommon compared to partnerships based on improving quality and delivery speeds, which covered about 60% of the output in the firms surveyed. This same pattern also appears in the types of services that suppliers provide to retailers. EDI, model stock programs, and automatic replenishment applied to less than 15 % of the output of the firms in our sample, compared to providing bar-codes and manufacturer's labels (60 and 50 % respectively).

Figure 7

Supplier Services Offered to Retailers



Data : Author's calculations. Means are based on unweighted averages for business units in the sample.

We were unable to obtain meaningful information on how suppliers' final inventories were changing, since production of samples and small batches that are typical of small-scale French producers do not involve much inventory accumulation prior to shipping. Nor did the distinction between shipping to traditional warehouses as opposed to more modern distribution centers seem important to these firms. Instead, supply logistics continues to involve direct shipments by suppliers to their own retail outlets and to the manufacturers, jobbers, and wholesalers that serve independent retailers. The major change in the logistics practices within France has involved direct shipments to individual retail stores, which bypass the warehousing function. Such direct shipments were made by about 5% of the suppliers in our survey in 1990 and this fraction increased five-fold to about 25% by 1996.

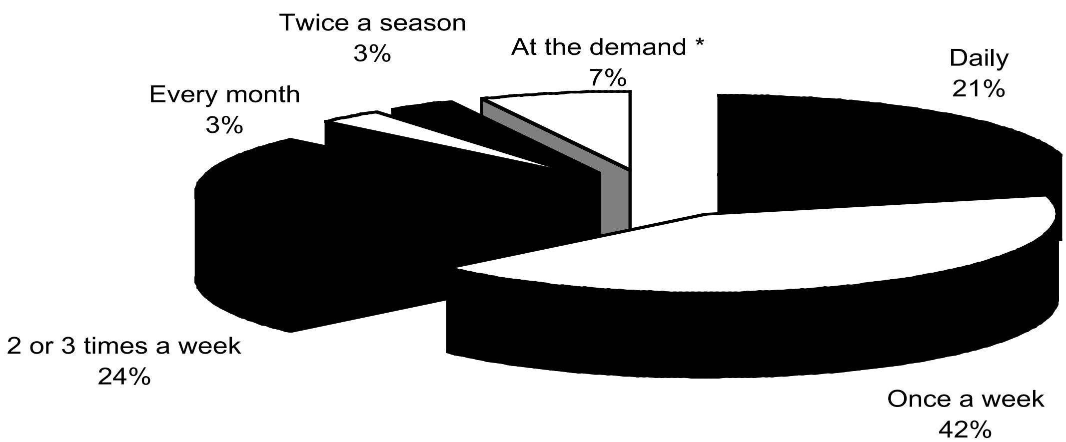
Rapid Replenishment Practices

The extent to which flexible retailing in France relies on rapid replenishment of existing products in order to facilitate inventory reduction and "lean" retailing practices is a more complicated question to answer than in the United States. National surveys of the types of large retailers that are most likely to be able to develop "lean" retailing strategies, collected by their trade association (CTCOE), show very large fractions of retailers receiving rapid replenishment supplies weekly or more frequently. This survey data, from stores accounting for about one third of total clothing sales, reports chain stores with large selling areas (such as hypermarkets) having rapid replenishment rates of 87%, with specialty chains close behind at 78% (Figure 8).

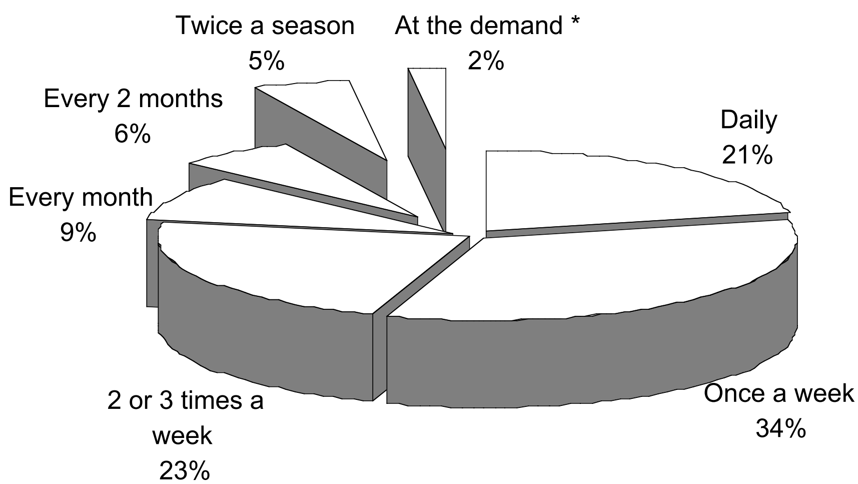
Our interviews with such retailers, however, show that these high replenishment rates largely reflect deliveries of basic and basic fashion products that have a life cycle of a season or more. These are not the types of products that are usually manufactured in France. Instead, they are generally produced by nearby foreign suppliers in North Africa or supplied by mass manufacturers in other European countries and frequent deliveries of "replenishment" supplies often represent the delivery of previously scheduled production. Although these data also include replenishment supplies that are outsourced by domestic suppliers and the small batches of replenishment production of higher fashion products manufactured domestically, they do not represent what has become the more typical domestic production of samples, or of small batches of "quick fashion" products with life-cycles of less than a season that are used in place of replenishment for products with higher fashion content.

Figure 8

Replenishment Rates for Different Types of Chains: 1995



Large Chains > 400 m^2



Small Chains < 400m^2

Data : C.T.C.O.E. (*) "At the demand" means that manufacturers determine the replenishment schedule

Our survey data confirms that domestic apparel firms engage in little direct production for rapid replenishment markets (Table 1). The average replenishment frequency for our sample is every six months. Only 10-15% of the firms re-supplied large retailers on a daily or weekly basis and the highest rate of rapid replenishment was to independent retailers for whom 40% of the firms provided rapid replenishment. These independent retailers, however, are those that are most closely associated with producers through direct ownership or franchise arrangements. They are not the traditional independent shops, which do not replenish their product supply more than twice a season.

Table 1

Replenishment Frequency by type of Retailer: 1997

(% of Establishments)

	Department Stores	Super & Hypermar-kets	Mail Order	Independent retailers	Specialized Chains
Daily	-	5.0	-	15.0	6.0
Once a week	15.0	5.0	10.0	25.0	7.0
Twice a month	-	-	10.0	-	61.5
Monthly	25.0	45.0	30.0	10.0	25.5
Every 6 months	60.0	45.0	50.0	50.0	-
TOTAL	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

Data : Author's calculations. Means are based on unweighted averages for business units in the sample.

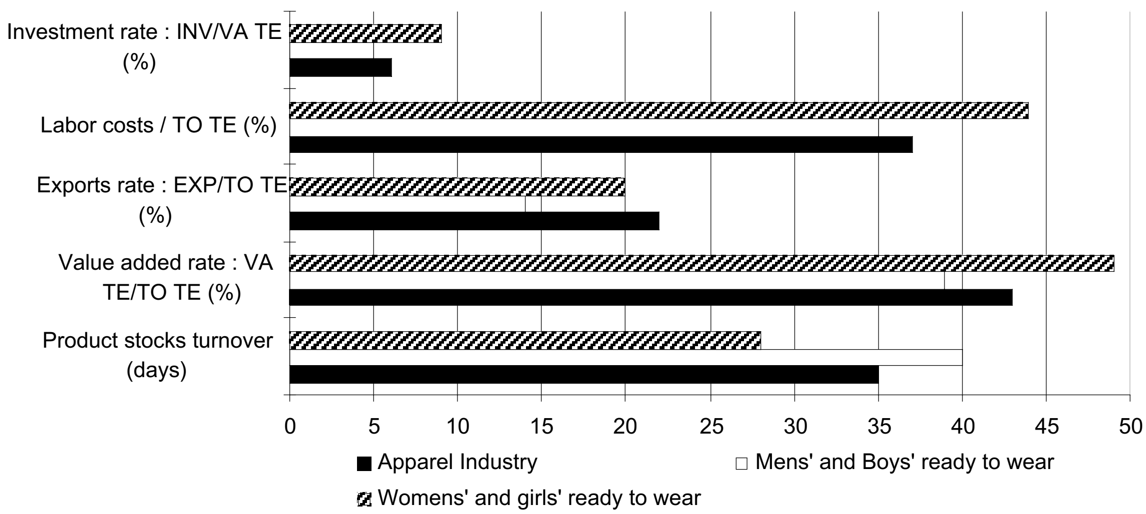
This is not to say, however, that rapid response production is not an important development in the domestic apparel industry. All of our evidence points to domestic producers increasingly supplying product market niches where speed of production is essential. The quick supply efforts of the domestic industry are centered around the production of samples and of new fashion products that can be introduced during the season. These new or modified fashion products are substitutes in the French retail market for the rapid replenishment of established products that is featured prominently in the domestic supply chains of the United States. The importance of this market for new, short-life cycle fashion products is further underscored by growing importance of the production of fashionable women's and children's wear in the domestic apparel industry and the decline of less fashion-oriented men's wear production.

The relatively stronger performance of the women's wear sector is also evident in other measures of performance that we document in our survey of firms in Roanne and Cholet. Despite its greater labor intensity the women's and girls wear sector out-performs the men's and boys sectors in terms of rates of new investment, exports, value-added, and speed of stock turnover (Figure 9).

Figure 9

Performance Measures of the French Apparel Industry, By Sector: 1995

(For firms with 20 or more employees)



TO = Turnover, TE = Taxes excluded

Data : Results from the " *Enquête annuelle d'entreprise* ", SESSI (Ministry of Industry), " *La dispersion des performances des entreprises* ", Edition 1996.

Conclusion

The recent restructuring of the apparel supply chain in France is quite easy to summarize. Historically, the structure of the apparel supply chain consisted of independent manufacturers and subcontractors, each of which supplied a specific market segment. Each apparel manufacturer developed its own relatively stable market through long term contracts with retailers.

This traditional domestic filière, which was strongly shaped by manufacturers selling to smaller retailers, has been reconfigured over the past decade or more into a global filière that is designed and coordinated largely by mass retailers and large specialized retail chains. The key features of the domestic component of this new filière are more rapid production, just-in-time supply capacity, and the continuous renewal of fashion products throughout the selling season.

As we have endeavored to show, the changes in retailing practices and manufacturing reactions have been so major and deep that they are difficult to convey completely. However, the main result is that only some suppliers have been able to react and adapt their business strategies to the requirements of the new filière. Some have survived by retaining their traditional role as suppliers to independent retailers, or have started their own retail chains. Others have found new product niches or are providing new services, which were not previously available. Many have also become managers of production networks in low cost countries. Most, however, have been forced out of business.

The most promising development for the domestic industry is that the dominance of large and flexible retailers has opened a very diverse and buoyant set of niche markets stemming from the demand for faster development of new products and new fashions. The large chains that now control the retail market have adopted flexible retailing strategies that include better inventory management (through the use of scanners and bar codes), rapid replenishment of basic and fashion basic products, and a reliance on quick supplies of samples and small batches of new fashion products for women and children. Rapid replenishment of basic and basic fashion products comes from nearby foreign countries, while rapid supplies of new fashion products is the province of domestic apparel producers.

Mail order firms were the first to adopt these rapid supply practices for replenishment and new fashion products by emphasizing 'forty eight hours delivery' (" *48 heures chrono* ") in the early 90s and then the 'twenty four hour delivery' (" *24* *heures chrono* ") in 1995. These practices have now spread to other mass retailers and large specialty chains, which represent the fastest growing segments of French retailing.

The most radical example of quick response supply, however, involves the development of "quick fashion" by domestic suppliers of specialty chains. Under quick fashion *("mode de la rue")*, new products are continually being produced and market tested in small batches. Successful products are then replenished in somewhat larger batches until demand slackens. Meanwhile, new products are continually being developed and tested.

These new retailing strategies are generating increased demand for samples and small batch production. These are the products where the domestic sector of the apparel filière has a speed advantage in a market where products are multiplying and product life cycles are getting shorter. This market niche is typically being served by firms that were once subcontractors for traditional manufacturers and that have developed new relationships with flexible retailers.

These subcontractors have also taken on new design and commercial responsibilities, formed strong collaborative arrangements with other local subcontractors, reorganized their production methods, and engaged in intensive training to create a multi-skilled and flexible workforce. Textile suppliers have further contributed to the growth of this quick response capacity by reducing minimum order sizes and lead times for delivery. Our surveys confirm that these suppliers are among the most entrepreneurial and innovative in the industry, have the shortest supply times, and have the strongest prospects for survival.

APPENDIX

THE RESEARCH SURVEYS

The survey results presented in this report draw upon a long history of research on the French apparel industry conducted under the auspices of the Centre d'Etudes de l'Emploi (CEE). These include a study of French and European textile, apparel federations in 1992-1994; 6 French textile manufacturers: spinning, weaving, ennoblement in 1994; 6 European textile and apparel manufacturers in 1993-1994; and 21 French apparel contractors and manufacturers in 1994-1995**.**

In addition, Elisabeth Parat has conducted a large study exploring the business strategies of clothing producers and retailers from 1994 to 1996. Her work included mail questionnaires from 98 producers. Each of these studies was devoted to a special topic and they used a mixture of questionnaire and interview methodologies. Each study, however, provided an opportunity to review the internal practices of individual firms, their relationships with other firms, and their successes and failures and they collectively provided a baseline for our research in Roanne and Cholet.

There have also been a series of studies on the regional economies of Roanne and Cholet that focused on apparel manufacturing conducted by CEE. The first survey was of 40 apparel firms in Roanne in 1988-89, the second one in 1991-92 studied 23 firms in the Cholet area, and the present one conducted late in 1996-1998 with a total of 57 firms in both Cholet and Roanne. In addition, we interviewed 9 apparel manufacturers and wholesalers in the Parisian " Sentier " in 1996-1997 and 9 French clothing retailers in 1999. A list of firms surveyed in these studies is provided below.

Firms Interviewed in Cholet - 1991-1992

Manufacturers

Name and type of the Firm	***Name Person Interviewed***	***Function***	***Nb of employees/ enterprise***
MULLIEZ Frères - *Textile - Apparel*	Régis Mulliez	PDG	300
TROTINETTE - *Apparel - Baby*	JP Bretaudeau	PDG	26
NEWMAN - *Apparel Sportswear*	M. Canet, Gral et Guibert	MD, Prod. Mg.	1300
ARC EN CIEL - *Apparel - Baby*	ClaudeMartin	PDG	800
CATIMINI - *Apparel - Children*	Paul Salmon	PDG	450

MAUGIN - *Apparel - Children*	M. Rondeau	PDG	200
GASTON JAUNET - *Apparel - Women*	M. Rode	PDG	600
ALBERT SA - *Apparel - Children*	Marcel Albert	PDG	900
LEDUC - *Apparel - Women*	Jean Leduc	PDG	400
Etablissements SALMON - Apparel [9]	*François Salmon*	*PDG*	
	Subcontractors		
MANOUKIAN	Alain Moreau	PDG	50
BAIZET	Olivier Baizet, Mme Baizet	PDG	180
GETEX Marais	M. Dugast	PDG	50
GETEX Atlantique	Mme Dugast	PDG	50
HASPOLO	M. Baudry	PDG	50
MARIE PIRSCH	Marie Pirsch	PDG	50
SIVHA	M. Nicolle	PDG	50
ANNE FLORE	Françoise Lehéricey	Dir.	20
BOISSIERIENNE DE CONFECTION	Jacques Mothais	PDG	100
SOCOVET	Roland Bourhy	PDG	50
JACQUES BREMAUD	Jacques Brémaud	PDG	120
BOCAGE CONFECTION	Guy Cousseau	PDG	300
CONFECTION FAMILIALE	M. Aubert et Mme Cousseau	PDG	100
BOISSON	Mme Boisson	PDG	50

Agents

Jean SEREUX	Accessories, threads
Eric BAILLARD	Textile, woven and printed
François MAUGIN	Agent for “ Brother ”, and sewing machines

PDG = Chairman and Managing Director MD = Managing Director

Firms surveyed by Elisabeth Parat – 1994-1996

Spinning, weaving, knitting. ennoblement

Name of the Firm	*Name Person Interviewed*	*Function*
CHARGERS	Philippe Pasquet	Communications Manager
CORIEX	Claude Corbiere	Chairman and Managing Director
Groupe VERNAY		Sales Manager
Groupe MIROGLIO (Italy)		Sales Manager
GREYTEX - *Knitting - Dying- Ennoblement*		Manager
BEL MAILLE		Chairman and Managing Director
	French Subcontractors (Woven Apparel)	
ANDRE FACON André (G.S.S.) subcontractor	Didier Maillard	Manager
MICHAUX 3 Suisses (mail order) subcontractor		General Manager
	French Manufacturers	
BIDERMANN INTERNATIONAL SA	Georges Jollès -	Chairman and Managing Director

[9] The historical firm which generated the two recent ones, *Arc en Ciel* and *Catimini* (interviewed for historical matters).

ROUSSEAU - Men shirts		Chairman and Managing Director
JULLIEN - Children Apparel	Daniel Denat	Industrial Manager
LENER CORDIER - Women Apparel	Emeric Potié	Sales Manager
TSA INDUSTRIES - T-shirt		Chairman and Managing Director
L'OCEANE - Children Apparel	Patrick Berthomé	Production - Export Manager
DEVANLAY	David Evlagon	Men & Women underwear Manager
DEVANLAY	Bruno Luppens	Men underwear Industrial Manager
DEVANLAY	M. Mennessier	Project ISO - Certification Manager
DEVANLAY	Marie-Gabrielle Alain	Financial Manager
CHARLES ROMAIN - Luxury Women Apparel	M. Romain	Director
HUREAU - Children Apparel		Sales Director
COUP DE CŒUR (Groupe Devanlay) - Underwear Women, Men & Children Apparel	M. Stigler	Director
PORON DIFFUSION - Vêtement Enfant	Christophe Dubois	General Manager
GERARD DAREL - Vêtement Femme	Pierre Santelli	Manager
PHILIPPE PASQUIER - Women Apparel	M. Pasquier	Director Manager
WEIMBERG	Michel Weimberg	Director Manager
MOLINEL - Professional Apparel		Industrial Director
DEGUY - Children Apparel		Chairman and Managing Director

Foreign Manufacturers

Manufacturer (Portugal)	M. Giorgio Conti	Manager
Coats Viyella Plc (Great-Britain)	Richard Gilmore	Director of Corporate Development
Courtaulds Textiles (Great-Britain)	Peter Aubusson	Head of Corporate Affairs
Benetton (Italy)	Francesco Barbaro	General Manager
	Mara Di Giorgio	Financial Director
	M. Renato Tarditi	Technical Director
Groupe G.F.T. (Italy)	Laura Piatti	Economic & Strategies Manager
Marzotto SpA (Italy)	M. Renzo Ruella	Manager

" Le Sentier " Manufacturers

IRENE VAN RYB - Women Apparel	Irène Van Ryb	General Manager
WAIKIKI - Children Apparel	Claire Moronval	Communication & licenses Manager
LIBET - Women skirts		General Manager
JEFF GALANO - Women Apparel		Chairman and Managing Director
K et M associés " Lili Crepon " - Women Apparel		Chairman and Managing Director

" Le Sentier " Wholesalers

POLO - Women Apparel Wholesalers		Chairman and Managing Director
SILHOUETTE PARISIENNE - Women Apparel Wholesalers	Chantal Meniane	Chairman and Managing Director

Import Agents

DITA - Women Apparel	Hervé Haezebrouck	

Firms Interviewed in Roanne and Cholet, 1996-98

The apparel industries in the regions of Roanne and Cholet concentrate on lady's garments and children's wear. For the HCTAR study we contacted roughly 25% of the women's wear firms and 40% of the children's wear firms in the two regions. The men's wear industry accounted for only about 10% of the firms in the two regions and is under-represented in our study, However, women's and children's wear are the surviving product lines in France, while men's wear is the sector that is declining most rapidly.

The Cholet study consisted of 7 manufacturers and 17 contractors, while the Roanne study had 14 manufacturers, 12 contractors, and 7 textile & ennoblement firms. Willingness to cooperate with the study as the major criterion for selecting firms to be surveyed and, in Cholet, we initially intended to follow-up with firms that participated in an earlier study in 1991-92. However most of these firms had closed or changed owners in the intervening period. A list of the firms surveyed is provided below.

Firms Interviewed in Cholet, 1996 and 1998

Manufacturers

Name of the Firm	*Name Person Interviewed*	*Function*	*# of employees/ enterprise*
LE TORO	Mme Guilhon	Manager	3
JACQUES JAUNET - NEW MAN	Jean Luc Boursier	Prod. Mg	300
Sté JEAN BOURGET	M. Joseph Guerin	Prod. Mg	100
G.S.A.	M Françis Bernard	Prod. Mg	380
Sté GEVANA	Mr Gélineau	Prod. Mg	100
BIGOUDI*	Mr Jean Pierre Breteaudeau	Pdg	24
Sté CATIMINI	Mr Adam	Prod. Mg	360

Subcontractors (Woven Apparel)

Sté MARCILLET*	M. Nicolas Leliveld	Pdg	280
BOISSIERIENNE CONFECTION	M. Jacques Mothais	Pdg	48
CONFECTION FAMILIALE	Mme Annick Cousseau	Pdg	123
SIVAZ* Women	Mme Guilhon	Manager	22
ACC* Men	Mme Guilhon	Manager	67
Sté JACQUES BREMAUD	Jacques Brémaud	Pdg	49
CONFECTION DE LA TARDIERE	Mme Jacqueline Sarvarzeix	Pdg	47
MARIE PIRSCH	Maris Pirsch	Pdg	50
Sté CREATIM	Mme Michelle Snadjer and	Supervr	80
	Mme Dominique Adam	Account.	
Sté SOFAC	Mme Françoise Brillouet	Supervr	48
BOCAGE CONFECTION	Mme Vitrac	Pdg	239
CONFECTION SEVRES VENDEE	M Joël Cousseau	Pdg	484
Sté SOCAMI	Mr Garin	Pdg	110
Sté SERATEX	M. Jacques Bonnet	Pdg	60
C2S Confection des 2 Sèvres	M. Claude Tétard	Pdg	280
Sté PACREAU	Mr Jérôme Pacreau	Pdg	600
Sté BREMAND	Mr Pascal Biton	Pdg	48

Firms Interviewed in Roanne - 1996 and 1998 -

Manufacturers (Knitting)

Name of the Firm	*Name Person Interviewed*	*Function*	*Nb of employees*
Sté LEWINGER	M Bonicel	Prod. Mg	130
BONNETERIE McFERRET	M Verhee	Prod. Mg.	60
Tricots RHODAM (**)	Roger Chanroux	Prod. Mg	119
DESARBRE INTERNATIO.	M Léonard	Prod. Mg	160
PAUPORTE	M Faure	Prod. Mg	175
SKINORD	M Jullien Levinger	Pdg	75
LE GAILLARD	M Fayard	Prod. Mg	150
DEVERNOIS	Jean Pierr Devouassaud	Prod. Mg	600
MONTAGUT (près Lyon)	M Renaud Chauvin	Prod. Mg	815
MONTRICO(*)	M. Jacubowicz	Manager	35
CREATION MERVIL(*)	M. Christian Cane	Pdg	20
GRIFFON FRERES(*)	M. Raoul Griffon	Pdg	114
JEAN GIRARD(*)	M Xavier Bataille	Manager	24
DROLE DE MAILLE	D. Lechailler	Designer	5

Subcontractors (Knitting)

TRICOTAGE Durand Fouilland**	M Daniel Durand	Pdg	49+32
TRICOTAGE DU CENTRE	Mme Dousson	Pdg	19
Sté MAILLE SERVICES	M Jean Paul Aurouer	Pdg	32+12+7
Sté VIVAMAILLE	M Dominique Petit	Pdg	25
MB TRICOTAGE	Henri Drajnudel	Pdg	47
NEW'DAN*	M. Bonnin	Pdg	31
TRICOTAGE DESCHAMPS*	M. Deschamps	Pdg	7
ADS CONFECTION*	M. Jaime Da Silva	Pdg	52
TARA CONFECTION*	M. Bachelet	Pdg	47
MONIC et JO*	Mme Montardre	Pdg	30
DIFFUSION MAILLE*	Mme Durand	Pdg	49
Maille GTV	Mme Tevené	Pdg	22+35

Textile & Ennoblement Manufacturers

INTEXA - Weaver	M Patrice Vermorel	Prod. Mg	120
DEVEAUX SA Weaver	M Bertrand	Finance	260
BEL MAILLE* Weaver (Knit.)**	M Bourliere	Prod. Mg.	115
MUGUET*	M. Mainaud		26
TAD*	JL Danjoux		40
VERNAY et Fils	Annie Fayet	Ennoblisseur	80

Mediator Agent

Jean Le TROADEC

(*) = 1998 (**) = 1996 & 1998

In constructing the samples, we sought to interview all of the major establishments and a sample of smaller establishments in each region, chosen to include a representative range of products, position in the supply chain, and product quality. Employment data for establishments in the apparel industry is particular difficult to estimate because employment fluctuates substantially, and small establishments (with fewer than 20 employees) are typically excluded from official data because they are so unstable. We, therefore, estimated average establishment size for our sample based on somewhat more stable enterprise level data for the parent companies whenever possible.

In Table A-1 we report the establishment size distribution of the firms in our sample and compare it to industry-wide data. This means that our sample is biased towards the larger firms in both regions.[10] Compared to national data for firms with 20 or more employees, we substantially under-sampled small firms (1-49 employees) and over-sampled large firms (200 + employees). Because large firms do relatively more investment in information technologies and computerized design and manufacturing, our results are likely to overstate the extent of technological innovation in the industry, but understate the percentage of total production covered by innovate production methods.

Table A-1

Distribution of Firm Size By Type of Producer: Roanne and Cholet

Employment Size Class

Type of Producer	20-49	50-99	100-199	200-499	500 +
		Cholet			
Manufacturers	17%	29%	29%	17%	--
Sub-contractors	29	43	21	7	--
		Roanne			
Manufacturers	30	50	--	10	10
Sub-contractors	100	--	--	--	--
		Roanne and Cholet			
All apparel (20+ employees)	42	34	13	8	3
		France			
All apparel (20 + employees)	60	20	14	5	1

[10] Twenty-four percent of the total establishments interviewed employed fewer than 20 persons.

Interviews were conducted with production managers or other senior executives at each firm. While managers were willing to discuss their business strategies in considerable detail, we often encountered resistance to administering the survey questionnaire. The most common complaint was that the questions did not seem relevant to the experience of their companies. The smaller the firm, the more problematic was the questionnaire. In the end, we only had usable responses for a limited set of questions.