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EVOLVING STRATEGIES, STRUCTURES AND RELATIONSHIPS IN COMPLEX AND TURBULENT BUSINESS ENVIRONMENTS: THE TEXTILE AND APPAREL INDUSTRIES OF THE NEW MILLENIUM - PART 2.

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ABSTRACT

Over the past three decades the textile and apparel industries have experienced radical changes in their product, process and business technologies, the definition of their markets, the nature of demand, and the form, diversity and intensity of the competition they are facing. As a result, many of today's firms look radically different to their counterparts of twenty years ago in terms of their capital and technical intensity, their manufacturing and business process capabilities, and their business scope, structure and relationships.

In the future, firms will continue to be confronted with growing market diversity, far reaching technological change and intensifying competitive pressures. In combination, these factors will make the competitive environment in which textile and apparel manufacturers operate increasingly, dynamic, diverse, complex and hostile. As a result, the organizational structures and scope of firms in the industries will continue to be re-shaped. New strategies and organisational forms will emerge with a trend towards de-integration, involving a focus on core competencies and the separation of the physical processing functions from the creative 'brain functions' within the supply chain. In some ways, this represents a return to the pre-industrial system of manufacture, where physical production was in the hands of commission manufacturers, while the creative design and marketing functions were performed by merchants.

Keywords: Organization, organizational change, strategy, strategic change, technology, technological change, business environment, competition, information technology

Introduction

Over the past four decades the textile and apparel industries have experienced radical changes as a result of which, many of today's firms look radically different in terms of their capital and technical intensity, their manufacturing and business process capabilities, and their business scope, structure and relationships. The first part of this paper traced the pattern of change across the textile and apparel industries since the pre industrial era. This concluding part looks forward to consider how the industries may be re-shaped in the future. It also discusses the patterns of change with respect to findings in general business policy literature.

Extrapolating many of the long-term trends discussed in part one into the future, it is possible to consider what strategies and

structures firms may exhibit in response to developments in the business environment. It would appear reasonable that the trend towards more dynamic, diverse, complex and hostile conditions will continue as global economic integration proceeds; as consumer affluence spreads; as communication improves accessibility to other cultural influences; as companies from an ever-wider number of countries enter international markets; and as rapid technological change continues, with the emergence of new bio-materials and advances in information technology (IT).

Demand In The Future Environment

As incomes grow, the trend towards individuality and instant gratification is expected to continue. Through information technology consumers will be able to select products that exactly meet their needs, selecting design components from a palette and inputting personal body scan measurements. Access to the Internet via television and the telephone will provide consumers with the widest possible selection and allow them to find the most competitive prices with greater ease. In this way, it is considered that bargaining power in the supply/consumption cycle will switch from retailers to the consumer. Through improved knowledge of the many competing product offerings, consumers will show loyalty only to those suppliers that can delight them. Their ability to seek out new sources of supply in the pursuit of novelty will be much greater, adding to the diversity of styles in the marketplace. In the process, consumer needs will become more fragmented, difficult to understand and predict.

Perhaps the most significant development in demand in forthcoming years will be with the rapid growth of markets in newly industrialising and developing countries as industrial output and disposable incomes rise. As a result of this development the balance in textile and apparel consumption will shift, albeit relatively slowly, from Western Europe and North America towards other regions, especially Asia. Together with continued trade liberalisation, these markets will become more accessible and attractive.

Technological Change In The Future Environment

Materials technology can be expected to improve the processing and performance capabilities of textile and apparel products, enhancing their technical performance and widening their applications, accelerating processing speeds and probably permitting less energy, waste and pollution. An area opening-up rapidly is bio-materials, considered to be the emerging great age of scientific and industrial development after the information era. Developments include genetically engineered natural and man-made fibres and smart materials that respond to stimuli in a pre-programmed way.[27,28] Equally, importantly, IT is being built into textile and apparel products. Products that contain electronics and microprocessors, either to entertain, communicate or to monitor and adapt to changing conditions of the wearer or the environment have already been developed. So too have fabrics that convert movement into electricity to power such devices.[29,30] These new technologies, will increase the industries' diversity and complexity further, bringing-in companies with new skills and requiring established firms to assimilate these new capabilities into their organisations.[31]

IT applications will continue to evolve, becoming yet more powerful and less expensive. They will create new marketing channels through the expansion of the Internet and e-commerce. They will help companies identify market segments on a global basis by improving the ease and lowering the cost of reaching distant customers, capturing information about their specific needs and servicing their requirements. Through improved knowledge of what customers want and the introduction of ever more flexible

manufacturing technologies, an increasing number of products will be made to order (so-called demand activated manufacture) and include a customised element (so-called mass customisation). This, and the increased need for new product developments, will require intimate co-operation between companies at all stages of the manufacturing supply chain.[16,18]

More significantly, new technologies are likely to result in further re-engineering of supply and distribution networks. IT can cut out tasks and, potentially, intermediaries, in a process known as disintermediation. The importance of the Internet as a channel to market is its ability to cut out the retailer, or at least the expense of retailing. Retail stores are expensive to acquire, operate and maintain, while Internet sites on the other hand are infinitely cheaper and cost effective means of servicing markets. While the Internet will not replace traditional store retailing as a means of buying textile and apparel products, it will become much more important as a distribution channel through its ability to lower distribution costs and provide affordable customisation. For time-starved, value conscious consumers seeking individuality, the possibility of shopping on the Internet, designing the product to their own specification and having it delivered to their home will be a powerful draw. However, in the foreseeable future, traditional retailing is likely to remain the most important vehicle for selling apparel due to a general preference for seeing and feeling the product and the appeal of store shopping as a leisure time activity.[15,17,27]

Although retailers are increasingly competing with 'e-tailers' over the Internet, the latter operate in a similar way to traditional retailing, offering a limited selection of merchandise and acting as an intermediary between consumers and producers. Ultimately, they may be displaced by special kinds of expert system called 'knowbots' that take a problem such as 'I need a new shirt' and then search out and identify the best supplier from the universe of possibilities. Knowbots may also be powerful systems for linking companies together into virtually-integrated supply chains to fulfil particular contracts. [28]

Looking further into the future, the development and diffusion of new process technologies and of international standards for supply chain, communication, control and management may largely remove many of the international imbalances in product cost, quality and service capability that currently promote trade. As automation and new management systems permit speed, flexibility and dependability of quality and delivery, labour costs in manufacturing will decline in importance as a competitive factor. More significant will be the labour, time and capital tied-up in moving goods around the world. Hence, zero movement will become more of a priority for manufacturers. With this in mind it is interesting to speculate that a situation similar to the newspaper industry may develop. In the latter industry, for example, a reporter in Taiwan can transmit a local story via email using a laptop computer and cell-phone to the newspaper editor in New York. Upon receipt of the story, the editor will re-shape it to fit into the newspaper and, when all stories are combined, the edition of the newspaper will be ready for printing. At this point, the final product can be transmitted electronically to newspaper printing presses around the world, simultaneously. From these local presses the product can be distributed to the local market, making considerable savings in time and on the shipment costs of the physical product. In the newspaper industry, IT has permitted the separation of the editorial office from the printing plant, and the expansion of national and international markets for papers such as the Financial Times, Washington Post, New York Times and USA Today. A key factor in this development is that quality physical products are easily produced almost anywhere in the world with a modern

printing press linked to appropriate IT systems. When the ease of replicating yarns, fabrics and apparel to exact technical and aesthetic specifications improves, it is not such a large leap of the imagination to substitute reporter for customer and editor for designer, with the link being the Internet. Once the customer has chosen the specifications the vendor will transmit the order to an associated network of textile and apparel manufacturers in the consumer's own country. This will be automatically booked into their production schedule and, on completion, delivered direct.

It is the combination of technical possibilities and changing consumer needs and lifestyles that are drawing the textile and apparel industries in this direction.

Competition In The Future Environment

Competitive pressures acting within the textile and apparel industries will continue to intensify. This will be a result of low barriers to entry, the international diversity of companies and the high strategic stakes being played for as companies and national industries compete for their share of world markets.

Low entry barriers to world markets will continue to encourage many new entrants. The enduring characteristics of the global textile and apparel industries in terms of their ease of entry, through the ability to combine low cost labour with older technology; the encouragement received from national governments; and the sourcing policies of international retailers, trading companies and manufacturers, is likely to continue. In addition, an increasing number of companies will gain easier access to international customers via the Internet.

Competition will continue to escalate in the upper market segments as design and marketing capabilities of companies in Asia and elsewhere catch-up with those in Europe and the US, and as consumers seek greater diversity. Consequently, brands from outside Western Europe and the USA will expand their share of international markets. Another factor that is likely to intensify pressures in higher value market segments will be the growing ability of consumers to design and source their own products.

Retailing In The Future Environment

The growing internationalisation of retailing evident in recent years will accelerate as global economic integration proceeds and as domestic market saturation stimulates more retailers to seek growth opportunities outside their own borders. Combinations of retailers of different nationalities will become common, though national consolidation and the emergence of national champions will precede international integration. The diversity of consumer lifestyles will continue to support diverse formats and channels to market. However, bricks and mortar retailing will maintain a leading position due to its role as a leisure activity and improved services. Retail competition will continue to intensify as consumer choice expands. Intense competitive pressures, shifting and ever more complex consumer requirements and market and channel diversity will press retailers to put more emphasis on managing brands and channels as they develop multiple channels to the consumer (stores, catalogues, the Internet) for private label merchandise.

The increasing interdependency of supply chain partners to achieve innovation, efficiency, speed, flexibility in the face of expanded consumer choice will support stronger partnership based alliances rather than traditional adversarial approaches.

Strategies In The Future Environment

In choosing strategy, companies will consciously select a market position based upon servicing global, regional, national or local market segments.

With escalating international competition the emphasis will be on continuous innovation and on providing products and services with a customised element. In this environment, the trend towards focusing on core products, customers or market segments is also likely to grow. An exception to this may be in technical textiles, where higher research and development needs and interdependencies between products and markets in terms of technology and service requirements may sustain diversified groups. A key factor for success will be either the forging of a few closer partnerships or the creation of a looser network of alliances with other companies to create and deliver innovative and made-to-order products at high speed and low cost.

Continued emphasis on engineering costs down will maintain the characteristic of a mobile industry in pursuit of lower cost locations. It will also encourage further automation and the expansion of contract manufacturing. Such service-based manufacturers supplying the major retailers and brand houses will provide the most cost efficient means of manufacturing textile and apparel products. By focusing on servicing the needs of a few customers, they will achieve efficiency, speed and flexibility, by combining the latest technologies with high capacity loading and lean overhead cost structures.

Organisational Changes In The Future Environment

The further opening of international markets will promote the continued development of medium and large-sized trans-national companies focusing on specific market segments. These will include brand houses, technical textile manufacturers and contract manufacturers servicing the needs of retailers and brand house clients worldwide. A multitude of smaller job-shop operations will service market niches (special service providers and innovators) and act as 'swing manufacturers for sub-contracting work.

The separation of the 'brain' (or creative and controlling) functions from physical manufacturing, assembly and distribution will be driven by an increasingly dynamic, fragmented and competitive environment and the high level of complexity that companies face in both manufacturing and marketing. The need to simultaneously achieve continuous product and process innovation, and rapid and flexible response to demand and low cost will necessitate high investment costs in marketing and manufacturing/logistics. 'Brain activity' companies will focus on innovation and market development without the risks of heavy investment in specialised production technologies. These companies will include design-led companies (descendants of today's fashion houses) that contract-out the marketing function and marketing-led businesses that contract-out design. Both sub-types will sub-contract production or license products around the world to service local markets. 'Physical activity' companies will comprise specialist contract manufacturers that focus on efficiency, quality, flexibility, speed and dependability. They will be IT-enabled, and in some cases, multinational operations and utilise virtually-integrated supply chain partnerships.

These trends may result in a convergence between retailers and traditional brand manufacturers, as the former promote their own brand images and the latter abandon manufacturing and increase their presence in distribution, whether through retail or via direct channels such as mail order or the Internet.

DISCUSSION AND CONCLUSIONS

As the level of environmental turbulence has escalated during the last 50 years, companies have had to adapt by increasing their open-ness, by developing new strategies, organisational structures, systems and capabilities. Companies that have failed to adapt have been shaken-out, either

through bankruptcy or acquisition. Some textile and apparel companies are seeing the environment in which they are operating become extremely turbulent, to a condition synonymous with Ansoff's description of a creative environment. Here, highly innovative and flexible organisations will prevail. In some, less turbulent segments of the industry, where competition is less intensive and where demand is not driven by cutting-edge consumer needs, more traditional organisational forms will be found.

During much of the industrial era, prior to the 1950's, companies operated in markets generally characterised by a high level of fragmentation, comprising many small buyers, with small orders and small variations in product specification. In this environment, companies were typically small-scale specialists, manufacturing a limited range of products at a single stage in the processing sequence from raw fibre to finished product. Despite the high level of market fragmentation, overall, the environment was simple, stable and homogeneous. However, it was relatively hostile in that conditions were akin to the economist's concept of perfect competition. The typical organisational structure in this environment was simple but hierarchical, bureaucratic (governed by formalised rules and regulations) and centralised.

From the 1950's, growing environmental turbulence saw consumer expectations rise, the diversity of competitors, products and markets served increase, technological change accelerate and competitive pressures intensify. As a result of these changes, the environment became more dynamic, complex, diverse and hostile. However, strategies to combat these changes reflected an attempt to create greater environmental stability at the company level, through merger and acquisition, vertical integration and horizontal diversification. This resulted in the creation of a core of large, hierarchical and bureaucratically-managed companies. The growth of large companies was encouraged by greater capital and skill requirements as a result of changes in product and process technologies, and distribution methods. Vertical integration and diversification were pursued as a means to eliminate uncertainty and fluctuations between stages, and to balance risks over a broader range of products and markets. In response to increased diversity, these structures were often split into divisions, although many maintained tight central control over all activities as a response to the growth of environmental hostility.

These strategies typically failed because they were out of congruence with an environment that was becoming increasingly turbulent as a result of shifting consumer requirements, the entry of new competitors and accelerating technological change. In an increasingly fragmented, fast-changing and highly competitive environment, those companies that maintained more flexible horizontal structures and worked closely with suppliers and customers to innovate, typically performed more strongly than the vertical groups. These exhibited the flexibility and expertise necessary to adapt in such conditions. Vertically-integrated structures, however, performed more strongly in markets that continued to be characterised by greater stability and homogeneity in demand.

It was a further escalation of environmental turbulence between the 1970s and early 1980s that was the catalyst for major changes in industry strategy and structure. Higher levels of market diversity and dynamism, as companies pursued differentiation strategies based on market segmentation and innovation, led to the break-up of vertically-integrated structures back to more flexible horizontal arrangements. Increased hostility, dynamism and complexity in specific market sectors resulted in a focus on core businesses and a decentralisation of power from the centre to business unit management. Within this more fragmented framework, improved co-ordination was

required to achieve speed, creativity and flexibility in the turbulent environment. This was achieved through a re-engineering of business processes, within and between companies in the supply chain, facilitated by improved communications linkages and closer working relationships. Through these changes, many companies became more 'open' in Ansoff's terms, shifting from reactive towards anticipating cultures. Some vertical companies continued to prosper in markets or segments where stability could be maintained as a result of product market homogeneity and the sheer size of market segments, such as household textiles and in certain apparel fabrics, such as denim. Another important feature of this period, was the emergence of companies that controlled brands and managed networks of manufacturers and retailers, such as Ralph Lauren, Benetton and Nike. These were essentially creative cultures, identifying emerging market needs and then developing creative product, marketing and organisational solutions to service them.

In the 1990s, these changes were expanded as environmental turbulence escalated further. The extension of the de-integration process to include activities traditionally undertaken internally, such as logistics and some manufacturing activities, reflects the need to increase flexibility and to excel on core activities through greater specialisation by focusing resources and expertise.

In the apparel sector, the trend towards the separation of physical activities, such as manufacturing and transportation, from the creative or knowledge-based 'brain functions', such as design and marketing, may be explained partly in terms of the increasing capital and skill (and therefore investment) requirements both in manufacturing and in brand management. It can also be partly explained in terms of the differences in flexibility. Although manufacturing operations have become more flexible, they are still characterised by a narrow specialisation and by a need to run at a high level of utilisation in order to minimise unit costs. On the other hand, brand management requires, flexibility, to generate frequent variations; to introduce entirely new product categories and to enter new geographical markets. To achieve this flexibility in the context of a vertical manufacturing operation would prove extremely difficult, costly and inefficient. Instead, it is more easily achieved by contracting-out manufacturing while focusing on core competencies in marketing and design. Improved communications, management systems and the development of international standards related to these, are the factors that have facilitated this transformation.

In textiles, further de-integration among large diversified and vertical (but not integrated) groups has occurred. This has perhaps been in recognition of the fact that even where diverse activities are not interdependent in the workflow, residual interdependencies, in terms of pooled investment resources, and an additional layer of management at corporate level can inhibit flexibility and add an additional layer of cost.

These observations support the findings of Ulrich, that vertically and horizontally integrated structures change more slowly, and those of Harrigan, that quasi and non-integrated structural forms are apt where environmental conditions are turbulent because they reduce overhead requirements and increase flexibility. With companies emphasising continuous innovation and seeking to re-engineer business processes and networks, and to redefine their business scope in response to environmental challenges, there is a clear shift in the industry towards exploring and creative cultures.

Another recent trend, the growth of owner-managed businesses is perhaps a reflection that in intensely competitive environments returns may only be achieved that are acceptable to stakeholder managers rather than shareholders. Also, non-quotation

removes an additional source of environmental diversity, complexity and, potentially, hostility that many managers can do without, enabling them, to focus on longer term considerations rather than short term factors, in what remains a notoriously cyclical industry.

In some ways, it can be seen that as environments become increasingly, diverse, dynamic, complex and hostile, companies seek to reduce their impact. As complexity and diversity increases through segmentation and internationalisation, textile and apparel companies have sought lower levels of diversity by focusing on core customers, products or activities. They have reduced complexity by focusing on core competencies and contracting-out specialist tasks. They have also reduced dynamism and hostility by establishing stronger, more stable and congenial supply chain relationships.

Finally, to the extent that trends affecting the development of the industry over the last 40 years continue, the emergence of fragmented networks of highly specialised manufacturers, commission processors and support organisations working in close harmony with networks of brand houses, that distribute products to retailers and direct to consumers, is likely to continue. In some ways, this pattern of change reflects a movement back towards a structure similar to that which existed in the early and pre-industrial eras, where networks of contract manufacturers worked closely with specialist merchants to service market requirements. In this context, it might be seen as the industry being re-transformed once again as it passes out from the industrial age of mass production into the information age.

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