



Exploring Innovation in Action: Sewing up the Competition - Innovation in the Textile and Clothing Industry

Manufacturing doesn't get much older than the textile and clothing industry. Since the earliest days when we lived in caves there's been a steady demand for something to wrap around us to keep warm and to protect the more sensitive bits of our anatomy from the worst of the elements. What began with animal hides and furs gradually moved into a more sophisticated activity with fabrics woven from flax or wool – and with people increasingly specializing in the business.

In its early days this was very much a cottage industry – quite literally people would spin wool gathered from sheep and weave simple cloths on home-made looms. But the skill base – and the technology – began to develop and many of the family names we still have today – Weaver, Dyer, Tailor, for example – remind us of the importance of this sector. And where there were sufficient cottages and groups of people with such skill we began to see concentrations of manufacturing – for example the Flemish weavers or the lace-makers in the English Midlands. As their reputation – and the quality of their goods – grew so the basis of trading internationally in textiles and clothing was established.

The small-scale nature of the industry changed dramatically during the Industrial Revolution. Massive growth in population meant that markets were becoming much bigger while at the same time significant developments in technology (and the science underpinning the technology) meant that making textiles and clothing became an increasingly industrialized process. Much of the early Industrial Revolution was around the cotton and wool industries in England and many of the great innovations and machinery – such as the spinning jenny – were essentially innovations to support a growing international industry. And the growth of the industry fuelled scientific research and led to developments like the invention of synthetic dyes (which allowed a much broader range of colour) and the development of bleaching agents.

There's a pattern in this in which certain manufacturing innovation trajectories play a key role. For example, the growing mechanization of operations, their linking together into *systems* of production and the increasing attempts to take human intervention out through automation. Of course this was easier to do in some cases than others – for example one of the earliest forms of programmable control, long before the invention of the computer, was the Jacquard punched-card system which could control the weaving of different threads across a loom. But actually making material into various items of clothing is more difficult simply because material doesn't have a fixed and controllable shape – so this remained increasingly a labour-intensive process.

By the twentieth century, the industries had become huge and well established, with growing international trade in raw materials such as cotton and in finished goods. The role of design became increasingly important as basic demand was satisfied and certain regions – for example, France and Italy – began to assume strong reputations for design. Branding became increasingly important in a world where mass communications began to make the telling of stories and the linking of images and other elements into advertising, which fuelled demand for clothing as much more than a basic necessity purchase.



Mass production methods and the scientific management approaches underpinning them diffused rapidly and, in the case of clothing assembly which remained a labour-intensive process, led to the quest for lower-wage-cost locations. So began the migration of clothing manufacture around the world, visiting and settling in ever cheaper locations across the Far East, through much of Africa and Latin America to its present home in China.

Today this is a global industry embracing design activities, cutting and processing operations, assembly, distribution and sales – all fuelled by a huge demand for differentiation and personalization. This is an industry in which price is only one element – non-price factors such as variety, speed, brand and quality matter. And it's an industry dominated by the need for high-frequency product innovation – fashion collections no longer run along the old seasonal track with winter and summer collections. In some cases the range is changed every month and innovation in information and communications technology means that this cycle is getting shorter still.

All of this has shaped an industry which is highly networked across global 'value chains' and coordinated by a few major players. Much of the 'front' end of the industry is about major brands and retail chains while the 'backroom' operations are often small-scale subcontractors often in low-wage-cost areas of the world.

Like so many industries it has become somewhat footloose and wandered from its origins – leaving behind only a small reminder of its original dominance. Compared with countries like India and China today's European clothing industry is a small player on the global stage. There are some exceptions to this – and they underline the power of innovation and entrepreneurship.

Just because the dominant trends lead in one direction doesn't mean that there isn't scope for someone to spot and deploy ways of bucking this trend. One such player was a young clerk working in a small clothing retailing business in northern Spain. Frustrated with his career prospects Amancio Ortega Gaona decided to strike out on his own and in 1963 invested his savings – the princely sum of US\$25 – into a small manufacturing operation making pyjamas and lingerie. In classic fashion he peddled (and pedalled – his earliest transport was a bicycle!) his wares around the region and built the business over the next 10 years and then decided to move into retailing as well, opening his first shop in the north-western town of La Coruna in 1975.

Things have moved on somewhat since then. Industria de Diseno Textil – Inditex – the holding company which he established – is now worth around US\$8 billion and has just opened its two-thousandth store in Hong Kong. Active in nearly 70 countries this textile and clothing business has 8 key brand groups, each targeted at particular segments or product types – for example, 'Pull and Bear' for children, 'Massimo Dutti' for older men and women or 'Oysho' in lingerie. Best known of these is 'Zara' – a global brand with strong design and fashion identity running through both the clothes and the stores in which they are sold. Its clothes combine stylish designs with a strong link to current high fashion themes with moderate prices. As Lotte Freddie, fashion editor of the Danish daily newspaper *Berlingske Tidende*, commented, 'If you want a classic, Italianate look in tune with current styles and at a reasonable price go to Zara.' Zara's successful growth is not simply a matter of low cost or of standardization but rather of *innovation*.

The company have become leaders by exploiting some of the key non-price trends in the industry – for example, variety and product innovation. For example, over 10 000 different



clothing models are created and sold every year – this is most certainly not a case of ‘one size fits all’ or of long-lasting product types! Ortega has taken the entire system for creating clothes and built a business – and originally did so in an area which did not previously have any textile tradition.

At an early stage in the development of the manufacturing business he moved back into textile-finishing operations to make sure that the colours and quality of the material he used to make the clothes were up to scratch. Not only did this give better quality control but it also opened up the road to offering exciting and different fabric designs and textures. There are now 18 textile-designing and -finishing operations in the group as well as the clothing manufacturing.

A major part of the company’s success comes from a strong commitment to design – they employ over 200 designers and make extensive play of this commitment. It’s a theme which doesn’t stop with the clothes themselves but also extends to the presentation of the stores, their window displays, their catalogues, Internet advertising and so on. Part of the headquarters building in Arteixo La Coruna, Spain contains 25 full-size shop windows with display platforms and lighting which allow the team to see what real store windows would look like – not only under normal conditions but also on rainy days, at night and so on. Another key aspect of Zara’s success is the flexibility which comes from having a very different model for manufacturing. Around 2500 employees work directly in manufacturing operations – but behind them is a much larger workforce spread across villages and small communities in Spain and northern Portugal.

Once the new design has been approved the fabric is cut and then distributed to this network of small workshops – and these represent an outsource capability delivering a high degree of flexibility. Pre-cut pieces and easy-to-follow instructions are given to workers in what is still largely an informal economy – and their output then flows back into the massive Zara distribution centre like tributaries to a fast-flowing river. (This is not a small operation – the centre has around 200 kilometres of moving rails on which the products flow. Highly automated and with extensive in-line quality checking, the process transfers the incoming pieces into production lots which are then allocated to a fleet of trucks for fast shipment, mostly by air from the nearby airport at Santiago de Compostella.)

Needless to say this places significant demands on a highly flexible and innovative coordination system which Zara have developed in-house. In this way they make use of a model which dates back hundreds of years (the idea of industrial districts and clusters) but use twenty-first-century technologies to make it work to give them huge flexibility in both the volume and variety of the things they make. Where competitors such as H&M and Gap have to start planning and producing their new lines three to five months before goods finally make it to the stores, Zara manages the whole process in less than three weeks!

Their flexibility is also based on rapid response and extensive use of information and communication technologies. At the end of the day as the customers leave their 950 stores around the world the sales staff use wireless handsets to communicate inventory levels to the store manager who then transmits this intelligence back to Spain as a feed into the design order and distribution system. This gives an up-to-the-minute idea of what is selling – and what isn’t, so the stores can be highly responsive to customer preferences – which colours ‘work’, which themes are popular, which designs aren’t hitting the spot. But it’s not just following the market – Zara also push the game by making sure that no model is kept on sale for more than four weeks – no matter how well it is selling. This has a strong impact on their



brand – they are seen as very original and design-led – but it puts even more pressure on their ability to be agile in design and manufacture.

Case Study Questions

- 1.** Is the Zara model sustainable? What would you do to preserve their edge over the next 5–10 years, given that many other players are now looking to follow their example? If you don't think it can survive, give your reasons for why you think the model is unsustainable and will fail.
- 2.** You have been hired as a consultant to a small clothing manufacturer who wants to emulate the success of Zara and Benetton. She wants advice on an innovation strategy which takes the key lessons from these successful firms. What would you offer?
- 3.** Zara Home has just opened using the same basic business model and deploying the same innovative approach as the rest of the business but in the home goods field. Do you think it might succeed and why?