

Títol: Benetton and Zara information systems:a comparative analysis

Volum:I de I

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Data: 28 Junio 2010

DADES DEL PROJECTE

Títol del Projecte: Benetton and Zara information systems: a comparative analysis

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QUALIFICACIÓ

Qualificació numèrica:

Qualificació descriptiva:

Data:

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CHAPTER 1 : INTRODUCTION

The clothing sector is fundamental to the world economy. International trade in the combined sector has increased 60-fold during the past 40 years, a period characterised by major increases in the globalisation of business, deregulation and the gradual removal of quotas. The clothing industry is also one of the most mobile industries in the world. Over the last two decades complex global supply networks have emerged to supply clothing to world markets. The nature of these global networks poses significant challenges for quick and accurate response in the clothing sector. Ensuring the right product volume and mix within retail stores from a globally dispersed supply network requires innovative operational strategies and practices.

The purpose of this project is to use supply management as a tool in analysing the global sourcing processes and activities within two successful leading textile companies: Zara and Benetton; to describe their logistics and supply chain processes in order to understand how these two companies can add a good value to its customers, to its stakeholders and to its suppliers. Pressure for companies to create and deliver value to customers manifests itself in every stage of the business today. Therefore, it is significant to compare and to contrast these two companies' activities and processes which lead them to success.

After a brief introduction about vertical integration, are described these two companies: the business model, the strategy, the strengths, the weaknesses, the information solutions adopted, some financial data and the biggest competitors. An important point of comparison is the solution of the need of this market of a quick response (QR). Finally are described a solution that is adopted in the grocery industry and that can be adopted as well in the clothing industry (ECR).

The interest in this subject born from my Italian study in management engineering; as well an interest in informatics solutions grow from my Spanish study at FIB. Because of my permanence in Spain I choose to compare an Italian company with a Spanish one. This project is realised as a Final Project both in Italy and Spain with the supervision of a Spanish professor, Jose M. Cabré Garcia, and an Italian professor, Massimo Visconti, too.

Project description

This project would analyse two big companies in the clothing industry : Zara and Benetton. The objective is to compare the two model above all in the view of vertical integration, that is how the vertical integration is supported by the information technology.

The idea is to study the strengths and the weaknesses of these two model in order to suggest a possible informatics solution that allow to improve the efficiency and the satisfaction with the consumer.

Motivation

I choose to develop this project because of :

- My interest in clothing industry
- Application of my knowledge acquired during my study in management engineering
- My interest in a Spanish company, taking advantage of my permanence in Spain
- My interest in IT, due to my study en la FIB

CHAPTER 2 : VERTICAL INTEGRATION

2.1: VERTICAL INTEGRATION

In microeconomics and management, the term vertical integration describes a style of management control. It is grounded on the acquisition by a company operating in one market of another company which is complementary to its existing business (as a supplier or user of product) but which operates in another market. That is that the vertical integration is the degree to which a firm owns its upstream suppliers and its downstream buyers. Contrary to horizontal integration, which is a consolidation of many firms that handle the same part of the production process, vertical integration is typified by one firm engaged in different parts of production. Expansion of activities downstream is referred to as forward integration and expansion upstream is referred to as backward integration. Both expansions upstream and downstream are referred to as balanced integration.

- A company exhibits backward vertical integration when it controls subsidiaries that produce some of the inputs used in the production of its products. For example, automobile company may own a tire company, a glass company, and a metal company. Control of these three subsidiaries is intended to create a stable supply of inputs and ensure a consistent quality in their final product
- A company trends toward forward vertical integration when it controls distribution centers and retailers where its products are sold. Type of vertical integration where a manufacturer acquires the channel of distribution of its outputs to achieve greater economies of scale or higher market share (It was the main business approach of Ford and other car companies in the 1920s, who sought to minimize costs by centralizing the production of cars and car parts)
- Balanced vertical integration means a firm controls all of these components, from raw materials to final delivery.

The three varieties noted are only abstractions; actual firms employ a wide variety of subtle variations. Suppliers are often contractors, not legally owned subsidiaries. Still, a client may effectively control a supplier if their contract solely assures the supplier's profitability. Distribution and retail partnerships exhibit similarly wide ranges of complexity and interdependence. In relatively open capitalist contexts, pure vertical

integration by explicit ownership is uncommon and distributing ownership is commonly a strategy for distributing risk.

Two issues that should be considered when deciding whether to vertically integrate are cost and control. The cost aspect depends on the cost of market transaction between firms versus the cost of administering the same activities internally within a single firm. The second issue is the impact of asset control, which can impact barriers to entry and which can assure cooperation of key value-adding players.

Benefits of vertical integration

Vertical integration potentially offers the following advantages:

- Reduce transportation costs if common ownership results in closer geographic proximity
- Improve supply chain coordination
- Provide more opportunities to differentiate by means of increased control over inputs
- Capture upstream or downstream profit margins
- Increase entry barriers to potential competitors, for example if the firm can gain access to a scarce resource
- Gain access to downstream distribution channels that otherwise would be inaccessible
- Facilitate investment in highly specialized assets in which upstream or downstream players may be reluctant to invest
- Lead to expansion of core competencies
- Economies of scale
- Economies of scope
- Cost reduction
- Competitiveness
- Reduce threat from powerful supplier and/or customers
- Higher degree of control over the entire value chain

Drawbacks of vertical integration

While some of the benefits of vertical integration can be quite attractive to the firm, the drawbacks may negate any potential gains. Vertical integration potentially has the following disadvantages:

- Capacity balancing issues. For example, the firm may need to build excess upstream capacity to ensure that its own downstream operations have sufficient supply under all demand conditions
- Potentially higher costs due to low efficiencies resulting from lack of suppliers competition
- Decreased flexibility due to previous upstream or downstream investments
- Decreased ability to increase product variety if significant in-house development is required
- Developing new core competencies may compromise existing competencies
- Increase bureaucratic costs

Factor favoring vertical integration

The following situational factors tend to favor vertical integration:

- Taxes and regulations on market transactions
- Obstacles to the formulation and monitoring of contracts
- Strategic similarity between the vertically-related activities
- Sufficiently large production quantities so that the firm can benefit from economies of scale
- Reluctance of other firms to make investments specific to the transaction

Factor against vertical integration

The following situational factors tend to make vertical integration less attractive:

- The quantity required from a supplier is much less the minimum efficient scale for producing the product
- The product is a widely available commodity and its production decreases significantly as cumulative quantity increases
- The core competencies between the activities are very different

- The vertically adjacent activities are in very different types of industries. For example manufacturing is very different from retailing.
- The addition of the new activity places the firm in competition with another player with which it needs to cooperate. The firm then may be viewed as a competitor rather than a partner

Alternatives to vertical integration

There are alternatives to vertical integration that may provide some of the same benefits with fewer drawbacks. The following are few of these alternatives for relationships between vertically-related organizations:

- Long-term explicit contracts
- Franchise agreements
- Joint ventures
- Co-location of facilities
- Implicit contracts (relying on firms' reputation)

Origin of vertical integration: history

The strategic reasons for opting for a vertical integration strategy have changed over the years. During the 19th century, firms used vertical integration to achieve economies of scale. During the middle of the 20th century, vertical integration was used to assure a steady supply of vital inputs. In some cases, the theory of transaction cost economics was applied to backward integration or forward integration, as a means to total cost reduction. That is, it was cheaper for a firm to perform the role of suppliers and distributors than to spend time and money to interact with such parties. Subsequently, in the late 20th century, competition intensified in most industries. Corporate restructuring resulted in vertical disintegration by reducing the levels of vertical integration in large corporations.

Vertical disintegration is facilitated by the widespread use of information and telecommunications technologies, which support lower transaction costs between market participants. As lower transaction costs can be achieved using information and communication technologies, rather than by vertically integrating, firms start to

vertically disintegrate. This effect is commonly known as "Coase's Law" or the "Law of Diminishing Firms". This law states that when the transaction costs are decreasing, the size of the firm will also decrease.

Usage of vertical integration: applications

Decisions on vertical integration are usually made in the following contexts:

- In the strategy development process, vertical integration may be considered as a strategic choice. For example if suppliers are very powerful, a solution to that threat is to buy a number of them up
- When you are analyzing industry dynamics, using Porter's Five Forces model, vertical integration is an action to decrease the bargaining power of suppliers and customers
- Vertical integration may be a path for reducing transaction costs

2.2: THE THREE A'S OF A SUPPLY CHAIN EXCELLENCE

During the 1990s, companies across varied sectors of the economy rolled out bold initiatives to improve their supply chains and stay competitive. Apparel makers called their program Quick Response, the grocery sector came up with Efficient Consumer Response and the food service industry dubbed its system the Efficient Food Service Response. All focused on efficiency and speed. But supply chains that focus solely on cost efficiency or material speed cannot sustain long-term success. Companies may gain some ground over their competitors in the short run but may not be able to hold it.

The three A's

Companies today face a multitude of supply chain challenges that did not exist a decade ago. Increasing supply-and-demand uncertainties, the accelerating pace of product and technology changes and the electronics industry's continuing "disintegration" all add complexity. A successful supply chain strategy requires distinct capabilities to meet these challenges. First, as OEMs increase their product variety and customization and penetrate new markets, they need to improve their forecasting, production scheduling and inventory planning. Indeed, the day-to-day uncertainties in demand and supply are much more challenging when you have high product variety. In

addition, businesses are subject to more shocks today than in the past. The terrorist attacks of September 2001, the Longshoremen's strike in California in 2002 and the SARS outbreak in Asia in 2003 are three high-profile examples. Such events cause huge disruptions to supply chains, and companies must learn to respond swiftly. The dynamics of ultrafast product and technology life cycles mean that the "clock speed" of virtually all industries is increasing. The competitive landscape is constantly changing, and risks and opportunities present themselves rapidly. The right supply chain strategy of yesterday may not be correct today, nor will it be right for tomorrow. And the supply chain that works at the beginning of the product's life cycle most likely will be different from the supply chain at product maturity, and different again at end of life. Likewise, the pace of the industry's disintegration — the outsourcing of everything, from design to manufacturing to services — is unprecedented. The result is a rapidly maturing outsourced manufacturing and logistics services sector and a burgeoning ODM sector. We live in a world where supply chains, not companies, compete for market dominance. But companies often have diverging incentives and interests from their supply chain partners, so when they independently strive to optimize their individual objectives, the expected result can be compromised. The best efforts of one company could be wasted if its supply chain partners don't synchronize their efforts accordingly. To respond to the high degree of uncertainty associated with product variety proliferation and disruptions due to unexpected crises, supply chains need to be agile and flexible to match demand with supply. And companies need to develop supply chains that are adaptable, that respond to the systematic changes of the market and the customer. In addition, companies must be ready to adjust their supply chain structures and strategies when change occurs. Given the potentially diverse interests of the many players in the value chain, companies need to align their incentives so each acts in the best interests of the whole and the total supply chain is optimized. That's where the three A's — agility, adaptability and alignment — come in. Beyond just efficiency and speed, the three A's form the basis on which superior value can be created within the supply chain and delivered to the market.

2.2.1: AGILITY

Agile supply chains respond to uncertainties in a rapid, flexible, cost-effective and reliable manner. Building agility requires strong supplier relationships, the right buffer inventory, appropriate capacity levels, product and process design with postponement, parts commonality, efficient logistics systems, backup plans for supply and logistics, and an information system that enables fast and accurate information on demand and supply conditions. These capabilities require tight integration of such functions as design and manufacturing, merchandising and operations, and procurement and logistics. Consider two agile companies: Seven-Eleven Japan and Nokia. Seven-Eleven Japan is the most profitable retailer in that country. Its annual inventory turn rate of 55 is the envy of competitors worldwide. The company makes use of up-to-the-minute demand information — point of sales, customer profiles, local events and weather data — to drive its replenishment and product development process. And it reorganizes its retail shelf three times a day to meet the changing needs of consumers. Its logistics system is also agile, utilizing multiple modes of transportation, smart consolidation at distribution centers and flexible but reliable delivery processes. Nokia's agility is evident in its responsiveness to unexpected supply chain disruptions. In 2000, a Philips Semiconductors RF chip factory in New Mexico went up in flames when it was struck by lightning. Nokia, a Philips customer, had contingency plans in place and a team of executives ready and trained to deal with just such a crisis. The company promptly evaluated the seriousness of the problem, made quick design changes and tapped backup sources. Contrast this with Ericsson, also a Philips customer. Ericsson's supply chain couldn't cope with the disruption, so the company had to scale back production, which affected handset supply for months. As a result, Nokia was able to grab valuable market share from Ericsson.

2.2.2: ADAPTABILITY

For any given product family, OEMs try to design the most efficient supply chain to serve their customers. That includes optimizing the location of suppliers, manufacturing contractors, distribution, logistics systems and retail channels. When demand or supply conditions change, OEMs must reexamine the supply chain strategy to ensure it's still appropriate. Options include adapting the supply base, relocating manufacturing, using different means of distribution or outsourcing services, offering new sales channels and modifying product designs. Some companies excel at adaptability. EMS provider Flextronics International Inc. started as a pure contract manufacturer but over time evolved a business model of building industrial parks to accommodate its extensive supply base. More recently, Flextronics' services have expanded to include product design. Flextronics used its extensive supply network to help Microsoft Corp. launch and ramp production of the Xbox. Microsoft used Flextronics' industrial parks in Mexico and Hungary for the product introduction, since speed and market proximity were critical to a successful launch. But as the product matured, and when faced with strong price cuts from Sony, Flextronics migrated the production of Xbox to China to boost cost efficiency. Adaptive supply chains are one reason that Flextronics has moved from the 22nd-ranked EMS Company in 1993 to No. 1 in the world today.

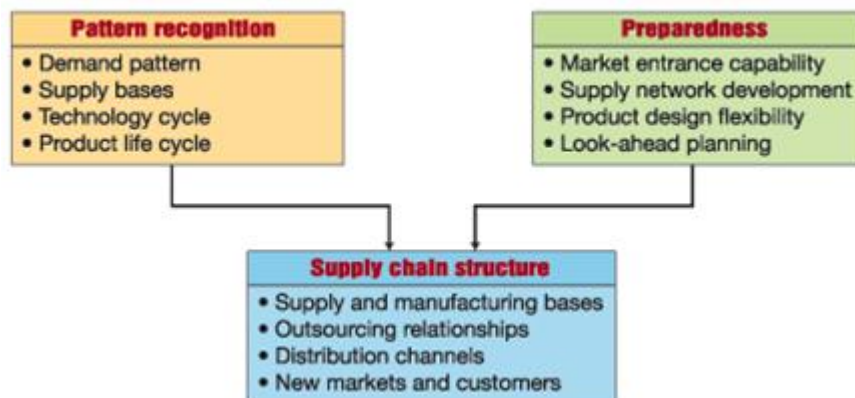


Figure 2.1: Foundations of adaptive supply chains

2.2.3: ALIGNMENT

The weakest link in any supply chain defines the chain's ultimate performance. If one member of the supply chain focuses only on maximizing its own interests, and if those interests are not aligned with the objectives of the entire supply chain, then the overall chain's performance will be less than optimal. Smart companies have therefore devised relationships and contracts that align their partners' incentives with their own interests to maximize the chain's overall performance. It starts with sharing information and knowledge to form the foundation for a deep supply chain relationship. The second dimension is the alignment of identity — that is, the roles and responsibilities of the partners. Here, such issues as responsibility for replenishment, forecasting, order fulfillment and customer service need to be well-defined and, if need be, realigned. We find examples of clearly defined roles in vendor-managed inventory, which shifts the responsibility of managing replenishment from the buyer to the seller. Another example is collaborative planning, forecasting and replenishment, where the responsibilities for those tasks are shared. Collaborative design is yet another example. The third dimension is the alignment of incentives. This requires the creation of risk-, cost- and reward-sharing schemes so partners' supply chain works in unison to maximize the overall performance of the supply chain, while each gets a fair and equitable return. One example of a successful supply chain incentive alignment is Saturn's service operation. The service supply chain works well because the interests of Saturn, its suppliers and its dealerships are aligned. J.D. Power's consumer satisfaction index has consistently ranked Saturn among the top three automobile companies in customer service. Inventory turnover at Saturn dealerships averages more than seven times a year, compared with between one and five for its major competitors. The Saturn system fully integrates service operations with the parts supply process. Integration here involves shared material flow systems, positioning of parts people within the production facility, use of direct supplier performance metrics, and inventory sharing among production and after-sales logistics to cover emergency shortage situations for either plant production or service delivery. Demand data is also linked with external parts suppliers' data to support production planning. Saturn has relieved its dealerships of the burden of managing their inventory directly —

something few did well — by creating a retailer inventory system known as Jointly Managed Inventory (JMI). The dealers bought the hardware, but Saturn provided all software implementation, system installation, maintenance and support. All demand transactions at the dealer are transmitted daily to Saturn via satellite. Saturn then generates stocking decisions and replenishment quantities for each dealership location. Successful implementation of JMI requires proper alignment of performance management and the sharing of risk. Saturn does not simply monitor its service performance in delivering parts to dealers, but the service operation personnel and dealerships are held jointly accountable for the service performance experienced by the vehicle owners. In addition, the Saturn service parts group is measured on the parts profitability of the dealers as well as the frequency of emergency orders needed to support those retailers. The Saturn system also lets retailers pool inventory. Saturn can transfer inventory from one dealer to another to address a stock-out situation. If demand for a stocked part has not occurred for nine months, Saturn will buy back the part. Flextronics has also succeeded at supply chain alignment. The EMS provider has low-cost manufacturing sites in several countries, but final-assembly labor cost is actually a small percentage of the total cost of many technology products. A high-quality supply base is essential too. Thus Flextronics uses the "industrial park" approach at low-cost locations in Hungary, Mexico, China and Brazil. In addition to housing final assembly in the parks, Flextronics invested in developing subassembly and processing facilities, utilities, transportation networks, labor education, logistics support, customs clearance and employee recreation facilities. These investments are a powerful inducement for Flextronics' suppliers to co-locate manufacturing in its industrial parks. The suppliers benefit from Flextronics' investments, and Flextronics ensures the reliable supply base that its customers expect. Creating capabilities in all three A's involves proper training and the right performance measurement system, business process design, product design, and incentive schemes and contracts with supply chain partners. Companies that work on all three simultaneously will achieve superior supply chain performance.

Dimension	Exchanges	Objectives
Information alignment	Information knowledge	Common, shared
Identity alignment	Role, work, responsibility	Efficiency and flexibility
Incentive alignment	Accountability, risks/costs/gains	Equitable and overall performance

Figure 2.2: foundation of aligned supply chains

CHAPTER 2.3: PORTER'S ANALYSIS

According to Porter, companies must look for having a superior comparable performance regarding competitors in the same industry, and described that the competitive advantage is to have a profitability level greater than those in the industry on the long run. He also described the cost leadership and the differentiation as the two types of competitive advantage a company can have, depending on the sources on which it is based on. In 1985, Professor Porter defined competitive advantage as the ability of adding value in the eyes of consumers, meaning the value perceived might be superior than the sum of the amount of costs related to the production processes. Subsequently, Porter's conception of strategy is that it is a matter of competitive position, that a company creates by differentiating themselves in the eyes of its valuable customers, including a process of adding value along a structure of different activities interrelated in a way imperceptible for competitors, and so that this complex mix differs from those created or used by competitors. By 1980, Porter defined the competitive strategy as all the offensive or defensive actions a company does in order to create a favorable and sustainable position within an industry with the objective of having a superior performance which at the end will be convert as a considerable ROI (return over investment). Additionally, he explained that these actions were the response to the competitive five forces that according to him were the ones that determined the business environment and competition level around a company. The sources of competitive advantage are described as a necessary issue for a company to superior the competitors, over which the strategy must be created, as those leverage the main activities of a business. On the literature found regarding the sources of

competitive advantage, it is possible to identify four approaches to describe those, the approaches are:

A) The industrial organization hypothesis comes from the microeconomic analysis of the relationship between a market structure and its profitability.

B) The Resource-based hypothesis affirms that the competitive advantage comes from a firm's strategic resources.

C) The Capability-based hypothesis affirms that a company's capabilities and competencies involved on coordinating the strategic resources are the sources of a firm's competitive advantage.

D) The Knowledge-based hypothesis affirms that a company's competitive advantage is founded on its explicit and tacit knowledge that might be turned into tangible and exchangeable assets, for them to last and so the competitive advantage.

Michael Porter's hypothesis to develop the generic strategies was the industrial organization analysis but he modified it in the sense of its focus from nothing can be done by companies, neither the industry nor the company's performance, by companies have some influence on its microeconomic area. This new subapproach affirm that even if for grouped products regarding characteristics and technology requirements, the industry frames them with specific parameters, within these parameters an industry evolves through different paths along time, which is related beside others, to the strategic choices firms actually make (Porter, 1981, p.616). After all, these participant firms can influence its industry by creating its own competitive advantage. The result of this approach is a stated vision that encourages companies to first analyze their environment and the structural parameters of its industry, followed by a consideration on the potential level of profitability of this specific industry and concluding with the selection of a strategy that can effectively align the firm to the industry and simultaneously generate superior performance (Porter, 1980, pp. 4-5). According to Porter, the sources of competitive advantage for a company are either cost efficiency or differentiation. The Cost efficiency can be considered as a source of competitive advantage if a company can maintain lower costs than its competitors. On the other hand, the differentiation can be a source of competitive advantage if a company creates tradeoffs for competitors while its customers recognize these

differences as an added value. To define whether a firm has a higher potential on cost efficiency or differentiation with the actual resources, a company must look at the strengths at the drivers of both of them. The drivers are: “economies or diseconomies of scale, learning, synergies, including linkages between activities and relationships with other business units; integration effects, capacity of utilization, timing, location, discretionary policies independent of other drivers like quality and sales policies, and finally institutional factors like government regulation.” Though, the sources of competitive advantage are given by the analysis of the activities of a company. According to Porter, those should be either a different set than those of a competitor or must be performed differently, providing a unique value creation. In fact, Porter developed a tool to analyze what kind of competitive advantage a company has, also to identify what are the sources of a company’s competitive advantage. The tool, that’s shown below, is the so-called value-chain, it disaggregates a firm into primary activities and support strategically relevant activities ‘in order to understand the behavior of a firm's costs and its potential for differentiation.



Figure 2.3 : Porter’s value chain

Finally, for a company to decide where to base its competitive advantage on, it must have into account some additional considerations on both the cost and differentiation sources. The cost sourced advantage might be sustainable only if it is maintained as the lowest one, and that besides the drivers that sometimes leads to different levels

on competitive advantage depending on the driver a company is strong in, it has to have several activities aligned with the lower cost performance, if not, that would run it easy to imitate by competitors. "Cost leaders usually accumulate cost advantages gained from numerous sources in the value chain that interact and reinforce each other. This makes it difficult and expensive for competitors to imitate their cost position In contrast, the differentiation sourced advantage given by added features, supportive differential services, better designs, increasing reliability, brand tradition, among others; might be sustainable not only if this higher value is recognized as such, to allow the company to charge prices higher than the average, but also if "the sources of differentiation involve barriers, if the sources of differentiation are multiple, if a firm creates switching costs at the same time it differentiates, and if a firm has a cost advantage in differentiating. To start to aboard the Porter's proposal, we might frame its limits on the business strategy one, understanding it as a strategy within an individual business, managed as a business unit, with a portfolio of a series of related products, that are involved into a bigger and wider portfolio but those are independent to the one on a business unit. The fact is that a business strategy will bring differences in all the areas of a business, creating though the necessity of a whole independent configuration between market needs and a company's resources, as so an independent strategic proposition, clarifying that it doesn't impact dramatically the performance of neither other business units nor the whole company. Additionally, the specification on Porter's model of generic strategies to be as for a business strategy allows us to predict that the main focus on this proposition will be to answer to competitive advantages search and synergy creation more than to bother with resources allocation. A business strategy involves goals associated with products and markets of a specific business unit, as well as it leads the path to further activities that will be done for a company in the mentioned specific sector. There were proposed several classifications for types of business strategies but the most recognized ones are: The portfolio based strategies, the ones based on the product life-cycle, and finally the classification on Porter's proposal, the generic strategies. In Porter's opinion, the essence of a business strategy is the selection of a manner that will always lead the company to acquire competitive advantages. The way he designed the model has been retold by different authors including a framework of Porter's backgrounds on strategy

but also on economics. Porter proposed two dimensions: the strategic goal and the strategic advantage, the first one refers to the scope in which a company wants to develop its activities being one segment or the broad market. The second one, refers to the manner the company will perform the best results in the market either by highly differentiated products or by low costs. According to other authors, he explained that these common strategies used by companies within an industry, were based on the market economic analysis matching supply and demand to capture from the demand side the size of the market a company seeks for, defining whether it is an industry-wide strategic target or a particular segment to target. From the supply side, it captures the strategic advantages, stating two general most important advantages according to him, which are product differentiation and product low costs (cost efficiency). Accordingly, by matching these two dimensions (supply and demand), companies have 3 alternatives as strategy as shown in figure1 and that will be explained in detail below. According to Porter and in order to decide which of the three generic strategies to choose, a company must consider if it has the capability, the competencies, the resources required, and the organizational requirements also . A competitive advantage is possible just for a specific given market context, so to model a competitive advantage is necessary to analyze the forces and issues that influence the business environment. In his new vision on strategy, showed in the book *The Competitive Advantage of Nations* (1990) Porter recognizes that because of new circumstances and challenges that the process of globalization brought to markets, the companies development got influenced, and that this three generic strategies are unstable, and that is needed to create new more dynamic models to describe the competitive advantage. Though, Porter affirms that there are different ways for a company to reach the desired position and obtain the superior expected return over investments, the main fact for him is that a company's strategy must illustrate the level at which it comprehended its situation related to its environment circumstances and the way it get going into that specific context. The context in which the generic strategies were developed implies reasonings in which: Those are to be used independently (but also combined in the case of differentiation and focus strategy by broadening the market scope, and anyway this can hardly be possible), to build in a long term the desired position, that was aimed to bring the company better results

than its competitors and so a sustainable competitive advantage. Miller, criticized Porter's generic strategies in the fact that they can not used mixed strategies, as porter said that companies that mix strategies would end either getting heavy in costs or structure to behave and compete with cost leadership focused companies, or confusing its targeted customers. He affirmed that by mixing two of the generic strategies, entering with a niche strategy and then increasing its market as their internal strengths allowed it they go for a differentiation one, expanding their market going to a broader scope. Entered a market as a niche player and gradually expanded.

Porter's Generic Strategies are:

1. Cost Leadership
2. Differentiation
3. Focus



Figure 2.4: Porter's strategies

Cost Leadership

The cost leadership corresponds to a strategy used by companies when they have abilities to produce at lower costs than the competitors, and so to get more profit when selling the products in high quantities. This strategy calls for cost efficiencies, close control of costs, advantage or preferential access to raw materials, to components, to labor, and some other important inputs; because as long as it gets lower costs to produce, it can provide lower prices to its customers getting the valuable profit from a high level of sales, supported with a production process reinforced by economies of scale and experience curve effects; though it might be directed to a broad market scope. Companies that implement this strategy expect to

take advantage of economies of scale and the experience curve, by producing large amount of a product, to allow the company to compete with other companies in the same sector and that has decided to go for the same way of cost leadership. Examples of this include retailers such as Wal-Mart but also IT firms such as IBM, Dell, and Lenovo. According to Porter, "Low costs will enable a firm to sell relatively standardized products that offer features acceptable to many customers at the lowest competitive price and such low prices will gain competitive advantage and increase market share. Additionally he stated that if the low cost support can be sustained for a company during long periods of time, this will guarantee that they will increase market recognition and so market share, increasing sales and profits and thus superior performance will be reached by this company in its specific industry or market. Yet, as soon as the model starts to be developed, the critics start to match Porter's ideas to say in this part that the sustainability of a cost based company's competitive advantage last until a competitor develop a model allowing it to provide lower costs to the customer, and so critics argues that it is not in hands of a company but that its strategy will always be dependent to the competitors and that it doesn't allow a company to react freely and follow its own path, because if this situation continues, this company will end by copying and minimize the competitor's strategy in a cyclic process that finally will stop when all competitors in an industry have the same strategy, eroding the market profits in hands of the consumers. Some disadvantages on the cost leadership strategy pointed out by authors like Vokurka are that it would represent for the company a decreasing customer loyalty¹⁶, that the author sees as the killer of the same strategy in the long run, because as the company educates the customer to get the value from the lower price, any other competitor that would be able to reach the same or an improved cost based performance and so would offer lower prices to the customer, this last one will have no doubt on getting the "best-value" (from their position) from whatever company offering the lowest price for a generic product. Priem also remarked that in terms of prices, there is a logic reasoning among consumers worldwide that those are related negatively to the quality. He described that customers perceive a tradeoff on quality and satisfaction when buying by prices means. This approach aim to expose the long term devastating consequences of this strategy in terms of how its customers perceive what they are buying and the

difficulty of make them come back again, because sometimes mind conceptions lead customers to change preferences in case for example of few more money to take buy decisions, under this approach they will go for another company that would offer higher quality for few more money. And finally, this might lead a customer to go at any given moment willing to pay more for a more distinguished article, being quality or different features. One of the most contradictory publications towards Michael Porter's proposal, Kim and Al with the Blue Ocean Strategy book, explained that this strategy can be possible only for one company per industry, and so that it is quite optimistic. According to Kim et Al, only "if firms costs are low enough it may be profitable even in a highly competitive scenario hence it becomes a defensive mechanism against competitors. Low cost leadership becomes thus a viable strategy only for larger firms. Market leaders may strengthen their positioning by advantages attained through scale and experience in a low cost leadership strategy. In fact, maintaining this strategy requires a continuous search for cost reductions in all aspects of the business. Emphasized on efficiency, this strategic option is not an acceptable approach of difference or advantage right now, because technology nowadays are getting accessible for lower costs and improved constantly so it turns a production process cheaper and allow companies to low prices, so the possibility for all the industries to have access to it, makes it an easy to copy approach. The solution that Porter gave to this easy imitable issue was that it is not necessary to produce at less cost but also when doing that, companies must create tradeoffs that lead competitors to desist to get into these new technologies. Finally, this strategy besides requiring huge companies running huge markets, it is necessary to have price-sensitive customers as a big part of this market. Weather a company has decided to chose this strategy, there are three basic methods of cost management, it can use: the traditional product costing (TPC), the process based costing (PBC) and the activity based costing (ABC). There exists also the value added/non-value added method that minimizes costs and tries to reduce activities that don't provide the company too much value added, to better use those resources. Additionally, the target costing method model a company's costs regarding a target that represents being better that competitors. Anyway there are several methods for companies to control and reduce its costs and manage to run their business as efficient as possible. For the cost leadership strategy to be accurately

implemented, and to have more chances for it to be successful there are some situational issues that can help and that have been pointed out by Buble. Those are: “prices are the dominant mean of competition, products are highly standardized, customers are not especially bounded to a specific product brand, products have ordinary usage characteristics, customers change product preferences easily due to lower prices, or customers possess extensive bargaining power. This approach is criticized for been considering operational efficiency, which according to Porter in a latter work is necessary but not sufficient. The cost leadership brings a big problem for companies and is that once the company has reduced costs from several processes, if a competitor achieve to improve its performance with lower costs, the chances are that the company can’t react to this situation, loosing not only the competitive advantage and the market leadership but also inducing costs and devasted revenues and profitability.

Differentiation Strategy

The differentiation strategy, also directed at a broad market involves the creation of a product or service that is perceived throughout its industry as unique and that is valued for a customer meaning that he/she is able to pay more for this uniqueness. This uniqueness usually is reflected in design, brand image, technology, features, network, or customers’ service. In this strategy, the sustained competitive advantage is given by customers loyalty reflected on low price sensitivity what allows companies to cover extra costs to provide customers high value by charging them in a differentiated product, this happens without affecting the demand. Some examples of companies runned with this strategy are Nike in the clothing sector, Apple in the IT sector, but also in the automobile sector with Mercedes- Benz and BMW or big designers on clothing worldwide like Dolce & Gabbana. This vision of differentiation is easy diluted in globalization as customers get the same differentiated product from a huge number of companies, even if the service is so specialized, there is a global supply that makes a fierce competition, due to the conception of see the market as structured like everyone thinks it is structured. This strategy is not accurate by the current business environment as customers are each time more aware of the suppliers and are more exigent when doing a purchase, wanting to cover all their most little desires on any

product. As there are wide forms of differentiation and customer with very specific needs, companies and competitors “differentiated” for a wide scope, maybe do not satisfied the very specific needs of its customers, and so this is how the competitive advantage on this strategy as customer loyalty are lost, giving entrance to new comers that can supply widely a customer specific needs. In this approach we must consider increasingly higher competition reinforced by lowered boundaries on design, production, and distribution that brings differentiated portfolios constantly to the market in the same worldwide market. For a company to be able to develop a differentiation strategy it is necessary that it has remarkable strengths and advantages in research and development, design, marketing, and quality control, but also an innovative orientation, a technological level superior to the average of it industry, beside others. This internal requirements cause also increased costs especially under the means of product development and marketing campaigns to inform about the products specifications and to promote product tasting. What can sustain this strategy is the continuing development of differentiated products that match customer’s needs and preferences along trends, and in order to reach that, a company must monitor constantly its customers trying to identify their preferences and understand their behavior, until the point of predicting how they can react to certain product changes. As well, this strategy implies some requirements that must be seen on the industry, such as the existence of numerous market segments, as well as specific customer’s needs and wants, which are not satisfied by products in the current market.

Focus Strategy

The focus strategy is aimed to attend specific small niches that require special features or prices to be provided and so for the company to get the market. Porter proposed this way of competing as to get involved into specific market segments either by focus on differentiation on products or by focus on costs. An example of this strategy in firms is Southwest Airlines, which provides shorthaul point-to-point flights in contrast to the hub-and-spoke model of mainstream. To run a focus strategy a company must have a selective offering provided to selective markets, every process must be focus oriented, in both meeting the market segment needs and doing it with lower costs than the average of its competitors. Afterwhat a company will direct its efforts headed for a

specific group whose specific needs were not satisfied for companies with the broader scope of differentiation. According to Porter, for a successful implementation of a focus strategy the market must be a big one and expect to grow dramatically. And have for a company too much different segments in which it can focus on or represent the impossibility to go to the broader perspective, because these are facts creating tradeoffs, and so barriers to imitation. These specific needs usually generate specific demands, that includes specific inputs to be provided and so higher prices to cover these costs and that are reasonable for the customers demanding such products. In the long run, the company will not only maintain these customers but also will integrate more customers by continuing improvements on technologies and research and development processes. The risks implied in this approach are the volatility in the customer's preferences and trends on its consumption patterns that would imply a change on supplier of the product and so to give a try to competitor's products. Another risk is the fact that newcomers would easily saturate the market that would bring about all the already known consequences.

Stuck in the middle

Michael Porter explains that companies that don't fit in any position are about to be "stuck in the middle" meaning that its customers will find more value on competitors with strong defined position as those are offering them more value either in characteristics or in price, by using its resources more accurately to what their market is asking for. Porter was also criticized for its co-existence of two strategy types, related to this concept of "stuck in the middle", Luis Eduardo Ayala Ruiz described that there is an incoherent reasoning between the cost leadership and the differentiation strategy relationship; because in some industries, there were companies able to have a cost leadership and would choose to compete at prices comparable to the industry. This situation, according to Porter would be classified as stuck in the middle, meaning that this company will not have superior performance compared to its industry, but actually the financial situation of those companies were superior to the average, showing that even if a company can lower the prices there is no reason to do it when a customer will buy at a price of the industry, not entering a price war, and keeping

profits in the hands of the company whose revenues will be higher, rather than in the hands of customers that were able to pay more for the same.

Other Critics

Another point of criticism is the missing variables that affirm that as a model is supposed to reflect reality in a simplified way. The objective of the model determines the level of simplification, which is represented by the number of variables included in the model. Porter's model contains variables like economies of scale which are supposed to lead to a certain choice of strategy. However, nowadays, where we find "pull"- markets rather than "push"-markets (a "pull" market being a market in which the demand, the costumers, determine what is produced) other variables might be necessary to describe a company's strategy in a way that reflects reality. A missing variable might be the abilities of the internal management. For example, if the CEO of a company is an engineer he might have the ability to foresee future trends and to follow specific R&D projects. Even if the company had a competitive advantage with respect to its production (for example economies of scale) it might be possible that it will rather follow a differentiation strategy – because of its internal management capabilities. If you'd try to describe this company's strategy using Porter's model of generic strategies you would not get a satisfying result.

2.4: EXAMPLES: WAL-MART AND DELL

Wal-mart

Companies like Wal-Mart, now the first world leader retailer, had followed his advices about strategy, going for a cost leadership strategy, developing a huge experience curve, high negotiation power due to the enormous volumes of distribution, developing economies of scale on distribution and marketing, and a commitment to continuously search for cost reductions in all aspects of the business. The starting point was a relentless focus on satisfying customer needs. The key was to make the way the company replenished inventory the centerpiece of its competitive strategy. This strategic vision reached its fullest expression in a largely invisible logistics technique known as "cross docking". In this system, goods are continuously delivered to Wal-

Mart warehouses, where they are selected, repacked, and then dispatched to stores, often without ever sitting in inventory. Instead of spending valuable time in the warehouse, goods just cross from one loading dock to another in 48 hours or less. Cross-docking enables Wal-Mart to achieve the economies that come with purchasing full truck-loads of goods while avoiding the usual inventory and handling costs. Low prices in turn mean that Wal-Mart can save even more by eliminating the expense of frequent promotions: Stable prices also make sales more predictable, thus reducing stock-outs and excess inventory. Finally, everyday low prices bring in the customer, which translates into higher sales per retail square foot. These advantages in basic economics make the greeters and the profit sharing easy to afford. Another key component of Wal-Mart logistics infrastructure is the company's fast and responsive transportation system. To gain the full benefits of cross-docking, Wal-Mart has also had to make fundamental changes in its approach to managerial control. Instead of the retailer pushing products into the system, customers "pull" products when and where they need them. This approach places a premium on frequent, informal cooperation among stores, distribution centers, and suppliers, with far less centralized control. The company information systems provide store management with detailed information about customer behavior. As the company has grown and its stores have multiplied, even Wal-Mart's own private air force hasn't been enough to maintain the necessary contacts among store managers. So Wal-Mart has installed a video link connecting all its stores to corporate headquarters and to each other. The final piece of this capabilities mosaic is Wal-Mart's human resources system. The company realized that its frontline employees play a significant role in satisfying customer needs. So it set out to enhance its organizational capability with programs like stock ownership and profit sharing geared toward making its personnel more responsive to customers. Even the way Wal-Mart stores are organized contributes to this goal, where training can be more focused and more effective, and employees can be more attuned to customers. Wal-Mart emphasizes behavior like the organizational practices and business processes in which capabilities are rooted, as the primary object of strategy and therefore focuses its managerial attention on the infrastructure that supports capabilities. The cornerstone of Wal-Mart's success control point was based upon opening stores that would satisfy all the retailing needs of a rural area within a 15-20

mile radius. Sam Walton discovered (or created) a less than obvious bottleneck in distribution to rural communities, and filled it so completely with large-scale, low-cost channel that existing competitors could not afford to compete and potential new entrants were preempted. Wal-Mart created a de facto monopoly for each rural location. To some extent this advantage was absent as Wal-Mart began to grow into larger metropolitan areas where the bottlenecks could not be created. Not surprisingly, their performance began to fall off.

DISCOUNT' MARKET CHARACTERISTICS IN 1962	WAL-MART'S APPROACH	SUCCESS FACTOR
	Small town presence	"cross-docking"
Low margins	Lowest price	Partnership with logostic companies
Small growth	No product promotion	Partnership with suppliers
Poor offer	Customer "pull" products	Information sarin
	Company culture identity	Fast & responsive transportation

Figure 2.5: Wal-Mart approach

Dell

In 1984, with \$1000 in startup capital and an unprecedented idea- bypass the middleman and sell custom-built PCs directly to customers-Michael Dell registers Dell Computer Corporation. Doing business as PC's Limited, the company is the first in the industry t sell custom-built computers directly to customers. In 1985, by offering risk-free returns and next-day, at-home product assistance, Dell establishes the customer experience as a company cornerstone. Dell is one of the first computer companies to send a technician to homes to service personal computers. Since the first Dell PC was introduced in 1986, Dell has continued to shape the industry, breaking new ground and pioneering critical developments in home, small business and enterprise computing. Dell's R&D efforts now span the globe, driven by some of the industry's foremost product designers and engineers. At the core of Dell's innovation approach, however, remains an unwavering commitment to delivering new and better solutions that directly address customer needs.



1. Listen

Requirements are gathered directly through tens of thousands of customer interactions daily, organized events, social media venues, and customer panels. Partnerships with a wide variety of key industry software, hardware and component suppliers give us a uniquely broad perspective on the computing landscape.

2. Solve

Many innovations begin in-house, led by a global team of top engineers, product designers and technical experts. Others begin as a team effort with Dell's strategic partners. The mission is to deliver innovative and cost-effective solutions that meet today's real-life customer challenges and work seamlessly in existing environments and with other products.

3. Impact

Dell is uniquely positioned to impact industry trends. It maintains strong internal development capabilities. It partners, rather than compete, with top industry technology suppliers and original development manufacturers. It steers enabling industry standards and technologies through industry groups and strategic partners. In this way, Dell spurs innovation and delivers value to customers. To deliver effective solutions that meet customer challenges, Dell focuses on pivotal standards that drive future technology innovation. Dell's industry leadership places it in a unique position to help establish the core building blocks for the future innovation - in the home, the office and the enterprise. With a long track record of pioneering work and wide network of strong industry alliances, Dell can drive adoption of open standards that give customers more choices, lower costs and complexity, and interoperability. In the 1980s, Dell became a pioneer in the "configure to order" approach to manufacturing — delivering individual PCs configured to customer specifications. In contrast, most PC manufacturers in those times delivered large orders to intermediaries on a quarterly basis. To minimize the delay between purchase and delivery, Dell has a general policy of manufacturing its products close to its customers. This also allows for implementing a just-in-time (JIT) manufacturing approach, which minimizes inventory costs. Low inventory is another signature of the Dell business model — a critical consideration in an industry where components depreciate very rapidly. Dell's manufacturing process

covers assembly, software installation, functional testing (including "burn-in"), and quality control. Throughout most of the company's history, Dell manufactured desktop machines in-house and contracted out manufacturing of base notebooks for configuration in-house. However, the company's approach has changed. The 2006 Annual Report states "we are continuing to expand our use of original design manufacturing partnerships and manufacturing outsourcing relationships." The Wall Street Journal reported in September, 2008 that "Dell has approached contract computer manufacturers with offers to sell" their plants. Assembly of desktop computers for the North American market formerly took place at Dell plants in Austin, Texas (original location) and Lebanon, Tennessee (opened in 1999). The plant in Winston-Salem, North Carolina (opened in 2005) is scheduled to cease operations in 2010, while the Miami, Florida facility of its Alien ware subsidiary remains in operation. Dell servers come from Austin, Texas. Instead of building computers according to a sales forecast and letting other companies sell those Dell sells directly from its own website and call-centers and then builds to order. That way, it not only cuts distributors and retailers out of its supply chain but also gets paid up front. Dell Inc. pioneered the Direct Model of selling PCs directly to the consumers. How it enabled Dell to manage its supply chain efficiently is discussed in this case study. Dell Computer Corporation a leading direct computer systems company was founded in 1984. Dell sells its computer systems directly to end customers, bypassing distributors and retailers (resellers). Dell's supply chain consists of only three stages— the suppliers, the manufacturer (Dell), and end users.

Dell's direct contact with customers allows it to:

- properly identify market segments,
- analyze the requirements and profitability of each segment, and
- develop more accurate demand forecasts.

Dell matches supply and demand because its customers order computer configurations over the phone or online (Internet). These computer configurations are built up from components that are available. Dell's strategy is to provide customised, low cost, and quality computers that are delivered on time. Dell successfully implemented this strategy through its efficient manufacturing operations, better supply chain

management and direct sales model. Dell takes orders directly from its customers; either on phone or online. Thus, Dell reduces the cost of intermediaries that would otherwise add up to the total cost of PC for the customer. Dell also saves time on processing orders that other companies normally incur in their sales and distribution system. Moreover, by directly dealing with the customer Dell gets a clearer indication of market trends. This helps Dell to plan for future besides better managing its supply chain. Another advantage Dell gets by directly dealing with the customer is that it is able to get the customer's requirements regarding software to be loaded. Dell loads the ordered software in its plant itself before dispatching it. By eliminating the need of a PC support engineer to load software, the customers gain both in time and cost. They can use the PC's the moment they arrive.

PC'S MARKET IN 90's	DELL'S APPROACH	SUCCESS FACTORS
	Direct customer order	Partnership with suppliers
Limited market growth	Tailored on customer's needs	Just in time supply chain
Margin erosion	High flexible cost structure	Efficient assembly
Risk of commodity	Internal efficiency	Very quick delivery
	Supply chain focus	

Figure 2.6: Dell's approach

CHAPTER 3: THE SYSTEM LOCK-IN

3.1: THE DELTA MODEL

The Delta model encompasses a set of frameworks and methodologies to help managers articulate and implement effective corporate and business strategies. It grew from the conviction that the world of business has been experiencing transformations of such magnitude that the existing managerial frameworks have become either invalid or incomplete. A fundamental force in these transformations has been the emergence of the networked economy. Networks have enabled a degree of bonding between customers, complementors, and suppliers that has changed the drivers of profitability and, consequently, the landscape of strategy. The foremost thing in defining the strategy of a firm or business is to decide on the relevant strategic positioning. This should capture the essence of how the firm compete and serves customers in its relevant marketplace. There are three distinct strategic options, which offer very different approaches to achieve customer bonding. They are depicted graphically through a triangle.

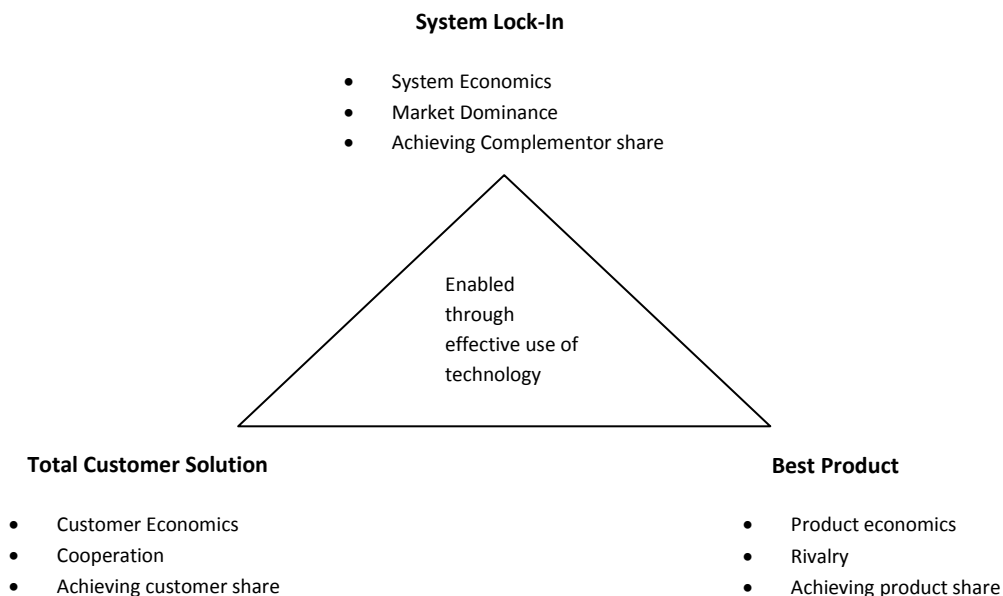


Figure 3.1: The Delta model

The best product

The best product positioning builds upon the classical form of competition. The customer is attracted by the inherent characteristics of the product itself, either due to its Low Cost, which provides a price advantage to the customer, or due to its Differentiation, which introduces unique features that the customers value and for which they are willing to pay a premium. The products tend to be standardized and unbundled. The customers are generic, numerous, and faceless. The central focus of attention is the competitor, who we are trying to equal or to surpass. Competitive advantage rests upon product economics and the internal supply chain, which provide the engine for efficient product production. Innovation is centered on the internal development process. The liability of this approach is that it generates a minimal amount of customer bonding, hence making the incumbent firms most vulnerable to new entrants. Its obsessive concern with competitors often leads to imitation and price war, resulting in rivalry and convergence; the worst of all situations. In spite of widely adopted, and the default position for those businesses that do not deliberately consider other strategic options.

The total customer solutions

The total customer solutions strategy is a complete reversal from the Best product approach. Instead of commoditizing the customer, seeks a deep customer understanding and relationship that allows to develop value propositions that bond to each individual customer. Instead of developing and marketing standardized and isolated products, seeks to provide a coherent composition of products and services aimed at enhancing the customer's ability to create their own economic value. Instead of concentrating inwardly on proper supply chain, seeks to develop an integrated supply chain that links the company with key suppliers and customers. Instead of focusing on competitors and imitating them, redefines the ways to capture and serve the customer by putting together an overall set of corporate capabilities, also sourcing from proper external parties, that enhance one's product offering. It means that the company is outwardly driven; customer economics is the guide. Strategy is not war

with the competitors; is it love with the customers. The innovation is not oriented toward the design of standardized products; it is aimed at initiatives with the key customers for the joint development of distinctive products.

The System Lock-In

The System Lock-In strategic option has the widest scope; it includes the extended enterprise- the firm, the customers, the suppliers, and most importantly the complementors. A complementor is a firm engaged in the delivery of products and services which enhance the firm product and service portfolio. The key to this strategic option is to identify, attract, and nurture the complementors. They are typically external, but may also be internal to the corporation, particularly in large and diversified organizations. These complementors are rarely detected and exploited effectively. This is why a System Lock-In has to start with the full corporate scope- not just for one product or business- and has to continue with the identification and incorporation of all the key external players that can become complementors. The customer continues to be the central focus, but now we extended the enterprise to the fullest. This strategy looks at the overall system supply chain, not just the supply chain for the product, and harnesses the innovation percolating throughout the system as a whole. The richness and depth of complementors supporting the product or service lock the product into the system and lock-out the competition. De facto Proprietary Standard are one way to achieve System Lock-In. Distribution channels are often a key consideration for a System Lock-In positioning, particularly for old economy companies. By owning or restricting access to distribution channels, competitor can be locked out. There are several routes to System Lock-In. A company that achieves this position exercises an enormous amount of power. However, a System Lock-In position is not always possible; there are necessary conditions. Foremost among these is that the value of the product to a customer should significantly increase as the product is used by others. After attaining it, there are additional challenges to a System Lock-In position: how to sustain it and exercise this power in an ethical way that does not create excesses of monopolistic behavior.

In a Best Product position the value proposition to the customer is the product and its attributes are independent of the customer. In a Total Customer Solutions position, the value proposition to the customer is enhanced by the interaction between the customer and the product, which leads to bonding with existing customers. In a System Lock-In position, the value proposition to the customer is enhanced by interaction with other customers, which leads to bonding with existing and new customers. Bonding reflects externalities beyond the product itself.

3.2: THE SYSTEM LOCK-IN

The System Lock-In represents the strongest form of bonding and demands that the business addresses the overall architecture of the system. Instead of focusing solely on the product or the customer, we are now concerned with all the important players in the system that contribute to the creation of economic value for a particular customer. Besides the normal industry participants – buyers, suppliers, channels, and potential new entrants- we are now especially concerned with nurturing, attracting, and retaining “complementors”. A complementor is not a competitor, or necessarily a supplier; it is a provider of products and services that enhanced, directly or indirectly, our own offering. Examples of complementor pairings include computer manufacturers and software producers, high fidelity equipment manufacturers and CD retailers, and video cassette recorders and movie studios. System Lock-In further expands the scope of the business relative to the previous strategic options. System Lock-In players attract, satisfy, and retain customers by attracting, satisfying, and retaining complementors. The value of the system grows with increasing returns with growth. This defies conventional economic reasoning which has its roots in the behavior of the agricultural industry. As the agricultural activity expands, less fertile lands enter into production. The more you produce the lower incremental margins you enjoy. Network effects put an end to the universal validity of this principle. At eBay, the Internet-based auction house, the value of their service goes up with each additional buyer and seller that uses their service. While networks enable and accelerate these effects, System Lock-In has always existed. Sotheby’s and Christie’s are physically-

based auction house that sustained themselves for years because they were the dominant exchange point for buyers and sellers to congregate. As with all aspects of bonding there are two necessary conditions to create System Lock-In :

1. The existence of increasing marginal returns
2. External network effects

Increasing marginal returns reflect how the value of the product or service increases with increased users and usage. Network externalities reflect the fact that attractiveness of the product is not embodied in the characteristics of the product, but is external and often the function of investments by others, particularly the complementors and customers. When these conditions exist, the more a product is adopted and used the greater the benefit it confers to the customer. This translates into a virtuous cycle, where more is better, leading to even more, and so forth. This sets the stage for achieving a System Lock-In position. This increased reach and connectivity that the Internet provides has expanded the stage of opportunities. Moreover, this technology has disaggregated industries creating a network of complex interactions among fragmented and specialized participants that almost mandates the use of common standards to ensure effective exchanges.

There are three ways to achieve System Lock-In:

1. Proprietary Standard
2. Dominant Exchange
3. Restricted Access

A business successfully positioned as a Proprietary Standard draws customers because of the extensive network of complementors that are designed to work with its product. If you want to use the complementors you are compelled to use the Proprietary Standard. Microsoft, Intel, Real Networks, Palm and Cisco are superb examples. A business positioned as a Dominant Exchange provides an interface between buyers and sellers, or between parties that wish to exchange information or goods. Once this sort of business achieves a critical mass it is very hard to displace. With eBay, sellers want to go to the site with the most buyers and buyers want to go

to the site with the most sellers. Other companies with this position include the Yellow Pages, Visa/MasterCard, and AOL Instant Messaging. In the case of Restricted Access, the competitors are deprived of access to the customer because the channel has limited capacity to handle multiple vendors. This is the situation for the Walls ice cream cabinets, free of charge, and keep them fully stocked with Walls ice cream. Due to space constraints in small shops there is no room for competitive distribution.

3.3: EXAMPLE: FORD MOTOR CO

Ford Motor Co is an automotive company that supplies vehicles to customers and companies. Henry Ford built his first car, the Quadricycle Runabout, over a hundred years ago in the summer of 1896. It had a four-horsepower engine and could reach speeds of up to 20 miles per hour, an astonishing feat for the late 19th century. He sold that car for \$200 to finance his second car, which was completed in early 1898. On June 16, 1903, he incorporated Ford Motor Company, which was capitalized for \$100,000 with twelve stockholders. The company produced 1,708 cars that first year. Today, Ford Motor Company is a US\$160 billion corporation with some 350,000 employees in 200 countries around the world. In 1999, just over one hundred years after Henry Ford built the Runabout, Ford Motor Company manufactured 7.2 million vehicles worldwide.

The Challenge

Ford's uses a complex supply chain that spans their entire business dealing with manufacturing, sales, after sales and marketing. Ford's roots are grounded in harnessing the latest technology and innovative production techniques. In fact, Fortune Magazine recently named Henry Ford the "Businessman of the Century" and Ford's Model T "Car of the Century." However, as a 100-year-old company, Ford had developed some of the unfortunate characteristics of large-scale growth. With customers becoming more demanding and cost pressures mounting, the company wanted to transform from a very linear, top-down, bureaucratic business model to a Net Ready, nimble organization that involves and integrates customers, suppliers, and

employees. Ford needed to integrate more closely with their many and diverse suppliers, to make information available to the entire supply chain simultaneously. In the current cascade process, this can take days, weeks, and sometimes even months. Another key initiative close to the executive team's heart is Ford's OTD (Order to delivery) process. OTD is the supply chain process that comprises product engineering through vehicle manufacturing and distribution. The goal of being more consumer oriented requires Ford to shorten the delivery cycle from the time a customer places an order to the time the vehicle is actually delivered to a dealer and the owner takes possession. Ford also wanted to improve communication to and among employees, to encourage a more open, collaborative working environment. From providing unfiltered top-down communication to providing low-cost access to the Internet, Ford wanted to expose employees to the eBusiness transformation every step of the way. In addition, online e-learning and other cost-saving employee benefits would be far more effective with a well-connected workforce.

3.3.1: FORD MOTOR CO LOCK-IN

Repeat transactions can be encouraged by situations that cause lock-in. In the case of Ford, lock-in can be created from the following:

Personalized vehicles

Ford customizes vehicles for companies such as RAC;AA and Royal Mail, they supply vehicles such as breakdown trucks, tipper trucks and chassis cabs. These companies all get priority service meaning that once they place order they "jump the queue", and all the regular orders get moved back. This creates trust and a good business relationship between the two companies.

Loyalty programs

Ford gives their large customers extra discounts known as their "privilege purchase" scheme. They also offer a discount to staff. This helps to compete against their manufacturers trying to under-cut them on price in order to win the order.

Servicing

During the first three or four years a vehicle has been sold by Ford dealership most vehicles are brought back to the dealership for services and maintenance. Many people do this as they feel it necessary to have a main dealership service history otherwise they feel that vehicle will be worth less when they come to sell it.

Reputation

This alone is a very good lock-in as they have built very good relationships and reputations with customers. This gives customers a good reason to stay with them.

Building upon transaction history.

Ford has lock-in other companies that supply components due to their buying power. They buy in extremely large quantities and their orders are highly valued among suppliers, the suppliers compete themselves to win the orders by cutting the prices as much as possible.

Brand name and trust (RBV -Resource based view- theory) resources are defined as stocks of firm-specific assets; they cannot be easily duplicated and cannot be easily acquired in well-functioning markets.

Examples:

- Patents and trademarks
- Brand name
- Installed base
- Organizational culture
- Workers with specific expertise or knowledge

The combined effects of this lock-in create the potential value of the business.

Lock-in helps reduce the amount of customers that take business elsewhere to competitors. In the case of Ford's lock-in causes repeat orders, guaranteed future orders and forced orders. This could happen because when switching costs from one brand to another are substantial, customers face lock-in. For this reason an existing customer base with high switching costs is a significant and valuable asset.

The factory layout is very efficient as the production line doesn't need to stop for a part to be transported to another part of the factory and all the space is being used. They have set places where parts travel behind cages and through walk ways. Certain parts of vehicles aren't required until the end of the production line. For example adding wheels, they are sent along a conveyor belt before they are needed and they arrive at the required place just in time (JIT).

CHAPTER 4: ZARA

4.1 ZARA'S HISTORY

Zara is the flagship chain store of Inditex Group owned by Spanish tycoon Amancio Ortega, who also owns brands such as Massimo Dutti, Pull and Bear, Oysho, Uterqüe, Stradivarius and Bershka. Amancio Ortega Gaona is a famous Galician fashion designer and entrepreneur, ranked by Forbes as Spain's richest man and the 10th richest man in the World in 2009. Amancio Ortega was born on March 28, 1936 in Leon, Spain. At the age of 13, Ortega began working for a shirtmaker as a delivery boy in La Coruña, Galicia, the centre of the Iberian textile industry. He worked for a variety of stores and tailors and studied how products and costs changed as they travelled from the manufacturer to the consumer. As a result, he became focused on the importance of getting products directly to the consumer without a middle man. Ortega never attended higher education and continued to work in the textile field into the early 1960s. After becoming manager of a local clothing shop, he discovered that only wealthy individuals could afford to purchase fine clothing and became even more determined to make quality clothes accessible to everyone. As a result, Ortega started making his own products, purchasing cheaper fabric from Barcelona and selling good quality, cheaper products to local stores. In 1963, at the age of 27, Amancio Ortega founded his own company called Confecciones Goa that made and sold fine bathrobes.

Ortega continued to build his company and in 1975 he opened his first retail store called Zara. It was located across the street from one of La Coruna's most well known department stores and Zara became famous for selling high quality designer products at reasonable prices. As a result of this success, Ortega continued to open stores and was credited with choosing perfect locations for each one. The Zara fashion concept was well received by the public later in 1976, allowing it to expand its network of stores to the other main Spanish cities. During 1981-1988 with the growing popularity Zara started new ventures by multiplying in number not just in Spain but around the world. In fact, in 1988, there were 82 Zara stores in Spain and the company started its international

expansion through Porto, Portugal. In 1989 they entered the United States and in 1990 France. This international expansion was increased in the 1990s, with Mexico (1992), Greece (1993), Belgium and Sweden (1994), home of its closest competitor, H&M, until the current presence in over 73 countries, with a network of more than 1,540 stores, ideally located in major cities. Its international presence clearly shows that national frontiers are no impediment to sharing a single fashion culture. With the Zara's increasing popularity and overwhelming success, in 1985, Amancio Ortega integrated Zara in a new holding company, Industria de Diseño Textil, INDITEX S.A. Inditex became one of the largest textile companies in the world. . He joins the business Jos Mar a Castilian, professor of business school and a lover of technology, such as Amancio Ortega's right hand, making the company as a logistics model. Inditex made an initial public offering of stock in May 2001. In 2003 enjoying being the eye candy among the fashion followers Zara entered the home furnishing market by opening the first Zara home store. In 2005, Pablo Isla replaces CEO Jose Maria Castilian and begins a restructuring of logistics, in search of efficiency. Its first store featured low-priced lookalike products of popular, higher-end clothing fashions. The store proved to be a success, and Ortega started opening more Zara stores in Spain. During the 1980s, Ortega started changing the design, manufacturing and distribution process to reduce lead times and react to new trends in a quicker way, in what he called "instant fashions". The company based its improvements in the use of information technologies and using groups of designers instead of individuals. Zara stores are company-owned, except where local legislation forbids foreigner-owned businesses. In those cases, Zara franchises the stores.

1975	Zara opens its first store in A Coruña (Spain)
1985	The creation of Inditex as head of the corporate group
1988	The opening of the first Zara store outside Spain in Oporto (Portugal)
1989-1990	The United State and France are the next markets in which the group begins its activity with the opening of outlets in New York and Paris
2000	The opening of stores in four countries: Austria, Denmark Qatar and Andorra. Inditex installs its head quarters in a new building located in Arteixo (A coruña,Spain)
2001	On 23 rd May 2001 Inditex goes public and listed on the Spanish Stock Market

Figure 4.1: Zara's timeline

4.2 BUSINESS MODEL

Zara is a vertically integrated retailer. Unlike similar apparel retailers, Zara controls most of the steps on the supply-chain: it designs, produces, and distributes itself. The business system that had resulted was particularly distinctive in that Zara manufactured its most fashion-sensitive products internally. Zara did not produce "classics", clothes that would always be in style. In fact, the company intended its clothes to have fairly short life spans, both within stores and in customers' closets.

4.2.1: PORTER'S ANALYSIS ON ZARA

To better understand how Zara developed its strategic proposition and how is it related to the Porter's proposal; it is shown how the market behaved at the very beginning of the company according to the Porter's 5 forces analysis.

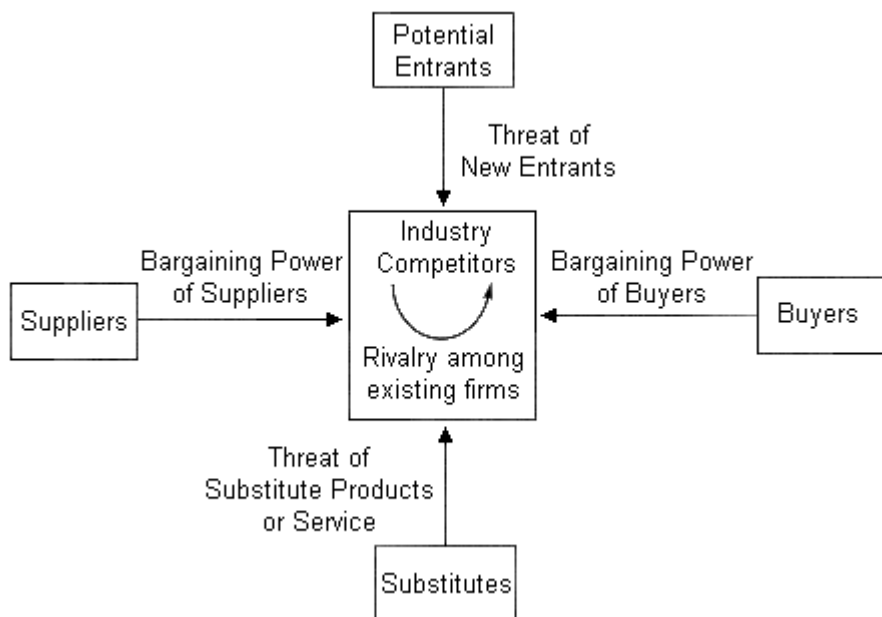


Figure 4.2: Porter's five forces model

Competitors:

- Elevated number of competitors
- The growth rate is low, it is a mature industry
- The barriers to get out of the industry are low in distribution and high in manufacture

- The storage costs are low as clothes have a long life time before getting damaged.
- There is no a diversification level in terms of quality of products, reason why the customer's choice is based on price and brand recognition.
- There might be diseconomies of scale for the possibility of quick changes in the consumer's habits and trends.
- High manufacture costs and raw material in the local market.

New Entrants:

- The local market (Spain) is not saturated
- No distribution barriers to entrance because it only consists on low costs of renting a shop, no administrative restrictions, low initial capital to start.
- Reduced reaction possibilities in front of new entrants.
- In production, there are barriers for the existence of economies of scale. The initial capital is high.

Substitutes:

- No substitutes, it is considered a basic necessity to be dressed.

Customer's Bargaining Power:

- Numerous customers, not well organized to defend their interests.
- Low purchase volume per customer.
- When it is about distribution, the customer is the final consumer, though there is no risk of back integration. The other way down to production.
- In distribution, there is no risk of not paying because they are paid off at very moment of the purchase.
- Because of changes on the lifestyle, demographic changes, cultural changes or technological changes, the demand can easily vary.

Supplier's Negotiation Power:

- There are too much suppliers, no negotiation power

- The nature of the products allow to storage them long time, unless the trends conditions.
- Big stores and supermarkets are relevant customers to Suppliers, because of the amount of purchases in each order.

4.2.2 ZARA'S PRODUCT LIFE CYCLE CURVE

Generally, a typical Product Life Cycle Curve looks like the one given in the diagram where Sales decreases as the product moves over the time line.

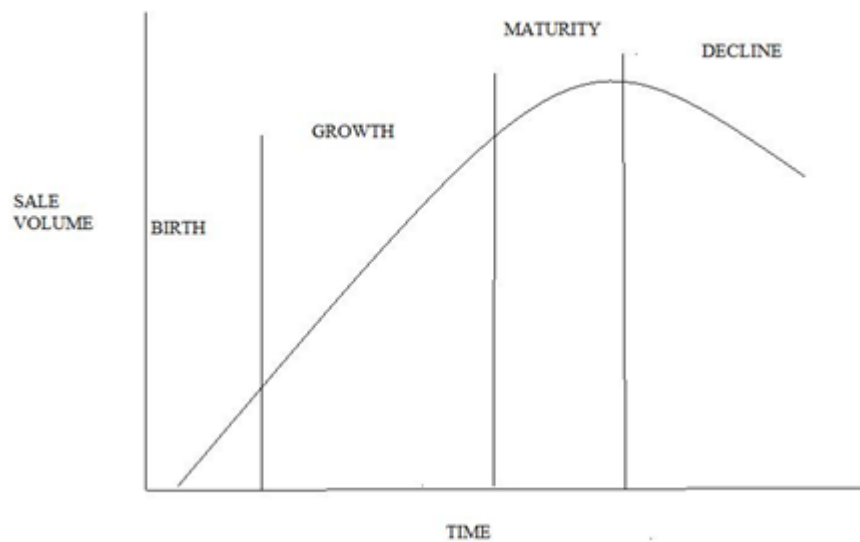


Figure 4.3 : Typical product life curve

But as Zara is in a high fashion industry and its product offering are the latest trends and designs with a life of maximum 5-6 weeks so its Product Life Cycle Curve becomes like the one given in next diagram.

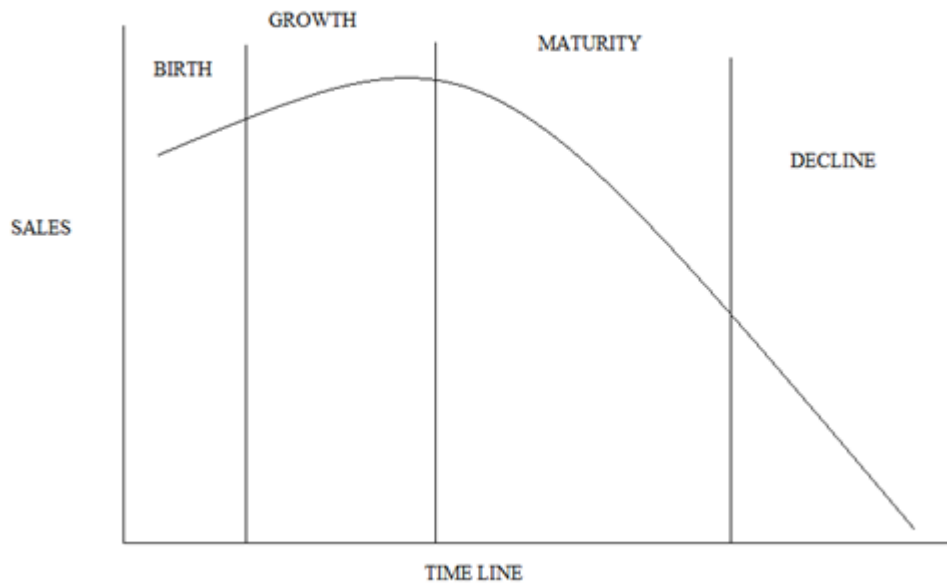


Figure 4.4 : Zara's production life cycle curve

4.2.3: ZARA'S KEY FACTORS OF SUCCESS

Zara concentrates on three winning formulae to bake its fresh fashions:

- Short Lead Time = More fashionable clothes
- Lower quantities = Scarce supply
- More styles = More choice, and more chances of hitting it

Firstly, by focusing on shorter response times, the company ensures that its stores are able to carry clothes that the consumers want at that time. Zara can move from identifying a trend to having clothes in its stores within 30 days, this means that Zara can quickly identify and catch a winning fashion trend, while its competitors are struggling to catch up. Catching fashion while it is hot is a clear recipe for better margins with more sales happening at full prices and fewer discounts. In comparison, most retailers of comparable size or even smaller, work on timelines that stretch into 4-12 months. Thus, most retailers try to forecast what and how much its customers might buy many months in the future, while Zara moves in step with its customers. Trend identification comes through constant research not just traditional consumer market research, but a daily stream of emails and phone calls from the stores to head office. Unlike other retailers, Zara's machinery can react to the report immediately and

produce a response in terms of a new style or a modification within 2-4 weeks. Many other retailers have such long supply chain lead times that for them it would seem a lost cause for them to even try and respond to a sales report. Secondly, by reducing the quantity manufactured in each style, Zara not only reduces its exposure to any single product but also creates an artificial scarcity. As with all things fashionable, the less its availability, the more desirable the object becomes. The added benefit of lower quantities is that if a style does not work well, there is not much to be disposed during the season-end sale. The result of this is that Zara discounts only about 18 percent of its production, roughly half the levels of competitors. Thirdly, instead of more quantities per style, Zara produces more styles, roughly 12,000 a year. Thus, even if a style sells out very quickly, there are new styles already waiting to take up the space. Zara can offer more choices in more current fashions than many of its competitors. It delivers merchandise to its stores twice a week, and since re-orders are rare the stores look fresh every 3-4 days. Fresh produce, moving in step with the fashion trend and updated frequently the ingredients are just right to create the sweet smell of success.

Number of product variants and change rate	Distribution channel	Demand and supply characteristics	Planning approach	Main benefits
12000 new models a year, short product life, for example 2 to 4 weeks.	Own store network, 600 stores.	Continuous change generates sales, part of production capacity responsive.	Accurate gathering of demand data and fast reactions to changes	Catching demand trends, stability through seasonal collection

Figure 4.5: Zara’s business model

4.2.4: STRATEGIC DRAWBACKS

Although Zara has a successful business model that differs from that of traditional retailers, it also has disadvantages that can affect its sustainable growth. Due its model, Zara’s weaknesses also differ from the traditional retailer. Zara holds around 86% of Inditex’s total international sales-a significantly high number for an organization that has 7 other chains. With that, Inditex is putting all of their eggs into one basket by sinking a great deal of capital into Zara. Inditex has contributed their extensive international sales to Zara and said “Zara was the principal reason Inditex’s

sales were increasingly international". If Zara fails in the future, Inditex will have to totally re-formulate their firm's strategies and may possibly face an internal meltdown. Zara also has an inability to penetrate the American apparel market. This may be due to American tastes that differ from European preferences. More importantly, however, Zara has not been able to develop a strong supply chain strategy in the U.S. like they have in Europe. Their European strategy includes, having a strong production and distribution facility in their home country in order to have short production and lead times. Zara has not invested in distribution facilities in the Americas, which is a threat to their U.S. selling abilities since the U.S. makes up 29% of the total apparel market. This may make them "subject to diseconomies of scale", which means that though are aware of how to quickly supply 1,000 stores, they may not be able to supply more retail locations due to their "centralized logistics model". Zara's strategy also creates some weaknesses. Their vertical integration has more advantages than drawbacks but it is important to recognize its limitations. Vertical integration often leads to the inability to acquire economies of scale, which means they cannot gain the advantages of producing large quantities of goods for a discounted rate. Higher costs are then incurred for the Inditex Corporation. Inditex also has to support their own high capital investments for their chains and be able to financially back their "technology and skills beyond those currently available within the organization". Zara's speedy and recurrent introduction of new products incurs increased costs as well. They have higher research and development costs. They also have elevated costs due to the constant changeover of production techniques to create their different apparel lines. That also means that employees must be trained in order to use the new manufacturing techniques, which again leads to increased costs. Traditional retailers do not experience higher costs in all of these areas.

a. Limitations of Vertical Integration

Vertical integration, a distinctive feature of Zara's business model, has allowed the company to successfully develop a strong merchandising strategy. This strategy has led Zara to create a climate of scarcity and opportunity as well as a fast-fashion system. However, Zara's strategy creates some weaknesses. Their vertical integration has more advantages than drawbacks but it is important to recognize its limitations. Vertical integration often leads to the inability to acquire economies of scale, which means Zara cannot gain the advantages of producing large quantities of goods for a discounted rate. Higher costs are then incurred for the Inditex Corporation. Inditex also has to support their own high capital investments for their chains and be able to financially back their "Technology and skills" beyond those currently available within the organization. Zara's speedy and recurrent introductions of new products incur increased costs as well. They have higher research and development costs. They also have elevated costs due to the constant changeover of production techniques to create their different apparel lines. That also means that employees must be trained in order to use the new manufacturing techniques, which again leads to increased costs. Traditional retailers do not experience higher costs in all of these areas.

b. Diseconomies of scale: Zara has not invested in distribution facilities to support their global expansion. As a result, although it is aware of how to quickly supply 1,000 stores, they may not be able to supply more retail locations due to their "centralized logistic" model. Even though Zara has been successful at scaling up its distribution system, the centralized logistics system might eventually be subject to diseconomies of scale as Zara continues to open stores all around the world and ships product from its single Distribution Center in Europe. This system may work well with the current number of stores because majority of the stores are centralized in Europe. However, Inditex won't be benefiting from short lead times and low operational cost with a single central Distribution Center model as they are branching out into other countries.

c. Fast and recurring introduction of new products in different countries increase costs

R&D: In the manufacturing environment, Zara's product development teams are responsible for attending high-fashion fairs and exhibitions to translate the latest

trends of the season into their designs. Also throughout the season, Zara's product development teams are constantly researching the market by traveling to universities and clubs around the world to track customer preferences. Additionally, the young, fashionable, and international staff helps to interpret the desire of the moment (Zara). Changeover of production techniques to create different apparel lines requires highly automated equipment specialized by garment type. The more flexible the system is, the more costly the production will be. In addition, employees need to be trained to use new manufacturing techniques. Developing vertically integrated supply chain system in different countries with high labor cost will result in high production cost. Zara Management is considering investing in distribution and production in new regions they are expanding into. North America and Asia seemed to be the obvious regional opportunities. The U.S market was subject to retailing overcapacity, demanded larger sizes on average. Zara is already in major cities in the United States. Since Zara does not have any distribution or manufacturing facility within United States, all the apparel is shipped from Europe to the States which incurs a significant transportation cost.

4.2.5: LOGISTICS AND SUPPLY CHAIN

Zara follows a structure that is more closely controlled than most other retailers, and pays further by having the various business elements in close proximity to each other, around its headquarters in Spain.

1) Ownership and Control of Production

Retailers like the American chain 'Gap' and the Swedish retailer 'Hennes & Mauritz' completely outsource their production to factories around the world and mostly to low cost Asian countries. In contrast, it is estimated that 80 percent of Zara's production is carried out in Europe which is within the small radius of its headquarters in Spain. In fact, almost half of its production is in owned or closely-controlled facilities. While this gives Zara a tremendous amount of flexibility and control, it does have to contend with higher people costs, averaging 17-20 times the costs in Asia. Counter-intuitively Inditex

has also gone the route of owning capital-intensive manufacturing facilities in Spain. In fact, it is a vertically integrated group, with up-to-date equipment for fabric dyeing and processing, cutting and garment finishing. Greige (undyed fabric) is more of a commodity and is sourced from Spain, the Far East, India, and Morocco. By retaining control over the dyeing and processing areas, Inditex has fabric- processing capacity available “on demand” to provide the correct fabrics for new styles. It also does not own the labour-intensive process of garment stitching, but controls it through a network of subcontracted workshops in Spain and Portugal.

2) Supercharged Product Development

Design and product development is a highly people-intensive process. The heavy creative workload of 1,000 new styles every month is managed by a design and development team of over 200 people. This means that every person on an average is producing around 60 styles in a year or 1-2 styles every week. With new styles being developed and introduced frequently, each style would provide only around 200,000-300,000 of retail sales, a far lower figure than other retailers or brands, and certainly not “cost-efficient” in terms of design and product development costs. But obviously, this higher cost of product development is more than adequately compensated by higher realized margins. In addition, the entire product development cycle begins from the market research. This combines information:

- from visiting university campuses, discos and other venues to observe what young fashion leaders are wearing
- from daily feedback from the stores
- from the sales reports

This has meant a significant investment in information technology and communications infrastructure to keep streaming up-to-date trend information to the people making the product and business decisions. At the leading edge of research are the sales associates and store managers in Zara stores, who zap orders on customized hand held computers over the Internet to Zara headquarters based on what they see selling. And not just orders, but ideas for cuts, fabrics or even a whole new line. They draw upon customer comments, or even a new style that a customer might be wearing

that could be copied for Zara's stores. Traditional daily sales reports can hardly provide such a dynamically updated picture of the market.

3) React Rather than Predict

What sets Zara apart from many of its competitors is what it has done to its business information and business process. Rather than concentrating on forecasting accurately, it has developed its business around reacting swiftly. What a typical retailer or brand might do? Designers may start looking at fashion trends, and start designing a look for summer 2010. Information and inspiration comes from forecasting agencies, trade shows, and various other places. Over a period of 3-5 months they develop the ideas into physical samples. Sales budgets and stock plans are developed based on what is going on in the business right then (roughly one-year ahead of the targeted style). At various times during this seasonal process, there are decision-making meetings, where styles are accepted, rejected or changed, pricing and margin decisions taken and orders finalized. Based on a host of factors, the orders might then be placed with vendors in one or more countries around the world. Typically vendors may take a few weeks to two months to procure fabrics, have them approved by the retailer, and then produce a number of samples, and only once all approvals are finished, put the style into production. From beginning to end, the process of defining a concept to receiving goods in the retail store might take anywhere from 9 to 12 months for a typical retailer. Amazingly, it seems to work 60-65 per cent of the time. Zara, on the other hand, largely concentrates its forecasting effort on the kind and amount of fabric it will buy. It is a smart hedging by Zara because of two reasons:

- fabric (raw material) mistakes are cheaper than finished goods errors
- the same fabric could be turned into different garments

In fact, for an extra degree of flexibility Zara buys semi-processed or un-coloured fabric that it colors up close to the selling season based on the immediate need. With that edge, and a super-fast garment design and production process, it takes to the market what its customers are looking for.

4) Quick-Bake Recipe: Well Mixed Ingredients

Garment styling for Zara actually starts from the email or phone call received from the stores. Thus, from the beginning Zara is responding to an actual need, rather than forecasting for a distant future. Based on the store demand, Zara's commercial managers and designers sit down and conceptualize

- what the garment will look-like
- what fabric it will be made out of
- what it will cost
- what price it will sell

As soon as approvals are received, instructions are issued to cut the appropriate fabric. The cutting is done in Zara's own high-tech automated cutting facilities. The cut pieces are distributed for assembly to a network of small workshops mostly in Galicia and in northern Portugal. None of these workshops are owned by Zara. The workshops are provided with a set of easy to follow instructions, which enable them to quickly sew up the pieces and provide a constant stream to Zara's garment finishing and packing facilities. Thus, what takes months for other companies, takes no more than a few days for Zara. Finally, Zara's high-tech distribution system ensures that no style sits around very long at head office. The garments are quickly cleared through the distribution centre, and shipped to the stores, arriving within 48 hours. Each store receives deliveries twice a week, so after being produced the merchandise does not spend more than a week at most in transit.

5) Information Technology Keeps It Boiling

Information and communications technology is at the heart of Zara's business. Four critical information-related areas that give Zara its speed include:

- Collecting information on consumer needs: trend into information flows daily, and is fed into a database at head office. Designers check the database for these dispatches as well as daily sales numbers, using the information to create new lines and modify existing ones thus, designers have access to real-time information when deciding with the commercial team on the fabric, cut, and price points of a new garment.

- Standardization of product information different or incomplete specifications and varying product information availability typically add several weeks to a typical retailer's product design and approval process, but Zara “warehouses” the product information with common definitions, allowing it to quickly and accurately prepare designs, with clear cut manufacturing instructions.
- Product information and inventory management being able to manage thousands of fabric and trim specifications, design specifications as well as their physical inventory, gives Zara's team the capability to design a garment with available stocks, rather than having to order and wait for the material to come in.
- Distribution management: its State-of-the-art distribution facility functions with minimal human intervention. Approximately 200 kilometers of underground tracks move merchandise from Zara's manufacturing plants to the 400+ chutes that ensure each order reaches its right destination. Optical reading devices sort out and distribute more than 60,000 items of clothing an hour. Zara's merchandise does not waste time waiting for human sorting.

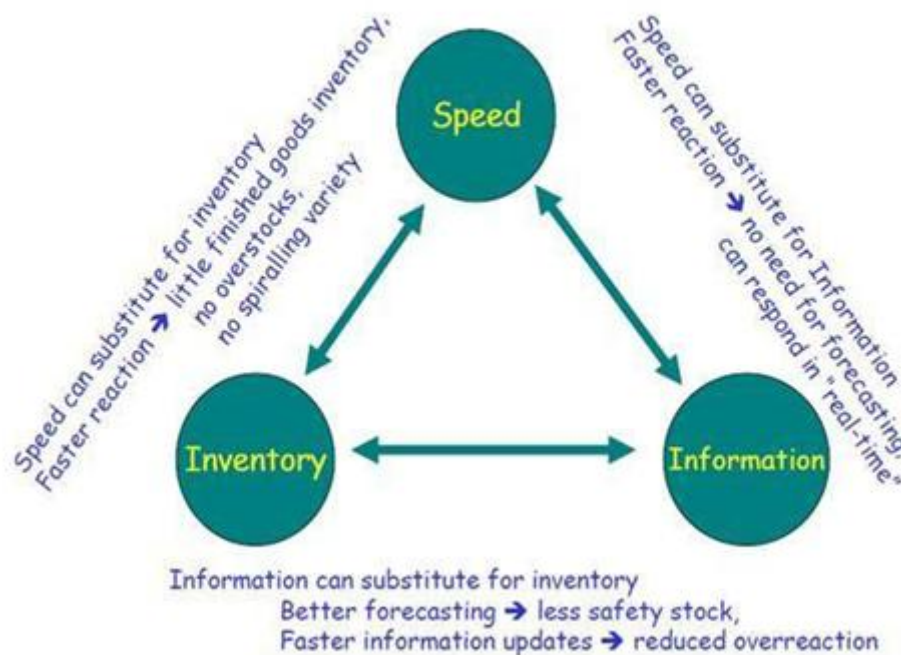


Figure 4.6 : Inventory, Information and Speed

6) Keeping Costs Down

Even while manufacturing in Europe, Zara manages to keep its costs down. None of its assembly workshops are owned by the company. Most of the informal economy workers the workshops employ are mothers, grandmothers and teenage girls looking to add to their household incomes in the small towns and villages where they live. Further, in terms of marketing costs, Zara relies more on having prime retail locations than on advertising for attracting customers to its stores. It spends a meager 0.3 per cent of sales on advertising compared to an average of 3.5 per cent of competitors according to the company, choosing highly visible locations for its stores renders advertising unnecessary. Apart from designing to the fashion-of-the-day, Zara's strategy of producing low volumes per style and changing products quickly in its stores enables it to cut down on the discounts as well. Only about 18 percent of Zara clothing doesn't work with its customers and must be discounted. That's half the industry average of 35 percent. Zara also has two clearly time-limited sales a year rather than constant markdowns. Lastly, since it spends effort on producing what are current fashion trends, it spends its design effort on interpreting rather than creating afresh. In fact, Zara has been constantly alleged to have knocked-off top designers' ranges, thus spending less on product development and design.

4.2.6: STRATEGY

When it just started, Zara's strategy was the low cost leadership; they apply this strategy as follows: Zara has controlled all its manufacture process, from the creation to the selling activities, avoiding being under the imagination of the designers, interest of the distributors or the ability of retailers to sell. The information is processed in the central offices in Coruña, and the commercial decisions are taken by the company's president. The prices for each item are fixed for each market but not towards costs analysis, in contrast, they adjust the prices in terms of the final price, and towards the profits they expect to earn. Before starting the production process, the company brings the raw material from other countries. The 90% of these materials are imported from Germany, Korea, China, Italy, India, Marrakech and Turkey. There are also delegations to purchase in the United Kingdom, China and Holland. As an addition, a big part of their purchases is from China, all of those on Asia are coordinated from

Peking. The local factories work all day long with 3 shifts, every 15 days there is a new cycle of production, in order to have a quick response to the trends and customer changes on preferences. A Just in time system was implemented, in partnership with Toyota, so their inventories are almost zero. There is a huge compromise with this process, and to move from one side to the other in the big factories, they use bicycles. The factories use high technology such as robots that do most of the work but do not finish it. Instead, they send it to more than 15.000 independent collaborators working for Zara, for the clothes to have higher ending quality. Those independent collaborators are grouped into 50 people companies, in which are well seen the familiar links, because according to Zara's managers this can increase productivity and lower costs. Under this strategy, Zara also recognized the need to sustain its position, meaning for them to reinvest in new technologies to manufacture their products and be aware every time of new possible improvements on the company's systems, processes and activities. In 1999, even if the company does not describe its strategy as a differentiation position, they mentioned that what they want to sell is not quality but the international prestige of the brand, and that as a difference from the traditional high priced boutiques, they want its customers to show what they have bought, not the brand they bought. Zara is a customer-oriented company; its shops distinguish themselves from the competitors for being very clean, and discreet in terms of the shops decoration and also in the design of its bags. It is all about strategy also. The other trend-bucking aspect of the company's business model is its approach to advertising. In comparison with other clothing retailers, who spent 3-4 per cent of sales on advertising, Zara spent just 0.3 per cent. The little it did spend went to reinforce its identity as a clothing retailer that was low-cost but high fashion. The company's founder, Amancio Ortega, believes advertising is a pointless distraction. The company believes that its shop windows, the contents of which are also decided in La Coruña, are all the advertising it needs. Displays were changed regularly, according to designs sent by headquarters, and were critical for Zara to remain visible and entice customers. Prime locations in regal buildings are chosen for splendid visibility. The store ambient is consistent and appealing from the interior design, artwork, window displays, lighting and music. The philosophy seems to have worked. As of late last year, Zara had 350 shops in Europe, 18 in the Middle East, 52 in the Americas and five in

Asia. With roughly 40% of Inditex shops, Zara brings in about 80% of the group's revenue. There are now about 1,100 Inditex stores in the world, and a new one opens every other day. The company's success is proof that it is still possible to build a massive brand by doing no more than meeting a market need. It has achieved this without any advertising or promotion and without outsourcing its manufacturing to countries where labour is cheap. Another of the key facts to success is the information management. The company disposes a team that works internationally to find new trends and customers preferences, by looking at fashion shows, parties, universities and competitors shops.

Brand Management At Zara

Ninety per cent of Zara stores were company-owned; the rest were franchises or joint ventures. Customers entering a Zara store on Regent Street in London, Rue Rivoli in Paris, Fifth Avenue in New York or Avenidas das Americas in Rio de Janeiro generally found themselves in the same environment: a predominantly white, modern and spacious store, well-lit and walled with mirror. The latest fashions hung from the store racks around them. A long line of people typically waited at the cash registers to pay for their purchases: a few select items. Zara's pricing differed across country markets. It set prices according to individual market conditions, rather than using cost plus margin as its basis (which has been the industry norm). In Spain, Zara products were low-cost, while in the US, Japan and Mexico, they were priced as luxury fashion items. The remuneration of store managers was partially based on the accuracy of their sales forecasts and sales growth. Each evening, a hand-held PDA displayed the newest designs sent by headquarters, which were available for order. Order deadlines were twice weekly, and were issued via the hand-helds. Store managers who failed to order by the deadline received replenishment items only. Deliveries arrived at stores twice per week from Zara headquarters, a few days after the order was made, and contained both replenishment items as well as new products. Failure rates of Zara's new products were reported to be just 1 per cent, considerably lower than the industry average of 10 per cent. Technology was a key part of enabling communications and information

flow. Zara's IT infrastructure was relatively simple, which meant that its IT expenditure was as much as five to 10 times lower than its rivals.

Communication

The company's success lies in it having total control of every part of the business. It designs, produces and distributes itself. Everything is co-ordinated from its headquarters on an industrial estate in Sabon-Arteixo, outside La Coruna in Spain. By controlling the entire process from factory to shop floor, Zara can react quickly to changing fashion trends and customers' tastes, providing a "newness" that has taken Europe by storm. It designs, picks and cuts the cloth before sending it to workshops and co-operatives in northern Portugal and the surrounding area of Galicia for sewing. The clothes are finished off at La Coruna before being shipped out twice a week to all its shops. This "fast fashion" system depends on a constant exchange of information throughout every part of Zara's supply chain: from customer to store managers, from store managers to market specialists and designers to production staff, from buyers to subcontractors, from warehouse managers to distributors, and so on. Most companies insert layers of bureaucracy that can bog down communication between departments. But Zara's organization, operational procedures, performance measure, and even its office layouts are all designed to make information transfer easy. "Investment banks used to say that this model did not work, but we have shown that it gives us more flexibility in production, sales and stock management," said Inditex chief executive Jose Maria Castellano. Shoppers addicted to the Zara brand know exactly when the deliveries will be arriving at their local shop and some even turn up before opening time on delivery days to be the first to pick up the latest lines. With its range of clothes constantly being updated, one or two unpopular items are unlikely to hurt its profits and customers are more likely to visit its shops regularly to see new stock. Zara shop managers report back every day to designers in La Coruña on what has and has not sold. The information is used to decide which product lines and colours are kept or altered and whether new lines are created. All this happens in the space of just a few days. The efficiency of the system means the company can keep costs down by

keeping stocks low. Its design team produces an incredible 12,000 different designs a year. Customers also have direct input into what the shops sell as their feedback is sent back to the designers too. Castellano has called this the "democratisation of fashion." Zara's single, centralized design and production center is attached to Inditex (Zara's parent company) headquarters in La Coruña. It consists of three spacious halls—one for women's clothing lines, one for men's, and one for children's. Unlike most companies, which try to excise redundant labor to cut costs, Zara makes a point of running three parallel, but operationally distinct, product families. Accordingly, separate design, sales, and procurement and production-planning staffs are dedicated to each clothing line. A store may receive three different calls from La Coruña in one week from a market specialist in each channel; a factory making shirts may deal simultaneously with two Zara managers, one for men's shirts and another for children's shirts. Though it's more expensive to operate three channels, the information flow for each channel is fast, direct, and unencumbered by problems in other channels—making the overall supply chain more responsive. In each hall, floor to ceiling windows overlooking the Spanish countryside reinforce a sense of cheery informality and openness. Unlike companies that sequester their design staffs, Zara's cadre of 200 designers sits right in the midst of the production process. Split among the three lines, these mostly twenty something designers—hired because of their enthusiasm and talent, no prima donnas allowed—work next to the market specialists and procurement and production planners. Large circular tables play host to impromptu meetings. Racks of the latest fashion magazines and catalogs fill the walls. A small prototype shop has been set up in the corner of each hall, which encourages everyone to comment on new garments as they evolve. The physical and organizational proximity of the three groups increases both the speed and the quality of the design process. Designers can quickly and informally check initial sketches with colleagues. Market specialists, who are in constant touch with store managers (and many of whom have been store managers themselves), provide quick feedback about the look of the new designs (style, color, fabric, and so on) and suggest possible market price points. Procurement and production planners make preliminary, but crucial, estimates of manufacturing costs and available capacity. The cross-functional teams can examine prototypes in the hall, choose a design, and commit resources for its

production and introduction in a few hours, if necessary. Zara is careful about the way it deploys the latest information technology tools to facilitate these informal exchanges. Customized handheld computers support the connection between the retail stores and La Coruña. These PDAs augment regular (often weekly) phone conversations between the store managers and the market specialists assigned to them. Through the PDAs and telephone conversations, stores transmit all kinds of information to La Coruña—such hard data as orders and sales trends and such soft data as customer reactions and the "buzz" around a new style. While any company can use PDAs to communicate, Zara's flat organization ensures that important conversations don't fall through the bureaucratic cracks. Once the team selects a prototype for production, the designers refine colors and textures on a computer-aided design system. If the item is to be made in one of Zara's factories, they transmit the specs directly to the relevant cutting machines and other systems in that factory. Bar codes track the cut pieces as they are converted into garments through the various steps involved in production (including sewing operations usually done by subcontractors), distribution, and delivery to the stores, where the communication cycle began. The constant flow of updated data mitigates the so-called bullwhip effect—the tendency of supply chains (and all open-loop information systems) to amplify small disturbances. A small change in retail orders, for example, can result in wide fluctuations in factory orders after it's transmitted through wholesalers and distributors. In an industry that traditionally allows retailers to change a maximum of 20 percent of their orders once the season has started, Zara lets them adjust 40 percent to 50 percent. In this way, Zara avoids costly overproduction and the subsequent sales and discounting prevalent in the industry. The relentless introduction of new products in small quantities, ironically, reduces the usual costs associated with running out of any particular item. Indeed, Zara makes a virtue of stock-outs. Empty racks don't drive customers to other stores because shoppers always have new things to choose from. Being out of stock in one item helps sell another, since people are often happy to snatch what they can. In fact, Zara has an informal policy of moving unsold items after two or three weeks. This can be an expensive practice for a typical store, but since Zara stores receive small shipments and carry little inventory, the risks are small; unsold items account for less than 10 percent of stock, compared with the

industry average of 17 percent to 20 percent. Furthermore, new merchandise displayed in limited quantities and the short window of opportunity for purchasing items motivate people to visit Zara's shops more frequently than they might other stores. Consumers in central London, for example, visit the average store four times annually, but Zara's customers visit its shops an average of 17 times a year.

4.2.7: OPPORTUNITIES

Short term

Renegotiate overseas shipping costs and terms. Building new plants and equipment is very expensive and takes a lot of time so it may not be feasible to open up new manufacturing plants or distribution centers in America in the short term. Zara will need to continue to ship product from its European distribution center. Leveraging the fact that Zara's shipments will grow as they continue to expand can help them renegotiate overseas shipping costs and terms to reduce overall costs.

Internet Retailing (America): with an existing website in place, Zara can easily add the e-commerce feature to its website. Although 80% of trends and styles are common across all countries, there is still some variation in preference and taste from country to country. Zara can reach consumers faster and easier in the countries they are trying to expand into. This method can also help gauge consumer preferences from country to country.

Long Term

Build a central regional distribution center in America and smaller/satellite distribution centers in other countries. Zara maintains its competitive advantage in Europe through its fundamental concept to maintain design, production, and distribution processes that enable quick response to customer demand. Global expansion means that Zara needs to carry its business model to America in order to maintain short production and lead times. Building a central distribution center in America will help Zara decrease

logistics and help maintain Zara's model of fast fashion and economies of scale. Zara can strategically locate its central distribution center in or near countries where manufacturing can be done with cheap labor cost (i.e. Mexico or Carribeans). Smaller distribution centers or satellite centers should be built in countries where expansion will proliferate in order to shorten lead times. The close proximity of the distribution center to the American market will allow Zara to effectively interpret the particular American fashion. The increased cost of product variety will increase cost due to possible changeover of production techniques to create different apparel lines but this cost is warranted since the monetary gain is much greater than the cost. Central distribution centers, however, will help cut some the cost of quick, high fashion since it can help streamline some of the processes and techniques used to create different apparel as they vary from country to country.

4.3: THE MATHEMATICAL MODEL

The Spanish distributor and retailer Zara specializes in inexpensive fashions for women and men between the ages of 16 and 35. In keeping with the spirit of that demographic, Zara moves quickly. Like many apparel retailers, it has two seasons-fall/winter and spring/summer - but selections change frequently within those periods. Items spend no more than two weeks on the shelf before making way for new merchandise, and stores are replenished twice a week. With annual growth of around 20 percent in both sales and number of stores, Zara was finding that strategy increasingly difficult to execute. Part of the Inditex group of fashion distributors, it currently has more than 1,100 stores in 68 countries. With so much volume flowing through the supply chain, the company could no longer rely on guesswork by store managers as to how much product it needed to replenish at each location. Previously, managers from around the world would submit weekly requests for additional product to Zara's three central warehouses in Spain. The orders would reflect each individual's decidedly unscientific view of what would sell in the store. Moreover, there was no limit on quantities. Aggregate orders might easily exceed the available supply of a given item, leaving warehouse managers with the task of

allocating limited product. The system was both labour intensive and imprecise. In the summer of 2005, Zara heard about research being done on mathematical models for retailing, by professors Jeremie Gallien of the MIT Sloan School of Management and Felipe Caro of the UCLA Anderson School of Management. They were invited to Zara's headquarters in La Coruna, Spain. The visit marked the beginning of "an active collaboration" between Zara and the researchers. The focus was on making better stock-allocation decisions for Zara's growing network of stores. A prototype of the resulting model was implemented between March and July of the following year, as part of a six-month internship at Zara by MIT graduate student Juan Correa. Between August and December, researchers ran a live pilot involving distribution of a dozen products to Zara's stores worldwide. An identical selection of products was dispatched to stores under the old process, for purposes of comparison. The mathematical model drew on historical sales data plus available stock in the warehouses to come up with a final number for each store. Gallien says the task was exceedingly complex. Each store carries several thousand items in up to eight sizes, with exact quantities to be determined for twice-weekly shipments. Through use of the model, computers could take over the basic number-crunching, with humans left to make adjustments based on exceptions such as bad weather or unexpected disruptions in the sales channel. What makes the model unique is that it was developed to address the world of "fast fashion." Zara makes it a point to respond quickly to consumer taste. Suppliers are given about two weeks to move from design to production of a new item. As a result the reaction to any specific trend can reach stores only three weeks after it has been identified.

Feeling of exclusivity

The emphasis on fast turnaround motivates consumers to purchase items on the spot. Unlike in many clothing stores, where seasonal lines remain on the shelves for weeks or months, a particular style in a Zara store can disappear within a week. At Zara the policy is WIGIG (when it's gone it's gone). Nothing is more frustrating to a shopper than finding the right style in the wrong size. So the MIT model is careful to dictate the

right selection of sizes for a given store. When a store is out of certain popular sizes, the entire supply of that item is removed to the back room. Many models replenish each size independently: if you're missing a small, it sends you two more units of small. But rather than look at a small size in isolation, (the MIT model) looks at the whole range. It only triggers replenishment if the shipment will result in an item making it back to the sales floor. Meanwhile, incomplete inventory is shifted between stores to create a full set of sizes at the locations where it is most likely to sell. Or it can be returned to the warehouse for discounting at the end of the selling season. The model captures store execution policies as well as the behavioral perception of customers when they are confronted by stockouts. By insisting on having the right sizes for a particular store, Zara makes best use of its available inventory while improving the customer's shopping experience. The idea is to substitute a vision that can capture the impact on an entire network.

Proximity production/model

Zara speeds up its supply chain by strategically selecting and locating suppliers. A "proximity model" judges not only their geographic placement, but their ability to respond quickly to production orders. About half of the retailer's production meets the proximity threshold, mostly coming from suppliers in Spain, Portugal and Morocco. From a geographic standpoint, nearly 65 percent of production is sourced in Europe. Zara also buys from suppliers in Asia, but because of the need for speed, their number is "considerably less" than the industry's average. These were basic collection items or wardrobe "staples," with minimum fashion content such as T-shirts, lingerie and woolens, and where there was a clear cost advantage. Externally manufactured items were shipped to Zara's distribution centre. Zara was a fashion imitator. It focused its attention on understanding the fashion items that its customers wanted and then delivering them, rather than on promoting predicted season's trends via fashion shows and similar channels of influence, which the fashion industry traditionally used. A team of 200 young, talented yet unknown designers created designs, based on the latest fashions from the catwalk and other fashion hotspots, which were easily

adaptable to the mass market. In this way, Zara became adept at picking up up-to-the-minute trends and churning them out to stores around the world in a matter of weeks. For example, after Madonna's first concert date in Spain during a recent tour, her outfit was quickly copied by Zara. By the time she performed her last concert in Spain, some members of the audience were wearing the same outfit. Working alongside the market specialists and production planners, the designers for each of Zara's collections kept in touch with market developments to create around 40,000 new designs every year, of which around one-quarter were manufactured. The process begins with a demand forecast, which is carried out just once for the entire lifecycle of a given product, at the time of the production order. For replenishment purposes, demand is forecasted on a daily basis. It's on the replenishment side that the MIT model comes into play. The model looks at inventory in the warehouse, what's remaining in all sizes at all stores, and the recent history of sales data. The initial conclusions seemed intuitively right to the humans who had previously made those decisions. What was different was the model's ability to process a massive amount of relevant data in a matter of seconds. By contrast, the previous method was limited by the cognitive limitations of human decision-makers, who could each only examine a small fraction of the relevant data at a time, and had to do so under intense time pressure. With several million individual shipments to calculate each week, differences by only a few units here and there quickly added up. Gallien says MIT and Zara didn't fully appreciate the system's impact on sales, especially its ability to shift items between stores, until the pilot was in effect. When the results of that model were compared with the old way of replenishing stores, Zara had achieved an increase in sales of 3 to 4 percent. In fact, the retailer last September beat analyst forecasts with an overall 7-percent increase in same-store sales for the first half of 2007. Other factors in Zara's success included the favorable impact of currency-exchange rates. The labour-intensive sewing of the garments was outsourced to local subcontractors, which used seamstresses in cooperatives. Zara was usually their sole client, and they worked without any written contracts. Subcontractors received a flat fee per type of garment, and operated on short lead times and fast turnaround. They picked up the prepared fabric pieces from Zara, and returned them to the 500,000 sq. metre distribution centers. At the Zara distribution centre, optical reading devices were used to sort and distribute over

60,000 items per hour. The garments were then picked up and collected by trucks, which transported them to different destinations all over Europe (which made up about 75 per cent of deliveries). Products for more distant destinations were transported by air (about 25 per cent). Shipments tended to have almost zero flaws, with 98.9 per cent accuracy and under 0.5 per cent shrinkage. Since Zara's garments were produced in-house, it was able to make a new line from start to finish in anywhere between two and five weeks, depending on the type of garment. As a result, Zara could be responsive to fashion items that were selling well during the season, and to discontinue those that were not. By constantly refreshing the collection, and manufacturing items in high-intensity short runs, Zara was able to prevent the accumulation of non-saleable inventories. It was estimated that Zara committed just 15-25 per cent of production before the season began, 50-60 per cent at the start of the season, and the remainder was manufactured in-season. Percentage of Zara sales consisting of markdowns was 15-20 per cent. In some cases, stores ran out of stock. However, this was not viewed as a negative since it contributed to customers' perception of the uniqueness of their purchase. Thanks to the frequent refreshing of stock, customers constantly returned to stores to browse new items. Zara's global average of 17 visits per customer per year was considerably higher than the three visits to its competitors.

Additional benefits

The model has yielded additional benefits. Product now spends more time on the sales floor, and less in a back room or warehouse. With a reduction in misallocated inventory, there are fewer returns to the warehouse and transfers between stores. And, as Zara's distribution network continues to grow, the retailer won't need to expand its warehouse team as fast as the old process required. Results seen first in the pilot remained steady when the model was rolled out to all items and stores, in a combined effort by Zara's Logistics Group and IT department. The task was completed by June 2007. At some point in the future, Zara wants to expand its use of the model to help determine the initial allocation of product to the stores. The only catch is that

the company won't have historical demand data on which to rely, for product hitting the sales floor for the first time. However, Zara could obtain some information by testing new products in a handful of stores that are representative of larger sales patterns. In the process it could generate some knowledge about how the item is going to sell, then leverage that information when doing the massive initial shipment. The right sampling of stores can afford a bigger picture of demand. Such intelligence can at least put a retailer on the right track, at which point it can follow up with a rapid replenishment model such as the one developed for Zara by MIT and UCLA. "The question is never whether the forecast is right or wrong: the only good question about forecasts is how wrong they are. It's important that the model generates information that makes sense, that doesn't conflict with human instinct. Zara is continuing to collaborate with Gallien and Caro in the area of clearance-sale pricing optimization. At the same time, the original model will likely be expanded to other units of the Inditex group, whose other brands include Massimo Dutti, Bershka, Stradivarius and the casual youth line Pull and Bear.

4.4: FINANCIAL DATA

As we can see in the following table, in the last 5 years Inditex's net sales are growth from 6741 (2005), 8196 (2006) to 11048 (2009). Below the growth of net sales, as well there is the growth of net income from 811 (2005), 1010 (2006), to 1322 (2009).

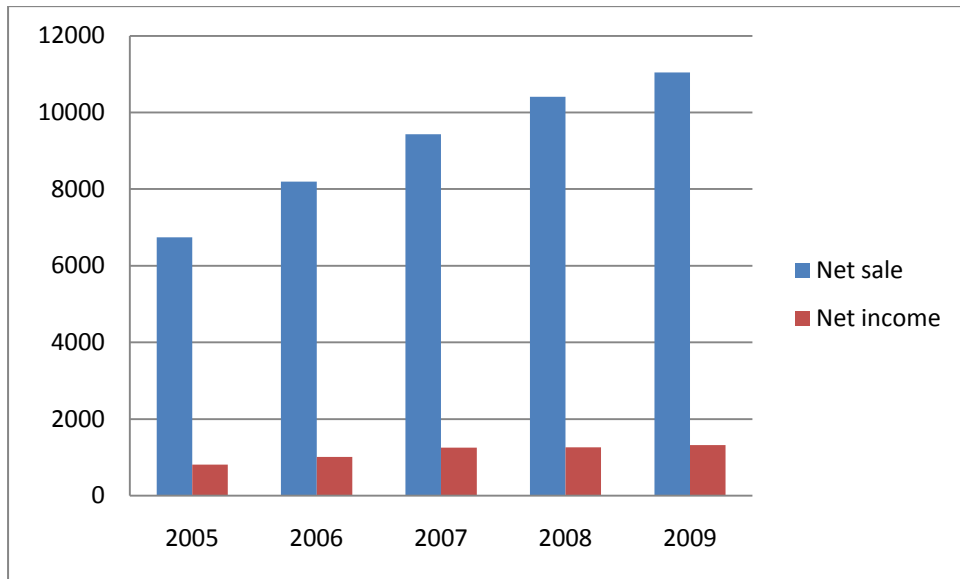


Figure 4.7: Inditex's net sale – net income

In the following graph, instead it is point out the trend of the ROE (Return on Equity), that show a decline during the last years : from 30% (2005), 32% (2006), 33% (2007), to 28%(2008), 26(2009).

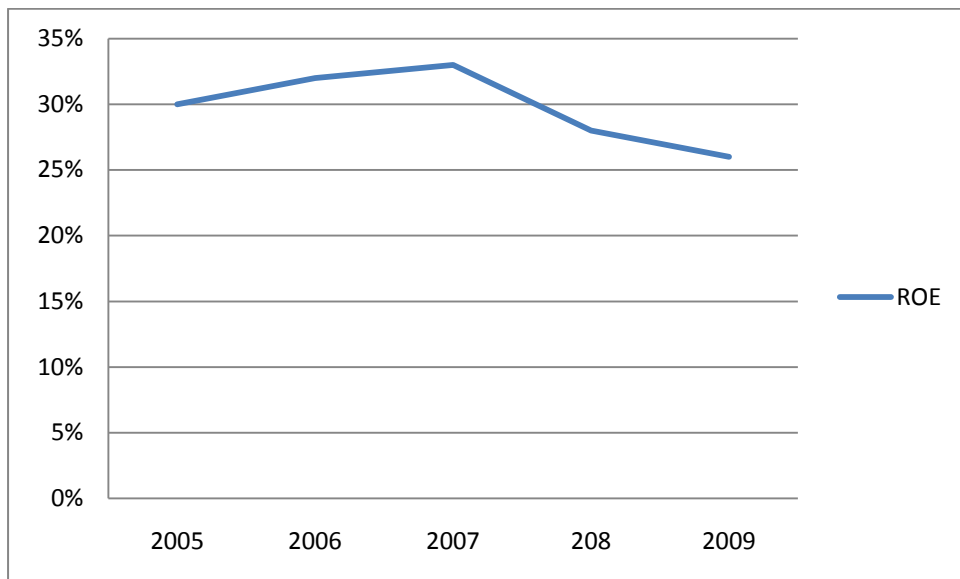


Figure 4.8 : Inditex's ROE

4.5: COMPETITORS

While Inditex competed with local retailers in most of its markets, analysts considered its three closest comparable competitors to be The Gap, H&M, and Benetton. All three had narrower vertical scope than Zara, which owned much of its production and most of its stores. The Gap and H&M, which were the two largest specialist apparel retailers in the world, ahead of Inditex, owned most of their stores but outsourced all production. Benetton, in contrast, had invested relatively heavily in production, but licensees ran its stores. The three competitors were also positioned differently in product space from Inditex's chains as seen in figure.

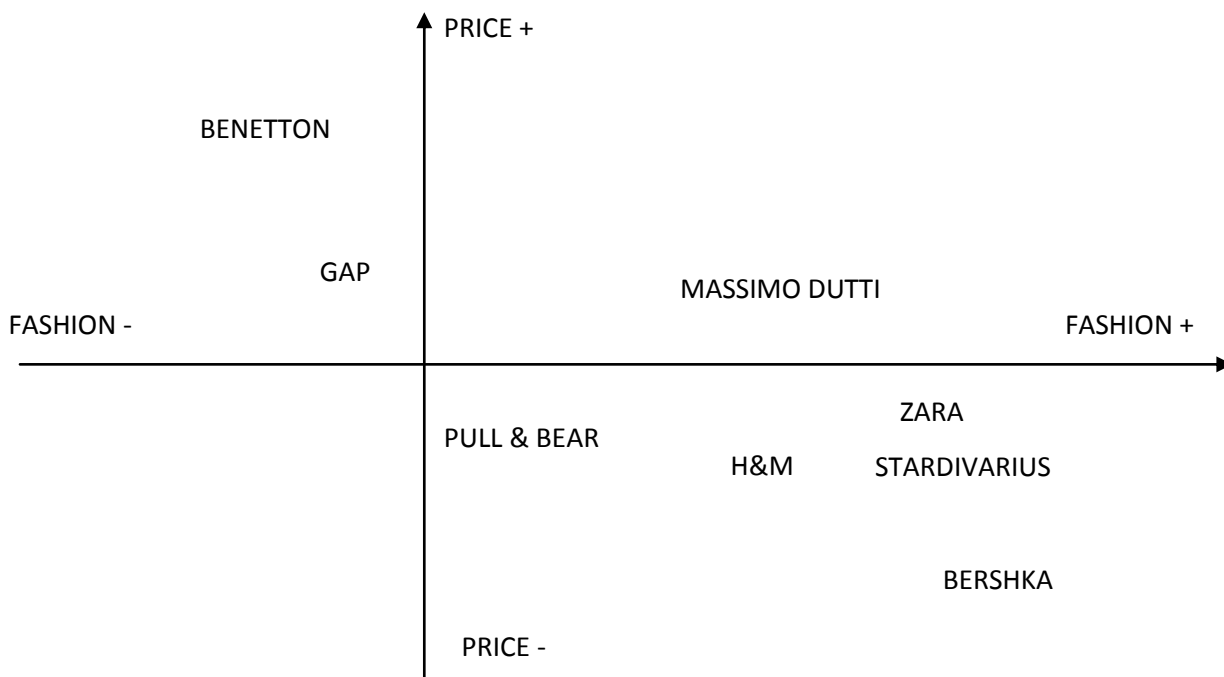


Figure 4.9: Zara's competitors

The Gap

The Gap, based in San Francisco, had been founded in 1969 and had achieved stellar growth and profitability through the 1980s and much of the 1990s with what was described as an “unpretentious real clothes stance”, comprising extensive collections of T-shirts and jeans as well as “smart casual” work clothes. The Gap’s production was internationalized- more than 90% of it was outsourced from outside the United States- but its store operations were U.S.- centric. International expansion of the store network had begun in 1987, but its pace had been limited by difficulties finding locations in markets such as the United Kingdom, Germany, and Japan (which accounted for 86% of store locations outside North America) adapting to different customer sizes and preferences, and dealing with what were, in many cases, more severe pricing pressures than in the United States. And by the end of the 1990s, supply chains that were still too long, market saturation, imbalances, and inconsistencies across the company’s three store chains- Banana Republic, The Gap, and Old Navy_ and the lack of a clear fashion positioning had started to take a toll even in the U.S. market. A failed attempt to reposition to a more fashion-driven assortment – a major fashion miss- triggered significant writedowns a loss for calendar year 2001 a massive decline in the Gap’s stock price, and the departure, in May 2002, of its long-time CEO, Millard Drexler.

Hennes and Mauritz

Hennes and Mauritz (H&M), founded as Hennes (hers) in Sweden in 1947, was another high-performing apparel retailer. While it was considered Inditex’s closest competitor, there were a number of key differences. H&M outsourced all its production, half of it to European suppliers, implying lead times that were good by industry standards but significantly longer than Zara’s. H&M had been quicker to internationalize, generating more than half its sales outside its home country by 1990, 10 years earlier than Inditex. It also had adopted a more focused approach, entering one country at a time –with an emphasis on northern Europe – and building a distribution center in each one. Unlike Inditex, H&M operated a single format, although it marketed its clothes under

numerous labels or concepts to different customer segments. H&M also tended to have slightly lower prices than Zara (which it displayed prominently in store windows and on shelving), engaged in extensive advertising like most other apparel retailers, employed fewer designers (40% as many as Zara, although Zara was still 40% smaller), and refurbished its stores less frequently. H&M's price-earnings ratio, while still high, had declined to levels comparable to Inditex's because of a fashion miss that had reduced net income by 17% in 200 and a recent announcement that an aggressive effort to expand in the United States was being slowed down.

CHAPTER 5: BENETTON

5.1 BENETTON'S HISTORY

The firm Benetton was founded in 1965 in Ponzano Veneto, a small town near Treviso, by four brothers' initiative. In the beginning, Benetton was only a small company that was producing sweaters for local independent retailers. The keys to the success consisted in some innovations related to the product and its distribution and to an efficient production organization based on the work of a large network of small local subcontractors specialized in knitting, cutting and sewing garments. In the 1970s it expanded in the Italian market of sweaters and soon of casual apparel in general. In fact, shortly after the production of knitwear, followed the production of shirts and jeans. In the beginning Benetton sold them under different brands (Tomato, Jeans West, etc.) because the quality of these new products was not yet comparable to the one obtained for the sweaters and there was a fear that it might damage the reputation that the firm had achieved as a knitwear producer. The first Benetton's shop opened in Belluno in 1966 and in just few years Benetton's stores covered all Italian's provinces. In the beginning of the 70s, there were about 500 stores under different Benetton's brands (as well as Benetton, also Tomato, My Market and Merceria). It is estimated that in the second part of the seventies around 60-70% of the overall Benetton production was made by a hundred of subcontractors located mainly in Treviso and in the surrounding provinces of Veneto. The activities such as design, quality control and the manufacturing stages which required greater investments (such as knitting, cutting and dyeing), were instead undertaken in the two factories of Villorba and Monzambano which employed about 1000 workers. From the very beginning, a tight control was imposed on subcontractors, to whom raw materials and precise technical details to make the garment were sent. The price paid by Benetton to its subcontractors was generally lower than the one paid by other firms, and it was updated yearly according to the rate of inflation. Lower prices, however, were compensated by the certainty and punctuality of payments, by long production runs (which could surpass 10 thousand items per model which was large for the market of the time) and by the guarantee of continuous orders that permitted the

subcontractors to work at full production capacity. In the 1960s and the 1970s, Benetton's promotional strategy was focused on shops, advertising huge expenditures being out of reach at the time. The first 'My Market' shop format was designed by Tobia Scarpa, son of the famous architect Carlo Scarpa. He suggested eliminating the counter, arranging all the sweaters on shelters, and opening the window towards the interior of the shop. This way, the same room could be used for stocking, selling and displaying merchandise. In the 1970s, the company started producing also jeans and velvet trousers, shirts and T-shirts, in order to allow customers to find a coordinate set of apparel inside its shops. With its combinable collections, Benetton helped developing Italian casual style. Product differentiation brought about target differentiation, and a multiplication of shop formats as '012' for kids, 'Merceria' for young customers' mothers (Benetton-Lee 1990, 12), 'Jean's West' for jeans, or 'Tomato' for penniless young people, and others. Benetton's name never appeared on the sign of the shop, but only on single items (with the wool-knot logo that became famous in the 1980s). Low visibility allowed not to alarm competition, and marked off the company from shopkeepers commercial policies. In the 1970s Benetton actually aimed to conceal its expansion, in order to escape social and political tensions, prevent unions from meddling with its informal production and distribution network, and keep on moving as a little family business despite its growth. In the beginning almost all Benetton production was sold on the domestic market and exports became significant toward the end of the 70s with stores opened in France, Germany, United Kingdom, Holland and Belgium. Between 1973 and 1979, the Benetton's sales increased from 31 to 287 million Euros. In the seventies, thanks to Benetton and to other firms that followed the trail of its success, Italy became the major producer of knitwear in Europe. Another important producer of Treviso, Stefanel, in those years experienced a market success following the same Benetton's business model (coloured sweaters sold in franchising) and becoming very soon one of its main competitors. At the end of the 1970s Benetton met its first difficulties in sales. This crisis made the entrepreneurs aware the company had reached a threshold in scale, and that reorganization was needed in order to avoid a downsizing. Awareness came along tentatively, buying and then selling shops and plants, and trying to expand in Europe in order to make up for the saturation of Italian market. This learning phase was useful to define company

identity according to its specific resources and the elements which had brought it to success. Indeed, it was only in the attempt to expand sales abroad that franchising was used on purpose to enter new markets, and became the driving element of a new strategy for growth. What strikes more is the radical change in the image policy. In the 1980s sales extended all over Europe, to USA and Japan. Internationalization stirred up a logistic and managerial reorganization, while the company went floating in order to support investments. From the low-profile attitude of the 1970s, Benetton moved in the 1980s towards an explicit brand promotion and an increasing transparency, in view of listing on the stock exchange. Sales promotion abroad needed to use the Italian-style appeal of Benetton name; in Italy too, Benetton unified different existing shops under the Benetton, 012 and Jean's West signs: too much differentiation threatened to frustrate brand-advertising efforts. Visibility was also a result of the choice to take family-business clothes off, and to turn Benetton into an international company with solid relationship with politics and finance. Thanks to its camouflage ability, in the 1970s the company had been able to enjoy State facilities without undergoing the limitations big businesses suffered. In the different political context of the 1980s, it became a respectable interlocutor for national institutions, politicians and bankers. In the second half of the 1980s, the success of commercial expansion in Europe urged an adjustment of international strategy. Western Europe had become Benetton's real domestic market, and the 1987 annual report praised European unification but also stated that product 'globality' was a strategic asset, a value 'for company management, and an inspiring idea for all protagonists and collaborators of Benetton Group'. To expand sales in Asia or in the Americas (and in other products), Benetton adopted a new step-by-step entry strategy, firstly licensing local producers to use its trade mark, then entering in joint venture with them, and establishing a local branch of the company only when the market had shown its development capacity. In this project, brand promotion was a basic point: advertising expenditures increased then more, in order to promote a coloured, multi-ethnic and *global* image of the company. The firm was quoted in Milano's stock's exchange in 1985 and later in the New York stock's exchange (from whose quotation it was withdrawn in 2007).

Advertising

Since 1983 advertising design had been entrusted to the Parisian agency Eldorado, employing the photographers Bruno Sutter and Oliviero Toscani. In the 1984 campaign 'All the Colours of the World' Toscani put together white and black young models wearing coloured clothes. He introduced then the 'United Colors of Benetton' slogan, explicitly identifying the company's globalization strategy with the ideal of a peaceful, multi-ethnic world, which after the international political changes of the second half of the 1980s seemed at hand. In 1989 this slogan became the logo of the company, and Toscani was hired by Benetton, breaking the contract with Eldorado. In the following campaigns, any reference to the product disappeared, and advertising focused on topical social issues. Toscani's 'shock' campaigns disconcerted for the subject of images, such as the nun and priest kiss, or for the timing of their publication, as for the war cemetery photo circulated on occasion of the Gulf-War outbreak. Toscani and Benetton claimed for the photographer and for the company the right to deal with the reality issues usually expunged from the fictitious world of advertising. Indeed, polemics on the press came to emphasize the visibility of the company and its presumed social commitment.

Acquisitions

In the 1990s, unsuccessful attempts to enlarge product range were followed by family-led acquisitions in other sectors. The inflation of Benetton's image in the first 1990s was also enhanced by the success of the Formula 1 stable the company acquired in 1984, which in 1994 and 1995 won the World Championship. The company also owned basket, rugby, volley and water-polo teams. In 1992 Luciano Benetton stood as candidate for and was elected to Parliament, with a move allowing him insider knowledge of economic policy decisions in those troubled years for Italy, and putting again his company in the limelight.

Shops

Indeed, troubles were not only for policy makers: in the 1990s Benetton's market position was challenged by international retailers such as The Gap, Zara, H&M and

Mango. Company reacted by adjusting the dimensions of shops to the need of a total-look offer including licensed apparel and accessories, from spectacles to cosmetics. The shops, generally of small size constituted an innovation in the Italian market because they offered, at good price, good quality and highly fashionable sweaters which were displayed in a way so that customers were able to pick them up from the shelves, touch and try them. The growth of Benetton depended more and more on the capacity to increase the number of stores under its own brands involving in the business some of its agents who became owners of many stores. Average shop area increased from 50 to 200 square meters, and new *megastores* were opened in big cities all over the world. The megastore project forced the company to buy valuable real estate in order to fill strategic commercial positions; still, in perspective also megastores were to be franchised to independent shop owners. Even facing retailers' competition, Benetton went on acting as an exclusive wholesaler for its franchisees. This strategy allowed more flexibility and shifted on shopkeepers most of market risks. The growing conflict between sales expansion and profits was then solved this way in favour of profitability. Still, the relationship between the company and its franchisee shopkeepers allowed them some room for autonomy and resistance, as in every network organization. In 1984, Benetton was planning to build up a communication system collecting both orders and payments from franchisees' sales records. This project failed because of the (mostly passive) resistance shopkeepers and agents offered to what they saw as a threat to their autonomy. Even if they succeeded in defending their managing independence, shopkeepers were never allowed to meddle in company's brand policy. When sales slumped in European markets in the first 1990s, shopkeepers (who could not return unsold goods) blamed Toscani's 'shock' campaigns for alienating customers, going so far as to sue the company for that, but lost the case. It is interesting to confront this episode with the completely different outcome of the 2001 conflict on the 'death row' campaign. On this occasion, the department store chain Sears, Roebuck & Co. rescinded the distribution agreement with Benetton it had entered into in 1998. Toscani resigned in 2002. The case pointed out some implications of commercial relationship the company seem not to have perceived. In its relationship with big retailers, Benetton did not enjoy the same position of strength which allowed it to impose its promotional choices to franchisee shopkeepers. Brand

policy could not leave out of consideration the eventual reaction of different commercial partners. Not only money, but also power concerns persuaded Benetton not to change its approach to distribution, even if its 'flexible formula' in last years turned out to be very rigid, when compared with international competitors' quick-response ability based on the control of their chain shops.

Production organization

At the beginning of 2000, Benetton speeded up the process of changing the production organization, in consequence of the strong competition mainly coming from Zara, H&M and Mango, which are the main foreign brands to have their own stores in Italy.

The process of restructuring was extremely fast: in 2003, 48% of the volume of production was still manufactured abroad and 62% in Italy. Production abroad increased in just one year, between 2004 and 2005, by 13 million items and the employment in Benetton's Italian subcontracting firms shrank, from 2003 to 2005, by 3100 workers. This great shift was due to the decision taken in 2004 to move production to China. The recourse to Asian suppliers with a large autonomy in managing a broader range of manufacturing functions, including the sourcing of inputs and sometimes logistics, is described as "full package production". Benetton provides the design, often a simple sketch, and buys the final product that is delivered to its warehouse and then distributed to the stores. In 2007, Benetton's full package production represented, in terms of volume, 37.6% of the total¹¹ and the increasing importance of this form of sourcing has made Benetton much more similar to the large clothing international retailers (e.g. H&M, The Gap, Marks&Spencer) than to a clothing manufacturer. In 2005 Benetton's organization shifted from a system based on productive units referring to the different product categories (such as wool, cotton, etc.), to a structure based on the different activities (such as design, quality control, marketing etc); a move that underlines the change in the governance of the value chain. Also the structure and the number of collections changed radically. Until 2003, the production was based on two seasonal collections (Spring/Summer and Autumn/Winter) that were designed much in advance of the selling season and 80% of the production was decided on the basis of orders collected before the season by Benetton's agents. The remaining 20% came from reorders. The products designed

during the selling seasons “flashes” were a very small part of the production and were made just to “refresh” the shop windows. This organization did not permit taking advantage of the market opportunities, and was not encouraging consumers to pay more visits to the shops in search of the last fashion trends. Following the success of Zara, able to offer constantly updated products in its stores, Benetton changed its collections timetable.

The traditional seasonal collection was split taking the names of Contemporary1 and Contemporary2. Each one of these collections has a time-to-market that varies between 4 and 8 months and is articulated in 4 launches: Spring, Summer, Autumn and Winter.

	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Spring/Summer													
Continuative Items													
Contemporary1 Spring													
Contemporary1 Summer													
Contemporary2 Spring													
Contemporary2 Summer													
Trend													
Just in time													
Autumn/Winter													
Continuative Items													
Contemporary1 Autumn													
Contemporary1 Winter													
Contemporary2 Autumn													
Contemporary2 Winter													
Trend													
Just in time													

Figure 5.1: Benetton’s collection

Additionally, during the selling season, Benetton introduced three collections: “Trend” a collection more sensitive to the fashion tendencies with time-to-market between 1 and 4 months and the collections “Just in time” and “Continuative items” that use standardised raw materials (“Continuative items” is manufactured on stock) and are brought to the market in a very short time (7 days if the products are made in Italy and 15 days if imported from abroad). While “Just in time” aims to satisfy fashion sensitive consumers, “Continuative items” guarantees that a collection’s core products are restored in a very short while. The passage from a production planned well in advance to a flexible one, with a reduction of the time-to-market and an increase in the number

of collections, required a new selling organization. The independent retailers, in fact, have to bear the risk of the end of season markdown and they put the orders only after having seen the products. There is in fact the need for the agents to visit the retailers more than one time a season to show the collections and this implies high transactional costs and difficulties in planning production. A direct control of the shops, instead, guarantees a better coordination of the entire value chain reducing the time needed for the independent retailers to decide their purchases. For this reason, Benetton, in the last few years, has increased the number of its own stores that now sell about a quarter of the value of total sales. Furthermore, in the last two years Benetton invested a great deal of resources in retailing activities, opening new stores in new markets, giving economic incentives to the franchisees and linking the production, logistic and retailing units through a new information system, in order to receive information about the sell-out and the retailers can have immediate confirmation and guaranteed delivery times for their orders.

This shift of focus from production to retail activities confirms the transformation of Benetton from a manufacturing to a buying company.

1960s	The idea of color
1965	The Benetton group is established
1970s	A business model making the difference: unique, flexible and innovative.
1980s	Benetton communication campaigns: known all over the world.
1990s	A global company present in 120 countries
200s	Benetton grows with the market: over 150 million garments produced every year and distributed in around 6,000 contemporary stores.

Figure 5.2: Benetton's timeline

5.2: BUSINESS MODEL

Benetton strategic intent is “to put fashion on an industrial level”. Its success is based on a creation, design and distribution system which enables it to be one of the largest international transactional structures. The entire supply chain is concerned with externalization. This system is based on the “short circuit” principles, and was optimized in the early 1980s. This manufacturing organization enables Benetton to maintain essential reactivity in a business dealing with fashion, while reaching the same efficiency as a large industry.

5.2.1: STRENGTHS

Right from the beginning, Benetton offered a new product characterized by bright colours and targeted to young people. The fully fashion knitwear was made on cotton looms and it was strictly in plain colour. In this way it is possible to knit plain wool into sweaters and postpone dyeing the entire stock just before going to the market, according to the latest fashion trends. Retailers could order plain sweaters in advance and specify the colour during the selling season. Together with the advantage of a rapid Carpi district, which had the Italian knitwear's leadership at that time, was instead specialized in a production of cut and sew knitwear with a very wide offer of models. So Benetton, differently from Carpi, offered a limited number of models, using the colours as strategy to differentiate its products. As a response to the fashion market, the dyeing postponement process allowed a drastic reduction of costs due to less expensive inventories and to a smaller unsold stock. This process was made possible thanks to an advanced dyeing process set up by Benetton, able to offer an wide number of colours and the guarantee that garments did not lose their colours when washed. Benetton internalized the dyeing process to take advantage fully of its dyeing know how

5.2.2: WEAKNESSES

In carrying out its business activities, Benetton is subject to the following risks:

The Benetton business is subject to competitive pressure. The Group operates in an industry, the apparel sector, which is highly competitive as far as production, sales and distribution are concerned. The number of competitors has grown considerably in the last few years, and companies manufacturing out of countries with a low cost base now play an important role. To contain this risk, the Group maintains a strategic focus on production and organizational efficiency policies related to the process of production decentralization, completion of production cycles in overseas units, and organizational cost reduction. Increased competition could lead to price pressure, which would have a significantly negative impact on the Group's financial standing and performance. As far as distribution is concerned, competition could increase given that there are few barriers to entry. Benetton competes against local, national and global department stores, specialized retailers, independent retailers and manufacturing

companies, as well as against mail order companies which use catalogues to target customers. Benetton focuses mainly on quality, breadth of product range and merchandising, customer service, store ambience, and sales and marketing programs. The Group also competes to secure prime retail sites and the best lease and purchase conditions. The success of Benetton's strategies is influenced by the sales network's buy-in. The substantial incentive scheme in place for the network of commercial partners, in line with the business model, seeks to enable partners to increase their investment capacity in order to open new stores, renew existing ones, and increase competitiveness in terms of price to the final consumer. The success of this strategy depends on the ability to motivate and manage the network by setting specific objectives and monitoring progress on a regular basis. It is to be noted that the Group's business model is linked to a risk of late payment from customers and, generally speaking, payment collection risk. Benetton's future performance depends on its ability to develop the business in emerging markets. The Group is strengthening its new commercial strategies. Special emphasis is being placed on certain emerging markets, such as China and India, including through agreements with large-scale retailers for the opening of "stores in stores" in large department stores in the largest cities. The Group's initiatives include the creation of new partnerships to manage and develop commercial activities. Benetton's business is sensitive to changes in customer spending habits and can be influenced, amongst other things, by business outlook, interest rates, taxation, local economic conditions, uncertainty over future economic prospects and a shift of spending habits towards other goods or services. Consumer preferences and economic conditions may change from time to time in each and every market in which the Group operates. Benetton's success depends on its ability to anticipate and respond to changing trends. Sales and profitability levels also depend on the ability to anticipate and react immediately to changes in fashion trends and consumer tastes. If Benetton's collections were not to meet with the customers' approval, the result would be lower than expected sales, a higher level of discounts, and reduced margins. The Group's growth and expansion strategy has led to an increase in fixed and operating costs. To strengthen Benetton's image and market share, investments have been made in recent years to sell products through directly-owned retail stores, even if the Group has traditionally distributed its products through

a capillary network of franchise stores. To date, the Benetton Group manages 280 wholly-owned shops, which are strategic as far as the demographic and commercial profile of their locations is concerned. These retail stores have, however, led to an increase in fixed and operating costs. These investments expose the Group to the additional risk that some of the chosen locations may turn out to be inadequate because of changes in the area's demographic profile or the location of shopping districts. Benetton is exposed to risks linked with its strategies. The Group strives to develop the existing commercial network and to strengthen its brand. However, this growth could be compromised were Benetton not able to:

1. identify adequate markets and adequate locations for new stores;
2. maintain the service levels expected by customers;
3. avoid sales and profit margin erosion for stores selling Benetton-branded goods when directly managed megastores are opened in the same areas or shopping districts;
4. manage inventories on the basis of effective needs;
5. deliver goods on time.

The Group's systems, procedures, controls, and resources need to be aligned to support its expansion plans. Should this not be the case, the success of the strategies proposed would not be ensured. The protection of Benetton's intellectual property rights is subject to risks. To safeguard the rights on those core product values which are crucial to the Group's success and market competitiveness - i.e. design, proprietary technologies and manufacturing processes, product and concept research, acknowledged trademarks. Benetton relies on the laws on business secrecy, unfair competition, trade dress, trademarks, patents, and copyrights. Nonetheless, trademark registration requests may not result in effective registrations, and in the same way even registrations granted may be ineffective to fend off competitors and could be subsequently invalidated. Above all, the actions undertaken to protect intellectual property rights may turn out to be ineffective against counterfeiting. The Group's know-how may become known to competitors, and Benetton may not be able to fully protect its intellectual property rights. Other companies may also develop

products independently which are substantially similar or better to Benetton's, without infringing the Group's intellectual property rights. In addition, it is to be noted that legislation in some countries does not protect proprietary rights. The already substantial amount of resources allocated to the protection of proprietary rights could be significantly increased should the level of infringement by third parties also increase. Furthermore, judgments against us in disputes relating to the Group's proprietary rights may:

1. impose the granting of licenses to third parties or the requesting for licenses from third parties;
2. prevent the production or sale of the Group's products;
3. lead to substantial losses.

United Colors of Benetton, Undercolors, Sisley, Playlife, Killer Loop, and other commercial and service trademarks have been registered or are subject to registration requests with the trademarks and patent offices of many foreign countries and are protected by ordinary legislation. The real estate market for commercial sites is very competitive. The ability of Benetton and its partners to find locations for new stores depends on the availability of adequate buildings and the ability to negotiate terms that are in line with established financial targets. Moreover, the Group must ensure that existing rental contracts can be renegotiated effectively. The Group is implementing a number of changes to its information technology systems which, by their very nature, entail the risk of temporary downtime. In synergy with its strategic development plans, Benetton has begun changing and replacing its IT systems. The changes primarily involve the upgrading of current business systems, the development of system modifications, or the purchase of systems with new features. Benetton is aware of the risks linked to substitution, including the accurate transfer of data and possible system downtime, but we feel we have taken all the necessary steps to contain these risks by means of testing, training and project planning, as well as by entering into related commercial agreements with suppliers of the replacement technologies. The launch of the new versions will be implemented in phases over a three-year timeframe. Benetton's sales and operating income may be influenced by foreign exchange rate and interest rate fluctuations. The Group's sales and operating income will continue to be influenced by foreign exchange rate fluctuations in the sale

currencies, which in turn impact on the prices of products sold, the cost of sales, and operating income. Foreign currency exchange rate variations against the euro may have a negative effect on sales, operating results, and the international competitiveness of the production facilities of the various business units. Even an appreciation of the euro could have an adverse effect on the Group's sales and operating income. Given that Benetton makes use of hedging in order to manage currency exposure, the strategies adopted may not be sufficient to protect income from the negative effects of future fluctuations. Benetton also holds assets and liabilities which are sensitive to interest rate variations and are necessary in managing liquidity and financial needs. These assets and liabilities are exposed to interest rate risk, which is, at times, managed through the use of derivative financial instruments. Benetton is exposed to risks associated with the internationalization of its business activities, including risks relating to late payments in some countries or, in general, to credit collection difficulties. The business is also exposed to political and economic instability in some of the countries in which we operate, as well as to changes in legislation, to linguistic and cultural barriers, tariffs or trade barriers, and price or exchange rate controls.

5.2.3: PARTNERSHIPS

Most of the shops were not company-owned, but informally franchised to shopkeepers paying no royalties and granted no exclusive right. Independent agents recruited franchisees and collected their orders. Benetton carried out a revolution: it was the first Italian firm to apply a quasi-franchising system to retailing. This system permitted a fast growth of sales thanks to the fact that there was no need to have great financial resources to open new stores. That was good for Benetton that at the beginning of its success lacked the necessary capital. The relationships with the retailers were similar but not equal to those of the franchising contract. In fact, there was not a written contract and royalties were not requested. On the other hand Benetton did not guarantee the retailers an exclusivity of territory, did not repurchase the unsold products and imposed the retail prices.

Benetton operates using a blend of in-house expertise and outsourced resources throughout the value chain. Benetton was involved in partnership arrangements (nothing more than a version of the Italian extended family) long before the term strategic alliance became fashionable. Manufacturing, for example, is carried out with the help of 450 subcontractors. The third-party manufacturers receive production planning support, technical assistance and quality control support. It is not unusual for Benetton to provide financial assistance to encourage contractors to equip with specialized machinery for special effects and to have Benetton help financially when the equipment is no longer required. Without this encouragement, the contractors would not have the motivation to change their technology. It is also not unusual for Benetton to encourage employees to convert internal processes to externally contracted ones and so assist employees to become self-employed entrepreneurs. In return, Benetton demands exclusivity. This is essential to ensure that Benetton always has capacity available to handle peaks and to be able to co-ordinate effectively these external production units. These independent labour cells give Benetton high levels of flexibility compared with a comparably sized in-house unionized labour force. Simultaneously, lower labour costs accrue given the cost structures of family-owned businesses. The risks and rewards are evenly shared with such an arrangement. It also appears that no need is felt to formalize such relationships with a legal contract. Analysts believe this blend of high labour cost third-party and a high-technology in-house operation gives Benetton a manufacturing cost structure comparable with Asian producers. Benetton describes itself as "vertically de-integrated". This is the process of centralizing those processes which add the highest value and decentralizing the rest. This mix of third party and in-house operations extends to functions other than manufacturing--always outsourcing when in-house economies of scale cannot be obtained and where quality and customer service will not be jeopardized. The use of subcontractors has also allowed Benetton to maintain its rapid expansion rate without the need for massive capital and labour force investment. The purchasing function is centralized in-house given the economies inherent in large scale buying. Benetton is one of the largest wool buyers in the world and at one stage was contemplating establishing a wool scouring plant in Australia. It is fairly typical for companies to be too small for some activities such as international transport and too large for others

such as labour intensive finishing and hence there is a cost advantage if such activities are performed by a third party. At each step of the supply chain Benetton has taken a conscious decision about whether to process in-house or subcontract bearing in mind cost, flexibility, speed and service.

5.2.4: INTEGRATION

Benetton grew through a strategy of vertical and horizontal integration. At the end of the 70s Benetton's organization could be defined as "quasi-vertical integration" as the company controlled the whole value chain, even if various activities were not organized through an exclusive hierarchical control. In fact Benetton represented the main, if not the only, client of its subcontractors and could decide the price paid and the general terms of supply. As in the case of the franchisees, there was no a written contract and the orders were tacitly replaced at every season. Benetton established with its subcontractors long-term relationships based on cooperation and trust. Although there was an evident asymmetry in the negotiation power (subcontractors employed an average of 15-20 workers), Benetton, thanks to the constant growth of sales, was able to renew and increase the orders at every season, favouring the subcontractors who updated. The mark up of Benetton's stores was 70% against an average of 100% applied by the other stores. In 1981, Aldo Palmeri, a Bank of Italy officer, became CEO of Benetton. Two years later, Giovanni Cantagalli, another manager coming from an American multinational company, was recruited in charge of personnel and shortly a team of managers was created to reorganize the Benetton's family-owned company. Benetton used to advise its subcontractors about new machines that were most profitable and provided to some of them financial assistance through its leasing and factoring company. It was at the end of the 80s that Benetton started the process of entering directly into the upstream stages of the clothing value chain. It acquired important textile and knitting factories through the affiliated company Olimpias that today owns, in several Italian provinces, ten plants supplying the majority of the raw materials necessary to the Group's clothing division. The control of the entire value chain was then completed: from retailing to clothing and textile manufacturing, to which also the wool production was added later. In 1991 in

fact, the Benetton family acquired the company Tierras Del Sur Argentino, becoming the owner of 900 thousand hectares of breeding area for sheep, for a total production of over 6 million kilos of wool. The process of horizontal integration was also achieved. The strategy of total look was completed with the introduction of products such as shoes, spectacles, perfumes, watches and, most recently, jewellery. This strategy was carried out both through acquisitions, as in the case of “Calzaturificio di Varese” in 1988, and through production licences as in the case of perfumes, spectacles and watches. In 1989 it was decided to enter into the sporting goods sector with the acquisition (near Treviso) of Nordica, an important producer of boots, skis, skates, skateboard and tennis rackets. The new business was not successful and it was sold in 2003.

5.2.5: SUPPLY CHAIN HISTORY

Benetton has changed their supply chain model in number of ways. Originally the company outsourced labor intensive production, for example tailoring, finishing, and ironing to local manufacturing networks. What they chose to keep internal were heavy investment strategies and operations such as weaving, cutting, dyeing, quality control at all phases, and finished goods packaging. Here is a diagram showing the historic supply chain model for Benetton.

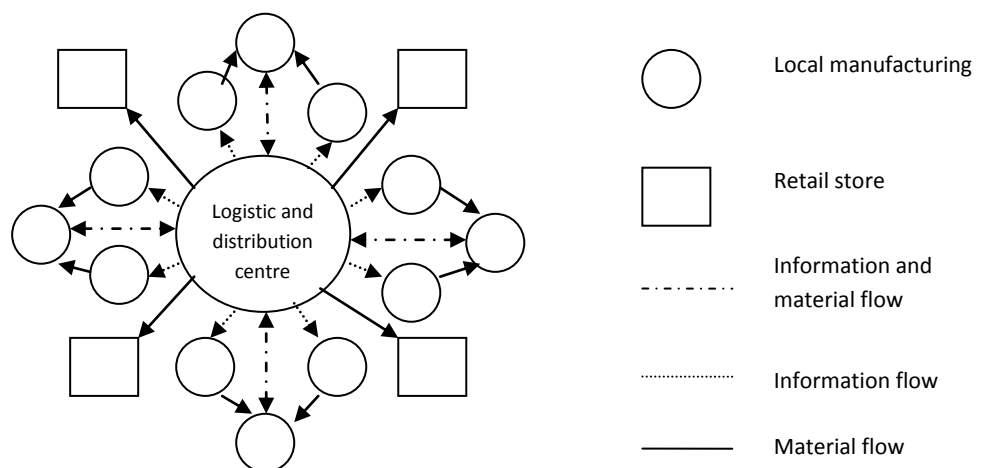


Figure 5.3: first Benetton supply chain model

In the mid- 1990’s as growth accelerated, Benetton designed a primary center to manage production, logistics and distribution. This facility is located near the company’s headquarters in Italy and is referred to as the central pole. With the establishment of a consolidated central shipping center, the company is estimated to have saved 20% on transportation costs. As this framework developed further, Benetton set up other similar regional poles around the world in its manufacturing centers. With this model, the head production pole in Italy now concentrates on the fashion design and electronically sends the product specifications to the regional poles. The regional poles then identify the production needs and source to a specific local manufacturing network. Once complete the finished products are sent back to the central pole for final shipment preparation and distribution to the retail outlets. In total, Benetton maintains 32 total productions centers, 22 in Italy, and 10 abroad. The following diagram represents this new supply chain orientation.

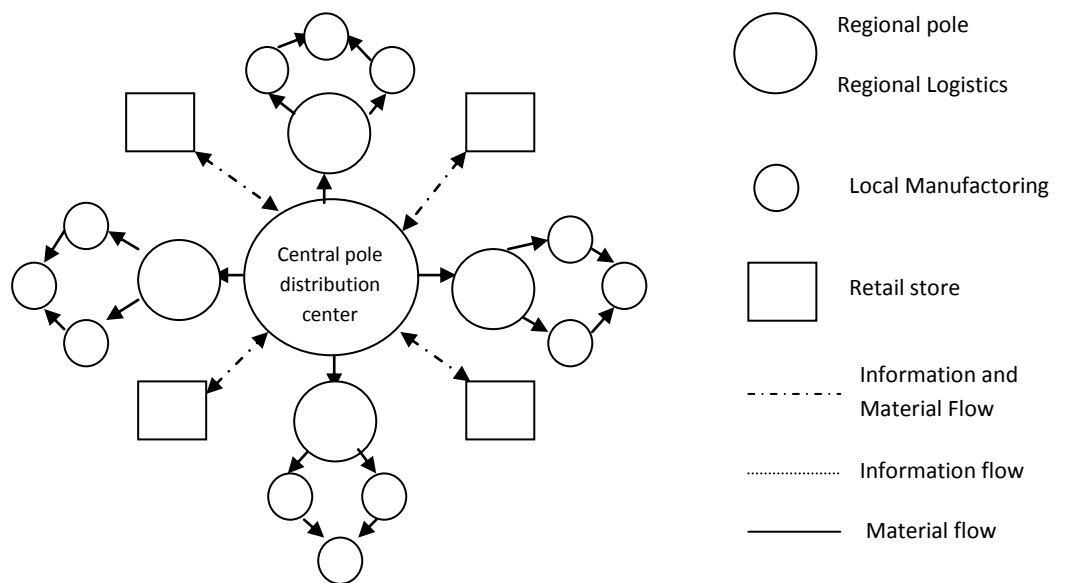


Figure 5.4: New Benetton’s supply chain orientation

Through this model, Benetton has realized significant efficiencies through coordination, increased control, improved speed of production, and reduced inventories. In general, the company’s direct operations, where quality can be assessed, and direct distribution to the retail outlets takes place. A timeline of supply

chain developments highlights some of the major events that have taken place at Benetton from 1999-2007.

	1999	2001	2003	2005	2007
Overview	Retail store changes	Increased control over supply chain and logistics systems	RFID used to track entire supply chain	Developed sales network	Increased Asian operations
Manufacturing and Distribution Operations	Increased manufacturing capabilities in volume production	Moved to a more vertically integrated system Reduced product line under two brands Controlled 85% of all raw material Integrated technology that links local stores to the main pole in Italy	Implemented RFID to track all products Estimated to improve in-store sales by 5% due to better in-store availability	Improved RFID logistics in supply chain Incorporated licensing of new brand for manufacturing	3 distribution centers in China to sort not accumulate Increase in sales of 15%-20% due to Asian's sourcing
Retail Operations	Move to larger store model Benetton owns and operates		RFID tags left on products after sales to monitor returns	Internet to increase Asian retail	

Figure 5.5: timeline of Benetton's supply chain development

The first aspect of the model that contribute to the company success is Networked Manufacturing where groups of manufacturers collaborate on specific orders that are targeted to their capabilities, batch size, flexibility in operations, and lead time to the central pole. The second is Postponement in Dyeing, which was a process improvement step Benetton created, which referred common manufacturing processes in the industry.

5.2.6: NETWORKED MANUFACTURING

The Networked Manufacturing system Benetton developed is an interesting configuration. Benetton had strict policies that stated manufacturing of products would not begin without an actual order in hand from a retail store. Once the order was placed, Benetton would purchase the raw materials and ship directly to the

Networked Manufacturing groups. As time went on, this system became highly centralized and allowed for better quality control of materials and logistics management in Networked Manufacturing system. The system itself however is where the power lies. As the company actively seeks manufacturers for specific product segments, for example higher batch size or stitching type, they look for and require highly integrated groups of manufacturers that combine their efforts and work together closely. What this means is each part of the manufacturing process, cutting each piece of the clothing, stitching, assembly, adding accessories, and packaging is all coordinated among the members of the manufacturing network so that each has a defined role and responsibility. In the 1990's, contracted networks conducted 40% of wool knitting, 60% of assembly, and 20% of finishing operations. The process of defining the capabilities for each group is critical and very specialized. If one group for example is strong in wool, undyed sweaters, then this network will handle the production of these products, while other highly specialized groups focus on say jeans. This allows clear guidelines to manufacturers, lower setup costs without having to switch machinery, improves speed and ensures proper resource utilization.

Another important key to the Networked Manufacturing is the coordination among manufacturers whose responsibility is similar. For example, if there are two companies that both supply collars for a particular shirt, but one runs into problems, Benetton doesn't have ask the other supplier for an increased order size. This may negatively impact quality, and hinders the resources the suppliers may have available. Instead the networking increases communication among all suppliers, so that the supplier who cannot produce the product will provide the order to another capable manufacturer. In the case of wool products, this saved Benetton an estimated 85% in costs when compared to its competition.

5.2.7: POSTPONEMENT IN DYEING

In the apparel industry, the process of dyeing or coloring a product commonly begins with a purchaser or manufacturers buying pre-dyed raw materials, cotton or other fabrics. With pre-dyed materials the only steps are manufacturing, assembly and

finished product distribution. What Benetton realized however, was if this process were moved to the end of the manufacturing cycle, once the product was completed without color, the company would realize greater flexibility in their demand production and could lower their inventory significantly.

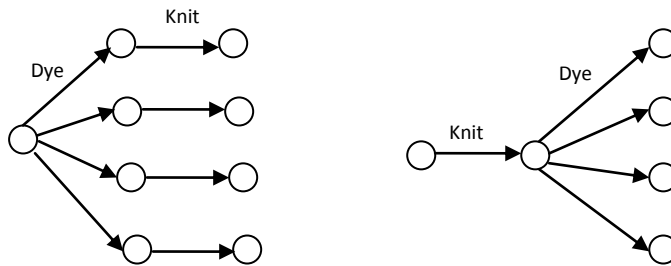


Figure 5.6: Dye and Knit VS Knit and Dye

With the addition of postponement to the logistics system, Benetton gained many significant competitive advantages in the industry. Instead of preparing an entire season product line, and holding a large safety stock, the company could produce smaller batch sizes to initially stock stores and adjust to customer preferences as the season went on. In the old model low volume colors would be marked down in price to clear inventory. In the new model, the same inventory is prepared in lower sizes so once the low volume product is gone, there is more retail shelf space for higher demand products and Benetton can produce these colors as needed. The company generally would use the first 5-10% of seasonal sales to project this into the postponement strategy for continued manufacturing during the season. Benetton also began to use 10% of its production line for what the company calls the “Flash Collection”. These 50 or so products are designed as customer demand is identified early in the season, primarily by highly desired colors and styles. Benetton limits the production of this line, but with the flexibility of the postponement strategy, these products can be produced and designed in less than 5 weeks. Manufacturing and shipping take only 1 week. The next time a customer enters the store, the product is there just as they imagined. This process improvement has helped to increase customer satisfaction and improve the lead time for new product introductions. Postponement has also decreased the risk significantly that a new product will fail and

the inventory costs of these failures will hurt profitability across all products. The investment in adding dyeing machines was well worth the costs saved in lowering the inventory holding cumulatively among all the retail outlets. Now retail outlets maintain a greater level of selling floor space, and are able to receive new shipment, which go directly to the shelf for purchase.

5.3: INFORMATION SYSTEM

Benetton operates in a highly competitive, mature industry characterized by a fickle consumer base demanding an increasing variety of products. The market is volatile and risky. Competitive activity can render one's product fashions unfashionable overnight. Product life cycles are planned to be short to maintain consumer interest. In fact, Benetton plans for eight fashion collections on top of the two basic fashion seasons--that is, a complete change of product lines ten times a year. The logistics system needs to operate at a high level of competency to support this incessant pace. The strategic responses in such an environment are complex. The successful marketer needs the vision and the skills to manage diversity. On the one hand it needs to meet the demands of fashion--the rapidly changing needs of the customer. Hence, it needs to develop flexibility and speed. On the other hand, to compete in the "industrial fashion" stakes, it needs to maintain high levels of efficiency. Benetton has learned how to rapidly and constantly adapt to changing consumer tastes while gaining efficiency through economies of scale. It has done this by clearly understanding the role of logistics in supporting the core business strategy. The linchpin of this support is information systems technology. Information technology links the market place with the manufacturing process. Electronic Data Interchange (EDI) allows Benetton's agents in each country to regularly transmit orders to Benetton's head office. This knowledge of the market updated every 24 hours allows Benetton to carefully track and react to demand by manufacturing only those garment styles, colours and sizes required. Communications technology has allowed Benetton to "eliminate the filters between the customer and production" and to link the customer directly to the factory. But the rapid transfer of information by and of itself is not the key factor for success. The key

factor is how to use the information technology to integrate the supply chain and maximize the value output. Benetton has been forced to innovate in the manufacturing process to take advantage of the market knowledge made available through EDI. Communications technology has been integrated to CAD/CAM systems to give Benetton the speed and flexibility which it needs to compete effectively in the fashion market. As Benetton has said, in comparing itself to its competitors, "many can get the knowledge but only we have the wisdom to be able to use it to create the competitive edge".

Knit now, dying later

Computer-aided design (CAD) of garments along with computerized garment cutting and assembly is the secret to a fast and flexible manufacturing operation. The process starts with in-house garment design using sophisticated CAD technology. Video disc storage of all past clothing ranges allows designers to call up previous styles and colours. State-of-the-art on-line software allows designers to create designs using 250-colour palette screens. Data representing these designs can be transferred directly to computer-controlled garment cutters and knitting machines. In theory then, garment design to manufacture can take as little as a few hours. The garment assembly is carried out by subcontractors. Any fabric and garment dyeing is carried out by Benetton while subcontractors are again used for finishing operations. Clothing manufacture is a mix of high technology and high labour. By retaining ownership of the high technology production elements, Benetton can take advantage of the economies of scale inherent in volume manufacture. By subcontracting the labour intensive operations it sheds the high cost elements to small family owned enterprises having lower cost structures. These cost benefits flow on to Benetton. Traditionally, the manufacture of clothing starts with the dyeing of the yarn followed by the knitting of the garment. The problem inherent in this sequence is that the knitting process is slow--so that to meet customer service expectations requires high levels of inventory of finished garments. The likely result of the traditional approach, as anyone who has been responsible for managing inventory will know, is that invariably the desired colours will be out of stock while there are excess inventories of the unpopular

colours. In a market characterized by very short product life cycles, this mismatch of inventory and customer demand cannot be corrected using a traditional manufacturing approach. The typical result is the end of season mark-down. The obvious answer technically is not a simple one and involved Benetton in process innovation. The solution was to manufacture the garments from the bleached yarn and delay dyeing until information on the preferred colours became available through EDI.

This reversal of traditional logic brings its rewards:

- cost savings by delaying addition of expensive dyestuffs;
- better customer service by matching supply and demand;
- increased sales by having customer desired stock available;
- fewer write-downs for the same reason.

This delayed dyeing process is an example of the principle of postponement. Postponement suggests that value should be added in the supply chain as late as is consistent with meeting customer needs.

The robotic distribution centre

The \$50 million distribution centre (DC), is more accurately described as a giant robot. The storage area alone of the DC measures 170 metres long by 80 metres wide by 20 metres high; a third of this height is below ground level to minimize the impact on the surrounding landscape, in keeping with the Benetton concern for the environment. Twenty loading and unloading bays service the building. Inbound garments from the production areas arrive below ground level. The garments are already packed in one of two standard boxes which are barcoded and pre-addressed to customers. The barcoded cartons are delivered by high speed conveyors from the receipt bays to rail-guided transporters in the storage area. Each transporter can transfer up to 24 cartons at a time to and from the racking. Simultaneous put-away and retrieval occurs to maximize efficiency. The storage zone has a capacity of 250,000 boxes sorted randomly. The DC handles 12,000 boxes a day, equivalent to 6,000 consignments a day, representing some 60 million garments a year. The high level of automation

allows the DC to operate on three shifts with six operators to a shift. Shipment is directly to one of 6,000 retail stores in 83 countries. Distributors, wholesalers and regional centres are not used. To achieve high levels of response all exports are airfreighted.

Improve service and logistics savings

During the transition from founder-managed organization to maturity, functions and processes need to be formalized and the ad hoc decisions and structures appropriate in the growth stage need to be reviewed. The logistics functions are not immune from this process. The breathless pace of establishing a global network of shops left a wake of uncoordinated and unintegrated movement activities. A raft of carriers, freight forwarders and customs brokers had been used to move the product, often with the not unexpected result of having the product arrive without matching paperwork and with subsequent delay in product delivery to the stores. The poorly integrated activities resulted in low service quality at a high cost of distribution. An analysis showed Benetton that economies of scale were possible in the freight-forwarding function. In a joint venture it established WIDE (Worldwide Integrated Distribution Enterprise) to manage the international forwarding and customs clearance functions. WIDE was first established to manage the North American product movements. This organization deals directly with air carriers--eliminating a level of freight-forwarded intervention. EDI technology allows Benetton to transmit documentation ahead of consignment arrivals, to allow speedy clearance through customs and on forwarding to the retail outlets. These functions are managed or performed by WIDE. The result of this rationalization was a 55 per cent reduction in physical distribution costs and a reduction in lead times to the USA from 22 days to seven days.

5.3.1: THE SHOP

Benetton works through a network of 85 agents around the world. Agents in each country are responsible for recruiting the retailers, showing the fashion collections, processing retailer orders, selecting retail sites, carrying out training and, importantly,

feeding market intelligence to Benetton. For this they receive commission, usually around 4 per cent, based on sales in their territory. Although often called franchises, the retail outlets are more accurately described as licensees. The licensees, unlike a franchised arrangement, pay no fees or royalties. This neatly allows Benetton to sidestep the often restrictive franchise legislation in many countries. Licensees must agree to stock and sell only Benetton products, merchandise and display the garments according to Benetton guidelines and also follow price guidelines. For Benetton the stores are not simply outlets for their garments but information probes measuring the level of customer acceptance of the Benetton "look". In true partnership mind set, the key desirable qualities of the licensees are their commitment to Benetton and their ability to expand the market. The global EDI network used to keep Benetton in touch with the world is used to provide support to the agents. They have access to information about what is in production, in the DC or in transit, Licensee billing and credit status is also made available to the agents.

In sum, then, the strategic outsourcing decisions look as follows:

- CAD/CAM design, cutting, knitting, dyeing: high tech, high capital, scale economies possible: do in-house.
- Garment assembly, finishing: no scale economies possible, large high cost labour force needed which could reduce flexibility: outsource to sub-contractors.
- Raw material purchasing: scale economies possible; do in-house.
- Mass distribution: scale economies possible, fast cycle times needed to meet customer expectations with minimal inventories: do in-house.
- International transportation: scale economies not possible with Benetton volumes: outsource to international carriers.
- Freight forwarding: scale economies became possible with increasing volumes, service improvements possible: change from outsourcing to in-house through joint venture.
- Global communications network: scale economies not possible with Benetton volumes: outsource to GE Information Systems.

- Retail stores: high capital needed, potential labour cost and motivation problems, and high customer service levels needed: outsource to licensees.

The speed and flexibility of the entire system is such that it is capable of filling a retail shop replenishment order mid-season within two to four weeks. This includes the time to manufacture the garments. Mid-season ordering is beyond the capacity of most fashion businesses. This is possible with minimal inventories by manufacturing only what is ordered. In addition, this is possible only with the aid of information technology, flexible high speed manufacturing, high speed distribution and an organizational structure capable of handling this.

5.4: FINANACIAL DATA

As we seen for Inditex, there is a comparison of revenues and net income. Nevertheless, for Benetton revenues and net income are appreciably declining. Revenues from 1765 (2005), 1911(2006),2049(2007), 2128 (2008) and then another time 2049 (2009). Net income seen a decrease before the revenues: 122(2005), 145 (2006), 155 (2007), and then 125 (2008), 112 (2009).

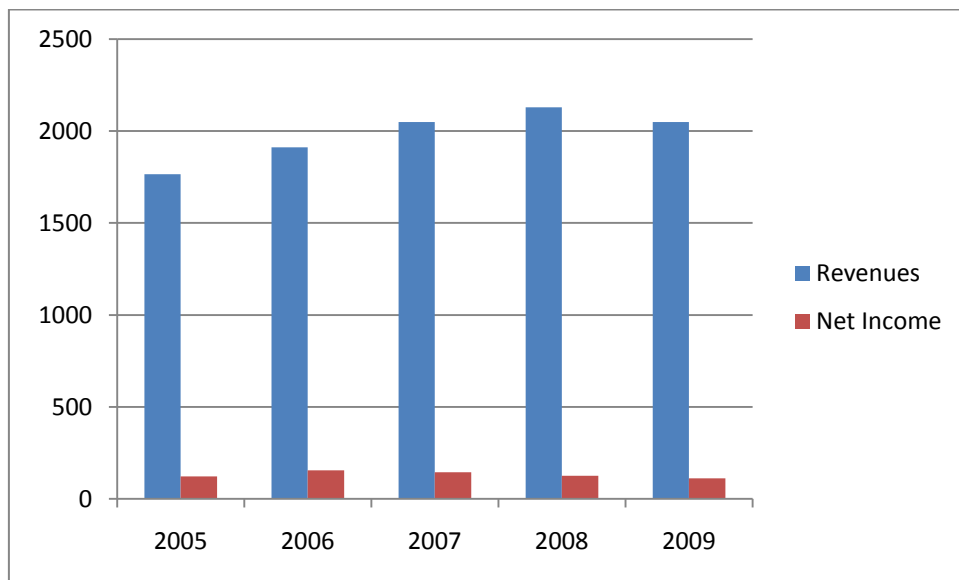


Figure 5.7: Benetton's revenues-net Income (millions of euro)

The following chart show how the revenues are distributed in the world: most of them came from Italy.

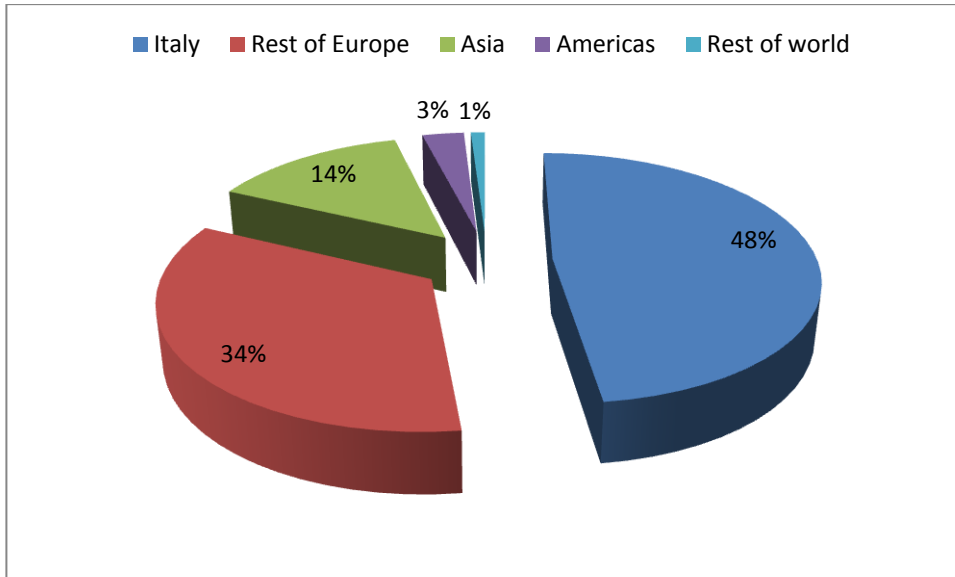


Figure 5.8 : Benetton's revenues by regions

To end the financial analysis there is a comparison among three performance indicators : ROE (Return on Equity), ROI (Return on Investment) and ROS (Return on Sales)

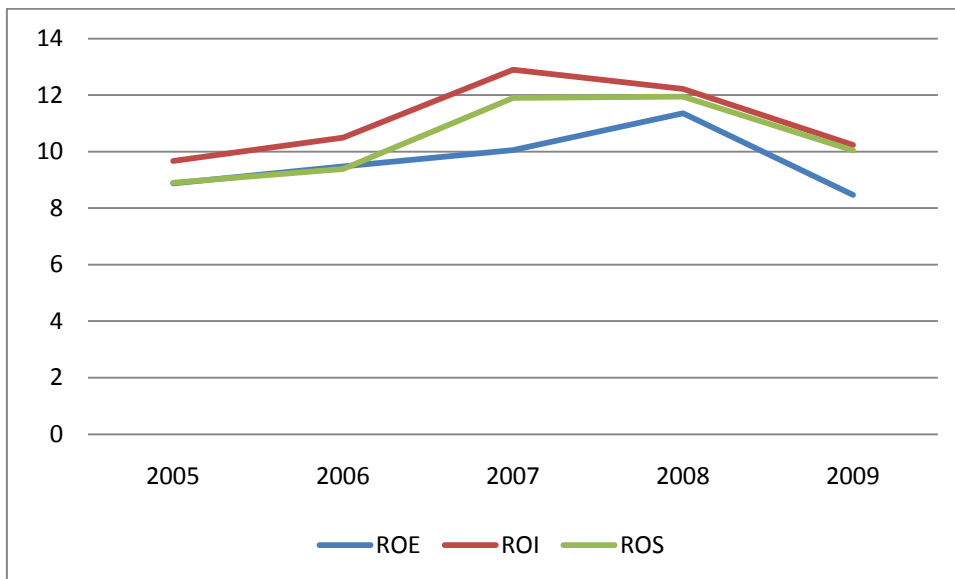


Figure 5.9: Benetton's performance indicators (ROE, ROI, ROS)

5.5: COMPETITORS

GAP

Similar to Benetton, Gap is also a retail company offering similar product lines and services; this then makes Gap a direct competitor of the company. In addition to similar product lines, Gap also employs similar franchising efforts in order to expand its business in the international level. For instance, the company had recently established a franchising agreement with Al Tayer Group, a retailer based in Dubai, in order to distribute its products within five Middle Eastern markets. Aside from this, Gap has also been actively expanding its business in other Asian regions; the company for instance, had recently signed an agreement with F.J. Benjamin, a Singaporean-based franchisee, in order to put up Gap stores in Malaysia and Singapore. This ability of the company to expand in different countries is supported by the fact that Gap is a recognized global brand, hence, exhibits a strong appeal even to foreign consumers.

Although Benetton and Gap apply a similar methodology to gain foreign market entry, the objectives of the companies appear to be different. Specifically, Benetton employs the franchising method so as to strengthen its commercial strategy as well as expand its business operations. Gap on the other hand, applies this strategy mainly to reverse its slowly declining sales. Gap stores have long been established in Britain and France; however, the stores in these areas have already matured and are no longer showing signs of great improvement. Thus, the company adopted the franchising strategy so as to revive the business. While the companies differ in objective, the development of using the franchising strategy in Benetton and Gap took the same pattern. In particular, both companies have initially started on establishing company-owned stores in foreign locations. Eventually, this system proved to be more costly as compared to dealing with large foreign retailers. Thus, in order to save on operational and labor costs, Gap and Benetton now consider entering foreign markets by contacting interested external franchisees.

STEFANEL

Benetton is imitated by its mainly Italian competitor: Stefanel. This company is one of Italy's largest fashion companies, manufacturing young, sporty, wearable separates and knitwear for the young menswear and womenswear market. Sold in shops worldwide, Stefanel clothing is synonymous with good design in quality fabrics, as well as its licensing agreements and a joint venture with Calvin Klein. The company began in 1959 as a manufacturer of knitwear in Treviso, Italy. The brainchild of Carlo Stefanel, it quickly established a reputation for lively color and quality. Carlo's son Giuseppe Stefanel entered the business in the mid-1970s, with exciting plans for expansion into the broader fashion market of casual clothing, sportswear, jeans, and ready-to-wear. Through franchising, Stefanel developed a competitive distribution system that resulted in a steady growth in international markets, particularly in the Far East and Europe. Stefanel's development strategy has supported distribution growth by introducing carefully targeted production policies within the textile and clothing sector, constantly widening the breadth of product ranges. Knitwear still plays a dominant role in Stefanel collections. For both menswear and womenswear the look is unisex, homespun, and traditional. Fair Isles, jacquards, stripes and checks are incorporated into cozy, easy shapes and restyled into modern, young looks. For evening there are slinky gold, ribbed knits and crochet designs teamed with black drainpipes and silky white blouses for a dressed-up look. Pioneer-style denims, chambray, tartans, and tiny paisley prints are the major woven fabrics used in oversize shirts, casual shirtwaist dresses, simple jackets, and wrap over minis with fringed hems. Cuban style jackets in heavy wool coating, teamed with fisherman jerseys, can give a nautical feel to the range. Stefanel boutiques mix high-tech with traditional in their interiors. Simple wood floors and furniture are mixed with chrome and glass to create a spacious, modernistic shopping environment. The clothing is merchandised in a logical, easy way with garments arranged in color coordinated sections making it simple for the customer to put together an outfit. Such retail outlets were sprinkled throughout the UK, including its first shops in Ireland in the 1993. Stefanel also opened stores in major cities in China, the first consumer goods manufacturer to do so. In the 1990s the firm experienced growth and a much higher profile. In 1995 Stefanel and

Calvin Klein agreed to a joint venture to manufacture and distribute the popular CK bridge lines. The agreement further called for opening CK stores across Europe and in the Middle East, for Stefanel to acquire a production facility exclusively for CK apparel, and the formation of two new companies—K Service SpA (wholly-owned by Stefanel for manufacturing) and SKY Company SpA (73-percent owned by Stefanel, the remainder to Klein, for distribution). The glow from the Klein deal dimmed quickly, however, when Stefanel experienced its first ever losses in 1995 and 1996, due mostly to restructuring its worldwide operations. Then the following year top officials of the firm were under investigation by Italian authorities for fiscal fraud and falsifying documents, though charges had yet to be filed. Stefanel and Klein opened their first CK store in Milan in early 1997, and the former finally reaped the benefits of its reorganization and debt reduction of the last two years. For 1997 Stefanel was back in the black and the Klein venture was beginning to pay off. Stefanel then turned its attention to expansion outside Europe, namely in the U.S. where it operated just a few stores. Giuseppe Stefanel has carried on the tradition his father began almost 50 years ago, and their firm is one of the few remaining independent fashion empires in Italy and beyond.

CHAPTER 6 : QUICK RESPONSE

6.1: FAST FASHION

The traditional fashion markets, characterised by two fixed seasons per year, have also been affected by the need for more rapid refreshing of ranges, styles and colours. Demanding consumers and competitive retailing have generated pressures to respond with multiple refreshes per season. The focus is on replenishment of the specific styles, designs and colours that are selling well, whilst reducing, changing or abandoning those that turn out to be less popular than forecast. This reduces the problem of marking down the price of less popular clothing that fails to sell in the forecasted volumes. This trend, when taken to the extreme of compressing design times, multiple refreshes, coupled with very quick response from the supply base, and all done at low cost, describes the so-called 'Fast Fashion' market. Irrespective of the category, clothing products can take a circuitous route from fabric production, through garment production and distribution, to eventually reach an individual retail customer.

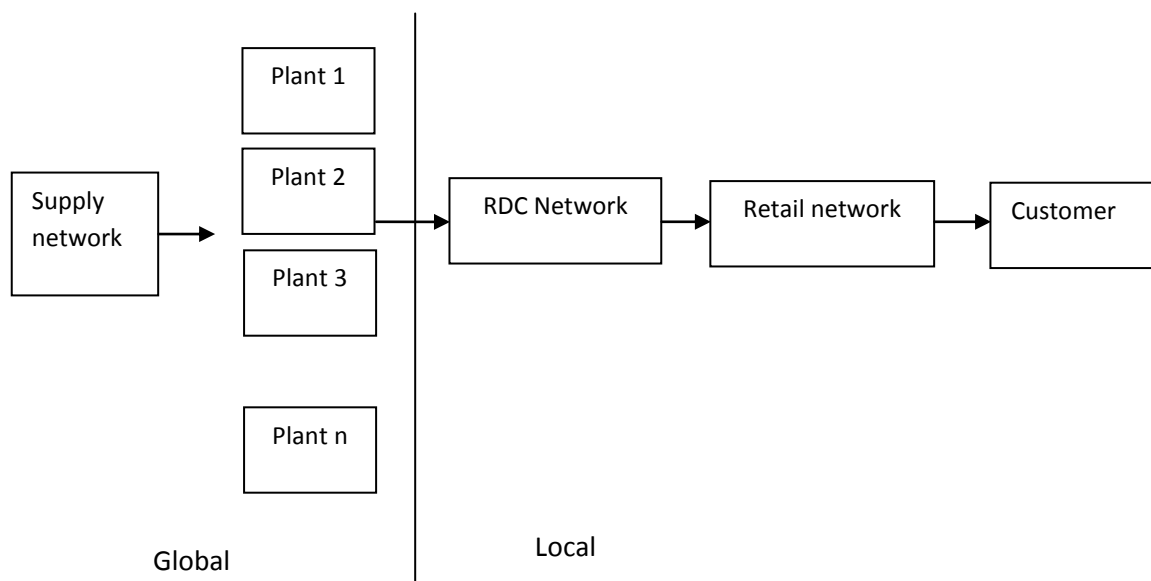


Figure 6.1 : generic high-level structure of globally dispersed clothing supply chains.

Figure 6.1 illustrates the generic high-level structure of globally dispersed clothing supply chains. The textile producers supply the clothing plants, which in turn feed into distribution and logistics systems to enable garments produced in dispersed global networks to meet anticipated demand in specific retail chains and stores. In Figure 6.1,

the solid line crossing the regional Distribution Network (RDC) is highlighting conceptually that the balance of what is globally and locally dispersed, as well as ownership and control patterns, can vary significantly, depending on the specific supply chain considered. Thus a major brand owner that sources globally and supplies major retailers will have to manage the interface between its distribution network and that of each of the retailers it supplies in their national markets. In reality, any specific clothing supply configuration will resemble more a supply network than a 'linear' supply chain. Much of the material flow complexity occurs around clothing plants and in the distribution and logistics parts of the system. However, describing just the physical configuration and the material flow is insufficient to understand and analyse the operation and performance of any specific system. The high-level view illustrated in Figure 6.1 is limited in displaying the diverse sets of entities that can play a part in any particular supply network. As well as fabric producers, garment manufacturing plants and retailers, a global supply network will include designers, buyers and merchandisers, distribution, logistics and warehousing companies and may include additional finishers that ensure products are ready for display and sale in any particular market. Key issues that need to be understood include the different participants within the network; the nature of their relationships; ownership, power and control structures; how the network is managed, coordinated and controlled and how information flows in the network. Buyer-driven chains are controlled by these powerful players through their ability to stimulate and shape demand via strong brand names and extensive retailing outlets or presence within retail outlets (e.g. M&S, Primark, Zara, Levi's). Such buyer-driven supply networks are different to the producer-driven supply networks common in some sectors such as the autoindustry. Producer-driven supply networks are characterised by large and powerful multinational manufacturers (e.g. Toyota) controlling tightly coupled networks of supply, production and distribution. Profits are derived from the scale and volume of operations and technological advances in both products and process. Technology rent (e.g. the use of unique technology) and organizational rents in the form of intra-organizational processes (e.g. employing JIT and TQM) act as barriers to entry in producer-driven supply networks and that relational rent (inter-firm relationships), trade rent (tariffs and quotas) and brand name rent (established brands) act as barriers

to entry in buyer-driven supply networks. In contrast to producer-driven supply networks, buyer-driven networks in clothing are often characterised by looser and more dynamic couplings linking production principally in developing countries to demand for fashion in developed countries. They rely on global sourcing strategies to meet demand. Profits and margins in buyer-driven supply networks are generated from design, sales, marketing and services that link globally dispersed factories with consumer markets. This more complex view of globally dispersed clothing supply networks incorporating multiple entities, a powerful control entity and various forms of relationships, must be considered when evaluating the capabilities and capacity of any system, how it performs and how it could be improved.

6.2: GLOBAL QUICK RESPONSE

Responsiveness in operations management has been defined in different ways. Common elements typically highlighted for responsive operational systems include information management, partnerships between supply chain members, manufacturing flexibility, effective inventory management and strong logistics systems. The importance of Quick Response strategies has been emphasised in the clothing and apparel sectors since the late 1980s and a number of QR initiatives have been undertaken in the sector. The study of QR was initiated by Kurt Salmon Associates (KSA) in the US apparel industry in 1986 and has spread widely in the apparel industry since 1990. QR in the clothing sector has been defined in different ways and from different perspectives. Lawson et al. (1999) define QR as 'a state of responsiveness and flexibility in which an organisation seeks to provide a highly diverse range of products and services to a customer/consumer in the exact quantity, variety and quality, and at the right time, place and price as dictated by real-time customer /consumer demand.' Forza and Vinelli (2000) define QR as 'modifying the current organizational system of the chain and speeding up the physical and information flows, in both directions, between all the phases of the value operative chain system.' The potential benefits of QR initiatives have been noted by a number of researchers - increased sales volumes, reduced markdowns, reduced stock-outs, reduced costs and prices, greater price validity in retail stores, and improved financial performance and increased competitiveness. Retailers improve the profitability of their business by using rotation

of stock as leverage (replenishment of orders), which helps to minimise forced markdowns and discounts and ensure more sales take place at the normal retail price. However, such responsiveness may result in a reduction in order sizes, higher ordering frequency and a requirement for shorter lead times than in conventional supply systems. The clothing industry now operates with global supply networks, presenting greater challenges for Quick Response. Global Quick Response (GQR) is a strategy that seeks to achieve accurate, rapid and cost effective response to specific markets dynamically by leveraging the potential of dispersed global supply and production resources through lead time compression, effective real time information management, flexible pipeline management and optimal logistics and distribution systems. GQR strives to combine cost and scale efficiencies by sourcing globally with quick and accurate response to specific market requirements derived from information management, dynamic planning and strong logistics. GQR requires that the complexities, risks and additional coordination inherent in managing international supply routes with multiple linkages are absorbed if sales opportunities are to be maximised and the risks of supplying the wrong products minimised.

6.2.1 ACHIEVING GLOBAL QUICK RESPONSE

From sample to volume

The process is initiated by a new garment design that is produced in sample form in very small quantities. If the design (typically a set of related garment styles in various combinations of colours and sizes) is successful in the marketplace with buyers, merchandisers or retailers then volume orders are placed. The process must be capable of 'ramping up' to volume production if a substantial volume order is placed. The flow of garments may then be sustained for a period of time by repeat orders that will typically vary in mix during the period, i.e. the quantities for each repeat order may vary in terms of colour, size and style details. Substantial pre-production stages are needed in order to move from the production of small scale sample designs for showing or merchandising purposes to large scale volume production capable of sustaining multiple repeat orders with varying mix over a season. Thus, for each unique style variant, garment specifications need to be defined, including sizing and pattern making and providing relevant instructions for cutting, assembly, sewing,

finishing and packing. A key part of ensuring that volume garment production can be initiated for a new style or range of related styles is the sourcing of the required fabrics and accessories in the required volumes and with appropriate timings. Multiple garment styles may often be produced from a specific fabric type. Fabric supply is a substantial part of the overall supply process, with typically substantially longer lead times than garment production cycles. Having a ready source of fabric that is delivered with the anticipated volume of orders is therefore important to ensure quick response to volume orders. However, this can pose significant challenges for fashion garments. In practice there may be iterations and overlaps between the design, garment engineering and fabric sourcing functions, e.g. sampling may be done by a company in one country interpreting the design concept from another. Fabric selection may stimulate the design process, with fabric sourcing being initiated concurrently with design and garment engineering. Garment production is typically a process of cutting, making up (sewing garment components together), pressing and packing. For some basic garments cutting may be done in separate production units before being sent to one or more production units for making up into finished garments. Making up of garments is usually the longest process, typically involving multiple skills and a significant garment production costs. However, manufacturing lead times may be less significant than the combined lead times in upstream design, specification and textile sourcing and the downstream logistics and distribution processes. Some of the technical aspects noted here vary for knitwear and hosiery garments. Depending on where a garment is produced (which could involve multiple locations), logistics and distribution must be considered from production sites into retailing distribution networks, possibly through producer or logistics providers' warehouses. In volume retailing systems this may just mean fitting into an existing logistics and distribution system. These are typically managed by 3rd party logistics providers to feed into the retailer's distribution centres serving the markets where garments are destined. For smaller and more specialized outlets specific systems may have to be designed. Two further issues that need to be considered are the colouring process and accessories. Garments may be produced from fabric that does not need colouring or from fabric which is subject to colouring after fabric production. A third possibility is that finished garments may be coloured once produced. In the second case the colouring process

may add to lead times or complicate fabric sourcing. Sometimes the garment producer may store fabric in a 'grey' undyed state and wait until orders are confirmed before sending fabric for dyeing. If whole garments are dyed then this additional process must be factored into the garment production cycle. Although the sourcing and supply of garment accessory items may seem a relatively trivial part of the overall process they can be problematic. Often accessory items may be the distinguishing feature of a particular style variant or be required to match other aspects of the garment style in some way. Coordinated sourcing for highly mixed orders is therefore important. Special processes such as embroidery or adding sequins may also be problematic if they require specialist skills or involve outside service suppliers, complicating process routes and adding to lead time.

6.2.2: THREE KEY PROCESSES

Global Quick Response (GQR) must be considered with respect to the generic garment industry structure and processes described above and the requirements, opportunities and challenges that arise. There are three key processes:

1. The new garment design and development process
2. The initial volume order process
3. The replenishment or repeat order process.

In traditional systems these processes occur sequentially and are affected by different constraints in the supply system. Here is considered these processes in the context of the global supply network and the factors affecting lead time and the ability to respond.

The new garment design and development process

Typically design samples require only relatively small lengths of sample fabrics usually available from fabric suppliers based on standard fabrics that are always in demand and new or special fabrics produced by the fabric producers based on expected fashion trends in anticipation of garment designers' needs. The new garment design process requires not only new garment designs to be produced quickly but it must also enable quick 'ramp up' to volume production. The rapidity of new product introduction is a feature of current Fast Fashion retailers. This requires capabilities to extract and utilise

relevant market information, leverage design resources, modify existing designs and understand what is practicable and realisable with available manufacturing resources. The value to designers of having local sampling facilities that can produce samples quickly is great. Where sample garments are produced using global resources they may use specific plants with which the design group has a special relationship. Fast turnaround times are important at this stage and may require sample garments to be expedited using expensive transport options in small volumes. The time taken for cost estimation for a new design may also have to be factored into the new garment development process. When pricing needs to be done before a garment is offered to retail buyers or merchandisers then decisions on where volume production is to be carried out, as well as detailed garment engineering and specification details need to be completed. Estimation done by a contracting garment manufacturer may add to new garment development time and may incur risks if approximations and assumptions are made with respect to supply and production costs. An important trend in a number of industrial sectors has been the move towards concurrent engineering for new product design and development. Concurrent engineering is particularly important and challenging when design, development and production are not co-located but dispersed internationally. Concurrent engineering principles are well developed for engineered products in sectors such as aerospace and automotive and there is significant potential for the clothing sector to exploit concurrent product development concepts in a GQR context.

The initial volume order

Decisions on the most appropriate plants in which to produce a new garment are typically based on technical, cost, contractual and logistical factors relating to the supply of inbound fabric and accessories and outbound distribution. Not all plants in a network will have the capability to produce all garment designs. Key issues are: technical competence to manufacture; capacity to supply and pre-existing contracts for agreed volumes. In buyer-driven supply networks, the brand owner, branded manufacturer or major retailer may control fabric supply. Garment producers in the network may be mandated to use specific fabric suppliers with which the buyer or prime supply network controller has established contracts. This may guarantee

adequate fabric supply but also, and importantly from the controller's perspective, may help to assure quality. Initial volume orders may enable significant learning e.g. in regard to quality and distribution. Lessons learned from a new supply route may well mean changes for subsequent orders – for instance if the anticipated capacity to supply has not been realized or if logistical difficulties prove insurmountable. At the very least there will be learning opportunities for repeat orders or new styles using the supply route.

The repeat and replenishment order process

A dependable network is needed for replenishment orders. The network needs to be capable of working at the required pace for the supply chain and, importantly, be capable of accommodating changes in volume and mix requirements. Quality and logistics issues need to have been eliminated to ensure that a supply route can respond to mix changes and costs with the required speed and responsiveness. Fabric sourcing should be agreed and capable of supplying at the rate required. An effective order placing and confirmation process must be in place. Supply networks cannot maintain high levels of unutilised capacity in anticipation of demand. The potential downside of a strongly demand-driven order fulfilment system is that volume sales opportunities that arise quickly may not be capable of being fulfilled. The market may demand some items in high volumes that could only have been satisfied by prior production based on forecasts. Increases and changes in the level of product variety add to complexity in international supply chains. Both QR and GQR systems must have sufficient supply capacity, accurate market intelligence and effective controls and to deal with both the volume and mix issues. Supply networks need to be able to absorb the negative effects of volume and mix changes. A key issue in designing effective GQR systems is good decision making with respect to when to commit to volume and mix.

Enablers for GQR

GQR needs to incorporate many of the elements of QR systems but do so in the context of globally dispersed production and supply resources. Strive for fast and accurate information transmission: the processes and speed of transmission of both product and order information need to be analysed. The formats for design and

garment specifications need to facilitate both rapid transmission of design requirements and the rapid production of new designs. An issue in the sector is that no standard universal product data formats exist for garments, unlike engineering design information. Speed and accuracy are also important in the transmission of order information, particularly for replenishment orders where time is of the essence.

Develop flexible production resources: traditional garment manufacturing uses batch production methods. Many opportunities exist to reconsider layouts and organisation of factory processes, particularly cellular manufacturing where whole garments or parts of garments are produced or assembled in flow driven cellular processes. If such cells are rapidly reconfigurable then advantages can be gained in quickly responding to the required mix changes. In addition, flexible human skills are valuable in responding to changing garment designs. This is critical, particularly in the time consuming making up processes in garment production. When flexible skills are combined with cellular team based production, then rapid response to design and mix changes can be enacted without incurring significant set up costs. Utilise technology and automation where appropriate: in general the garment manufacturing sector is less automated than many other industrial sectors, particularly the engineering sector. Human skills perform much of the value adding activities in garment production. However, every opportunity needs to be taken to adopt new technology in areas such as laying up and marking of fabric, cutting, sewing, pressing and packing. Also technologies that assist in rapid material identification, material handling and material flow and technologies that enable flexibility need to be adopted, particularly for quick changeovers and set up processes.

Develop fast logistics: rapid material flow needs to be encouraged and enabled in any QR system. The corollary to this is that stationary material and large inventory buffers should be avoided. The entire distribution channel from production to the retail floor needs to be considered. Implementing fast logistics for inbound fabric supply, for material flow within plants and outbound into the distribution channels is important. The technologies noted above can assist in achieving this. The last '50 metres' of the supply chain should not be ignored; hence the importance of 'floor ready' garments that are appropriately tagged and packaged for immediate display once delivered.

Exploit all opportunities for lead time compression: the combination of the above initiatives reduces many of the time delays affecting overall

response times. All aspects of processes, systems and procedures for gathering and transmitting demand information and for the design, production and distribution of garments must be looked at for opportunities to compress lead times. One of the keys to compressing overall response times is to ensure fabric availability. As noted earlier, this can be challenging for fashion or innovative garments. In addition, QR initiatives will try to identify specific opportunities for lead time compression in the systems and processes of any specific producer or supply chain prime partner and those aspects of the system that need close management and control. QR must be a key part of an organisations strategy and have a supportive organisational culture: An organisation that seeks to pursue QR must see it as a fundamental part of its business strategy. Not all organisations should attempt or will be successful at QR. In pursuing a QR strategy, every effort needs to be made to develop a supportive organisational culture. Strong QR basics are needed in GQR systems. However, much of the emphasis in QR initiatives has focused on internal production systems. Achieving GQR in globally dispersed clothing supply networks requires much more – a total systems focus.

In the remainder of this section GQR in buyer-driven supply networks is considered with respect to (1) market intelligence and rapid new product introduction, (2) network structure and composition, (3) network planning and staged postponement, (4) network capability, performance and health.

Market intelligence and rapid new product introduction

Given the increased complexity in a GQR system compared to a locally-based supply system, more and better market intelligence is required. Earlier and greater sensitivity to changes are needed particularly in new product introduction and in specifying repeat orders. The whole of the clothing sector is influenced by trade and fashion shows for yarns, fabrics and garments. These strongly influence new styles and the fabrics and materials used. Whether for commodity products or for Fast Fashion they provide important signals in understanding what future demand may look like. However, although such events strongly influence what is designed and produced, they cannot dictate consumer behaviour. Receiving accurate consumer-based market intelligence is equally important. Effective systems need to be in place to gather and

utilise the information emanating from downstream consumer behaviour and preferences. Opportunities for lead time compression may be possible in all parts of this process – information gathering, information interpretation and in dissemination to designers. Design capabilities, skills and expertise are needed that can utilise market information and that can manage the sampling process. For rapid new product introduction it is important to understand garment architecture and those details of garment styles that are important to the customer. Thus, the range of garment styles that can be produced from a specific fabric can be maximised. By offering only relevant variety that customers value in terms of ranges, styles, colours and sizes, the potentially negative impacts of variety in sourcing, production and distribution can be minimised.

Network structure and composition

A strong supply network with multiple capabilities that can respond appropriately to diverse and changing demands is essential in achieving GQR. Although some brand owners and retailers may be able to use global production resources on an ad-hoc contractual basis, more generally a well developed cohesive network is needed to guarantee continued response and replenishment in appropriate volumes and mixes and also to innovate where appropriate. Hence the nature of the supply chain partners, their relationships and locations within the network are important. Desirable network structure will depend on factors that include costs, quality, reliability of delivery, access to quality inputs and transport and transaction costs. Some supply networks may be based on traditional contractual relationships, whilst others may be fully integrated with long term relationships based on trust. Purely contractual relationships may have benefits in terms of achieving volume and limiting the liabilities for the contracting producer. However they are more limited in terms of responsiveness to mix changes, in-season refreshing and in changing pre-agreed contracts. A fully integrated network structure may positively affect the reputation of a brand, facilitating the close monitoring of the entire sourcing process. However, a fully integrated network may also be costly to maintain and may result in slow response in some circumstances when it is centrally controlled. A combination of contractual and integrated partnerships may provide the optimum level of network flexibility. Although

various forms of ownership, joint ventures, equity stake holdings, strategic alliances and contractual relationships may exist in a network, the development of strong mutually beneficial partnerships is central to establishing an effective supply network. Partners that agree to adopt a GQR strategy in a supply network are more likely to be successful in adopting effective processes and practices over time. Network structures operating on a purely contractual basis are likely to take longer to set up, have longer lead times and be less flexible and responsive to market changes. However there are difficulties in maintaining long term partnerships unless mutual benefits accrue. Making partnerships work involves sharing the benefits of improved margins and guaranteed volumes rather than benefits accruing only to the prime partner or retailer. The importance of partnerships and the careful selection of partners based on the specific competencies they offer and the contributions they make to the network. Building strong relationships is identified as important, not just at the company level but at the functional level as well. They note the importance of specific relationships and interfaces in the supply networks they analyse e.g. between designers and manufacturers and between sales and development functions. Although GQR is premised on utilising global supply networks to gain cost, capability and volume advantages, some local production resources may be important for some retail and brand strategies to enhance flexibility and speed. Thus, a GQR strategy may combine both local and global production resources to cater for some aspects of the dynamics of the market quickly and flexibly. An important issue is to decide the right balance between local and global production resources to meet specific market requirements. Network partnerships involve not just fabric and garment producers but potentially many other service providers. Effective logistics is central to a successful GQR strategy. This may be facilitated by using experienced Third Party Logistics (3PLs) providers with knowledge and expertise of global distribution. Such organisations can provide the 'glue' to enable a GQR network to operate effectively and efficiently. Third Party Logistics providers can enhance the operation of supply networks by utilising their expertise in deciding appropriate modes of transportation, in facilitating cross border trade and in providing contract warehousing facilities with the latest automation in materials storage and handling. Logistics partners can organize and facilitate cross-docking initiatives to minimise stationary time and reduce the need for intermediate

storage in supplying retail markets. In addition, GQR networks may require other services for the gathering of market data, for product design, merchandising and marketing. Ethical issues are increasingly important in supply chain management in general and in the clothing sector in particular. The globalisation of the clothing industry has increased competition amongst suppliers and indeed between countries and this has put pressure on the adoption and maintenance of strong ethical practices. However, globalisation also opens up supply networks to greater scrutiny and public awareness. Non-ethical practices are more likely to be exposed than in the past. The adoption of ethical practices may have positive effects on brand image, perception and loyalty both in customers and in suppliers although how these issues affect consumer purchasing decisions is open to debate. Many retailers and brand owners have developed ethical frameworks, policies and practices. However failure to have ethical policies or to apply them in practice exposes the major companies in the supply chain to significant risks with respect to both brand perception and legal issues. Ethical issues can be expected to play an increasingly significant role in influencing and affecting network design and composition in the future.

Network planning and staged postponement

A supply network must be capable of producing and delivering efficiently at the anticipated demand and variety level. Although at the detailed mix level, forecasting is likely to be inaccurate, in GQR systems some aspects of future requirements can and indeed must be predicted at the volume level, starting with a retailer's target sales volumes. Inaccurate volume estimation will result in either a network that cannot supply the required volumes because of capacity limitations or one with costly unutilised spare capacity. Effective supply network planning and management is important, particularly for ongoing repeat ordering and replenishment where market requirements are changing dynamically. There may be a tension here between the retailer's perspective and the producer's perspective. The former tends to prefer to delay committing to precise orders until as late as possible on the basis that later information will result in precise requirements being known with greater accuracy and thus entailing less risk. However, the producer values long planning lead times to ensure that production resources can be marshalled efficiently and that stable plans

can be put in place, avoiding frequent changeovers and giving reasonable lead times to suppliers. A type of staged postponement described here helps to balance these opposing needs. The postponement principle delays commitment to final product attributes until close to the point of real demand. It avoids the risks and costs of carrying large inventories. Postponement can be applied in different ways and the terminology used differs. The more common type of postponement – form postponement - delays commitment to the final product form until a late point in the production process. This is often associated with ‘late point differentiation’ strategies. However, this approach is not of great value in a GQR clothing context. The relative time in production is outweighed by time taken for pre-production, fabric sourcing and by distribution. In addition a late point differentiation strategy is difficult to apply in the sequence of operations in garment production. All the key product attributes – fabric/style/colour/ size – are committed to in the cutting process. Once fabric is cut, precise style commitments are made. However, the cutting process is the first value adding operation in garment production. Place postponement occurs when the final destination of finished garments is left undecided until clear demand signals are received. This has some value in a GQR system. Finished goods inventory may be pooled in central downstream warehouses and ‘called off’ for different locations as local demand requires. Place postponement may also be important for fabric sourcing when fabrics can be used by various garment producers in the network and allocated dynamically to garment manufacturing plants depending on current demands. There are some applications in apparel products combining late point differentiation and place postponement – so called ‘customising in the channel’ - where centrally stored inventory is worked on within logistics facilities for such finishing operations such as tagging, labelling, printing or specialised packing appropriate for particular markets, particularly for promotional items. A type of postponement that is less commonly discussed is postponement in planning. The most valuable and important type of postponement in dynamically managing a GQR clothing network is structured and staged planning postponement, illustrated in Figure 6.2.

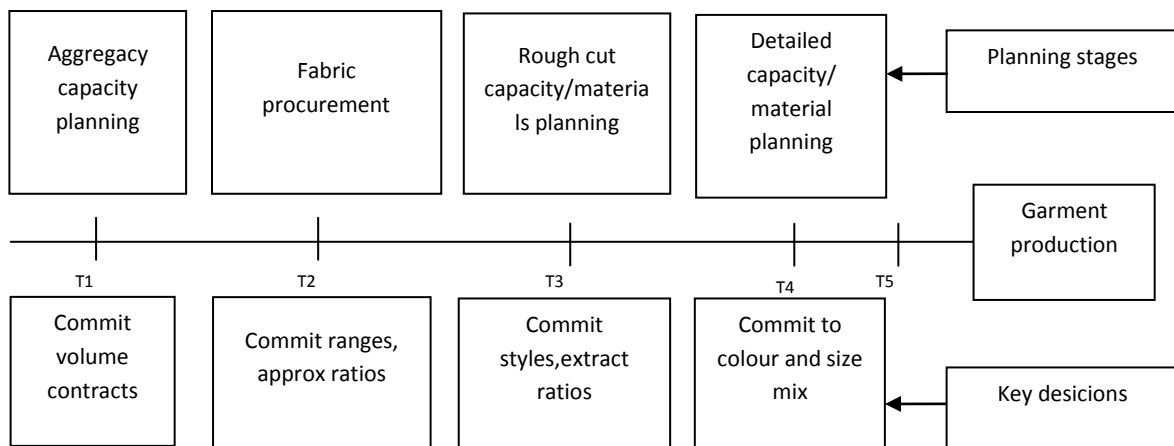


Figure 6.2 : Staged planning postponement and flexible open pipelines

Well designed staged planning postponement strategies operating over a rolling planning horizon have great potential to enable effective dynamic planning to meet changing market requirements. Essentially, aggregate volumes are committed to at an early stage of the planning process but commitments to precise mix requirements are delayed as late as possible in the planning process, thus maintaining an open flexible planning pipeline but allowing the network to prepare for volume production. At each stage, commitments to order details become more precise – initially just volume contracts but eventually commitment to precise mix ratios in terms of colour and size. The precise stages and timings (T1 to T5 in Figure 6.2), as well as the associated planning activities, will depend on the nature of demand, the nature of the supply network, how responsive it is and also on the retailer’s strategy. The global dispersal of production units needs to be factored in – geographical distance may determine the latest point at which commitments can be made and how much flexibility there is in the planning pipeline. Market knowledge is also important. The details of a staged planning postponement strategy will differ depending on whether basic, seasonal, fashion or fast fashion garments are being produced.

Network capability

Planning for capacity is one thing. Capability – the range of garment styles that a network can produce - is another. Both the capability and performance of the supply network must be assessed. Although fashion trends can and do go through sudden, perhaps seismic changes from one season to the next, for many seasons range changes can be more gradual and planning at the mix level is more important. Ensuring an appropriate range of network capabilities, particularly when major changes are anticipated is therefore important, i.e. the 'health' of the network must be maintained. For retailers and brand owners with established networks it is important to track performance, understand where critical interfaces occur (e.g. interfaces with the greatest influence on responsiveness and lead time) and where additional capabilities may be required. Managing across critical interfaces with supply network partners is important. The power of rapid information gathering needs to be leveraged with appropriate IT systems to highlight underperformance and to assess where additional or different capabilities may be desirable. Dynamic networks that attempt to match real demand with supply more precisely will inevitably have some problems but valuable learning can occur by addressing problems proactively and jointly. The powerful player in a supply network can benefit from managing the development of capability, capacity and performance of the supply base. Supplier development programmes can benefit the long term health of a network by enabling appropriate and timely capacity expansion (perhaps through joint investment), by developing quality standards and by having proactive and joint approaches to problem solving.

6.3: ZARA

Different retailers, brand owners and branded manufacturers have evolved, developed and deployed different strategies to achieve Global Quick Response (GQR) with different levels of network integration. Inditex, the Spanish textile, clothing and retailing company and its Zara brand have been noted frequently in the both the academic and practitioner literature for the radical changes they have brought to the way fashion clothing is sourced, produced and sold. Their supply network has traditionally been in Northern Spain and Portugal but increasingly they have used an international supply network, sourcing from countries such as Turkey, Morocco, India,

Pakistan, Bangladesh, Sri Lanka and Indonesia. However, their network remains strongly integrated - 60% of the production is carried out in-house in Europe and neighbouring countries; 40% of its fabric is sourced from Inditex companies; it has its own design resources and systems, centralized and automated fabric cutting and dyeing and has its own distribution centres. They are therefore more vertically integrated than many of the major clothing retailers or brand owners operating globally. Zara prioritises responsiveness to its global retail network over production efficiency. They are willing to tolerate surplus capacity to enable responsiveness. Their operating philosophy emphasises well-designed systems that are focused on compressing the time taken from receiving market information to delivering the right products to Zara's retail stores. The dominant 'rhythm' that drives design, forecasting, planning and replenishment across the entire network. In deploying these principles, Zara uses typical good practices, e.g. state-of-the-art IT, warehousing and distribution systems. Their distribution centres enable rapid dispatch of garments to stores all over the world, e.g. within 24 hours for the EU and within 48 hours for North America and Asia. However, they also adopt less common approaches. Co-location of designers, production and distribution staff has a major positive effect on achieving rapid response. By deploying 'end-to-end' control of both physical supply and information transmission, Zara achieves rapid time to market for new products in small batches, resulting in reduced markdowns and less stock holding overall than competitors. Their inventory-to-sales ratio is better than many of its competitors. Furthermore, Zara maintain different mixes of products across their retail outlets and offers large assortments of garments to their customers. They are prepared to tolerate stock-outs, reasoning that it may encourage customers to make frequent visits to stores. Figure 6.3 illustrates Zara's overall approach that enables it to achieve time compression in supplying garments to retail stores that will best appeal to customers. It is based on strong market intelligence to understand what is selling and customer preferences for specific garments, styles, colours and combinations. Retail stores operate on a tight schedule for replenishment orders that are fed into the forecasting, planning and scheduling system to drive both the production and distribution networks. This enables rapid dispatch of garments driven by real demand. Zara is prepared to hold significant stocks of fabric to enable the garment production system to be decoupled

from the longer lead time fabric production system. This is helped by having a significant level of fabric supply originating within its parent company group. Zara's new garment design cycle may be seen as a form of 'time postponement'. Market intelligence is used for designing and developing new garments quickly. Zara has invested significant resources into design and garment engineering to interpret market intelligence and to enable new garment variants to be developed, evaluated, costed and planned for production rapidly. Thus, Zara can delay or postpone the final design until it has a clear view of likely demand for the new variant, knowing that its design and development system can respond quickly with garment designs that can be successfully engineered and brought into production.

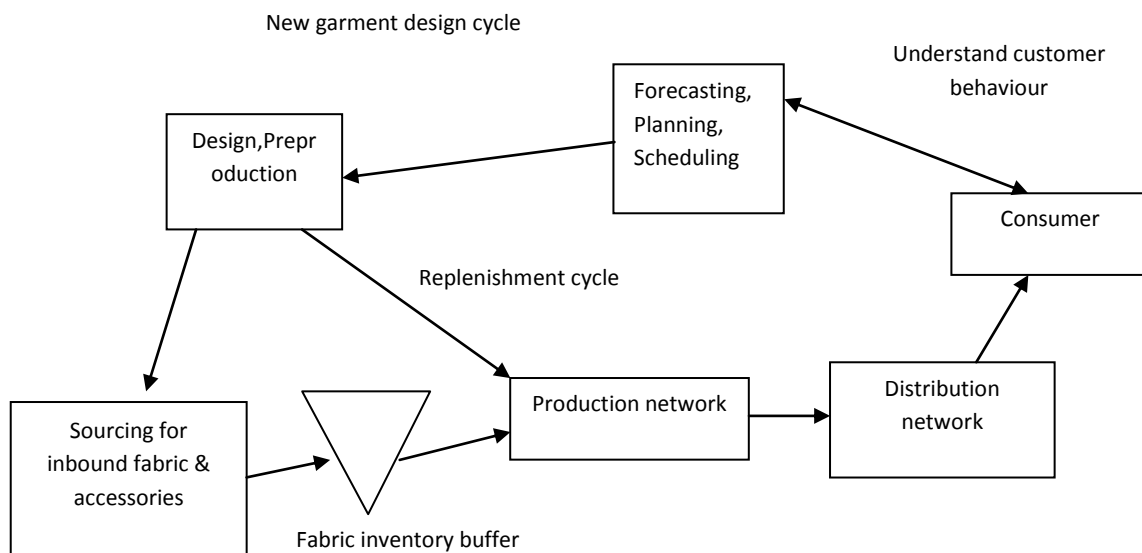


Figure 6.3 :Zara's demand driver approach

6.4: BENETTON

Benetton's traditional approach of direct retailing entrusted to third parties represented one of the Group's most successful strategies for many years. However, this strategy no longer seems to be able to sustain Benetton's presence on the market. The retail market has recently been characterized by a general tendency to increase the average size of retailing outlets, up to 1500-3000 square metres- the so-called

megastores. On the contrary, the average size of Benetton's retail outlets has remained much smaller. Benetton risks seeing its locations suffocated by the aggressive market penetration strategies of its international competitors, whose retail outlet's average size is larger. In order to face this challenge Benetton has decided to reorganize its commercial policies and change the size of its retail outlets. Alongside the strategy of rationalizing retail outlets, which are still organized using the traditional licensing formula, Benetton has taken on a far greater challenge: the Retail Project. Since November 1999, Benetton has been working on a project which seeks to flank its traditional retail network of licensed retailers with a direct sales network, which will be made up of medium to large-size shops directly owned and managed by the Treviso-based company itself. The Retail Project, which entails complete downstream integration, represents a marked change in the traditional Benetton model of business organization. With the Retail project, Benetton is seeking to challenge competitors, focusing on selling garments with a high styling content, on continuous rotation of the products displayed in outlets and on very large display areas. By opening and directly managing its own retail outlets, Benetton is also able to get closer to the final consumer, thus obtaining more information and reinforcing its image, in a business where fashion is more and more unpredictable, subject to lightning changes and where, as a result, quick response to the market is a key success factor. Moreover, through an information system that directly links Benetton's own retail outlets with headquarters, the firm know exactly how many, which size and what colour of article has been sold, how much it was paid for these and what remains on the shelves in the shops. Thus, Benetton is able to design and produce collections on the basis of continuously updated information.

CHAPTER 7 : ECR

Efficient Consumer Response (ECR) came into existence in the US as a direct response by the grocery industry to threats from alternative store formats/types – such as discount stores, convenience stores, deep discount drug stores (retail pharmacies which also sell low-price consumer items), hypermarkets/ supercentres, and the rather quaintly named “category killers” which offer specialised, limited-line discount goods (such as toys or sports goods). These alternatives to the supermarket began to take market share away from the major supermarket chains in the late 1980s and early 1990s. The pressures from competitors in this variety of alternative store formats then forced the United States grocery industry to re-examine its supply chain and, as a result of the study, a new initiative known as ECR was introduced. The term “Efficient Consumer Response” came into general usage at the Food Market Institute Conference in January 1993 in the United States. ECR is a grocery industry supply chain management strategy aimed at eliminating inefficiencies, and excessive or non-value-added costs within the supply chain, thus delivering better value to grocery consumers. It is designed to re-engineer the grocery supply chain away from a “*push system*” in which manufacturers “push” products into stores, towards a “*pull system*” in which products are “pulled” down the supply chain into the store by consumer-demand information captured at the point of sale. The ultimate goal of ECR is to produce a responsive, consumer-driven system which allows distributors and suppliers to work together in order to maximise consumer satisfaction and minimise cost. In order to achieve the goal, ECR proposes changes in nearly all the grocery industry business practices to make them efficient. The technologies, which are primarily electronic commerce (ecommerce) components, are used to automate these efficient business processes, as well as to enhance the communication and relationships between companies. ECR is thus an application of ecommerce within the grocery supply chain. The ECR strategy is used not only in the US but also in some other regions, notably Europe. A number of research projects conducted in Europe show that there have been increasing levels of interest among manufacturers and retailers in implementing ECR. Anecdotal evidence, however, suggests that ECR is being implemented in Europe for different reasons from those which drove North American corporations. The competitive push from alternative store formats does not appear to

be a major driver for ECR in Europe. As a preliminary comparative exercise, the more limited objective of this paper is to use available survey data to compare aspects of ECR implementation in the US and Europe.

7.1 : ECR'S HISTORY

The supermarket originated during the 1920s in the United States. As retail grocery outlets, supermarkets are characterised by self-service from open shelves. Supermarkets also provide an assortment of non-grocery products. Due to the economic depression which began in 1929 and the mobility of consumers provided by the newly-accessible automobile, consumers would rather travel to more distant supermarkets offering lower prices, than shop in their closer but more expensive local food stores. As a result, supermarkets experienced an explosive growth in popularity during the 1930s. As the number of supermarkets in the US began to reach its maximum sustainable level during the 1950s, competition drove the development of a number of innovations designed to maintain profits. These included, *inter alia*, the use of "private brand" labels, stamps and games. Later, in the 1970s, the use of discounting techniques and coupons began to replace the use of stamps and games. All these consumer promotion techniques required extensive administration and, therefore, introduced overhead costs to the operation of a supermarket which would naturally be reflected in the prices charged to customers. A further disadvantage of supermarket operations was the adversarial relationship existing between grocery manufacturers and retailers, which operated to the disadvantage of both groups. In most transactions, manufacturers would attempt to sell as much as possible at high prices, while retailers/distributors would tend to purchase as little as possible at the lowest price. Manufacturers normally started with high prices and later discounted these to meet their shipping goals. As a consequence, forward/investment buying and diverting were added to the array of inefficient grocery industry business practices which generated short-term excess profits for the supermarket, but created significant administrative overheads, inventory carrying costs, sporadic manufacturing schedules for manufacturers and high inventory levels for the entire supply chain. In addition, these practices also had the potential to erode the value of manufacturers' brands, causing customers to become more price sensitive and less brand loyal. All these

inefficient consumer and trade promotions resulted in a loss of market share for supermarkets in favour of the leaner, more focused alternative store formats in the late 1980's/early 1990's .

7.2: A COLLABORATIVE SOLUTION

In order to survive, the US grocery industry realised that it must re-examine its supply chain and purchasing practices. It needed to study the ways in which alternative format retailers were carrying out their business and to develop new ideas for making the mainstream grocery industry more competitive. A study undertaken by a group of US grocery industry leaders in 1992 resulted in the ECR initiative. ECR is actually not a new concept, but a specialised version of the Quick Response (QR) strategy, which is employed in the apparel industry. Quick Response, in turn, is a modified version of the Just-In-Time (JIT) inventory management strategy for manufacturers, which was first used by the Toyota Motor Corporation in Japan. ECR attempts to eliminate inefficiencies within the grocery industry supply chain by introducing strategic initiatives in four areas: Efficient Store Assortment; Efficient Product Introduction; Efficient Promotion; and Efficient Product Replenishment. K

7.3: STRATEGIES

Efficient store assortment

This initiative is aimed at optimising the productivity of inventory and shelf management at the consumer interface - the store level.

Efficient product introduction

The objective of this initiative is to maximise the effectiveness of new product development and introduction activities, in order to reduce costs and failure rates in introducing new products.

Efficient promotion

This initiative aims at maximising the total system efficiency of trade and consumer promotions. This can be achieved by introducing better alternative trade and consumer promotions, such as *pay for performance* and *every day low price* policy.

Efficient product replenishment

The objective of this initiative is to optimise time and cost in the replenishment system by the provision of the right product to the right place at the right time in the right quantity and in the most efficient manner possible.

7.4: PROCESSES

Category management

Category management supports the first three initiative of ECR discussed above. It is defined by Information Advantage as *“an interactive business process whereby retailers and manufacturers work together in mutual cooperation to manage categories as strategic business units within each store”*. A category is a group of products which can be substituted for one another by a consumer and examples include cereals, bakery, household cleaners, and so on. The types of categories to be included in a store have to be determined correctly to meet consumer demand and at the same time, to maximise profit for all parties. Category Management employs EDI, barcodes and scanners to accurately capture information on customer demand on each category and to share the information between trading partners.

Continuous replenishment program (CRP)

This program supports the efficient product replenishment initiative. CRP is defined as *“the practice of partnering among distribution channel members that changes the traditional replenishment process from distributor-generated purchase order to one based on actual or forecast consumer demand”* .

CRP transfers responsibility for inventory replenishment from retailers/distributors to suppliers and thus the approach is also known as *“Vendor-Managed Inventory”*. With CRP, orders are transmitted electronically and are made more frequently and in smaller quantities . CRP is also supported by the *category management* program which forms the shelf management strategy to track the inventory and demand for each individual category. In addition, CRP involves the use of technologies discussed below.

7.5 ENABLING TECHNOLOGIES

Barcodes / Scanners

The use of barcodes and scanners is a fundamental element for ECR implementation in the grocery industry as it allows accurate and faster information capture to be obtained, which in turn can be shared with trading partners (EAN Australia 1997).

Electronic Data Interchange (EDI)

Electronic Data Interchange (EDI) is *“an inter-organisational exchange of business documentation in a structured, machine-processable form”* . Besides purchase orders and invoices, another common business document exchanged electronically in the grocery industry is the Advance Shipping Notice (ASN) the EDI message which precedes the arrival of pallets at their destination.

Computer-Aided Ordering (CAO)

Computer Aided Ordering (CAO) is *“a retail-based system that automatically generates orders for replenishment when the inventory level drops below a pre-determined reorder level”* (ECR Central 1997, p1). The system keeps track of the inventory levels of all items in the store and makes necessary adjustments when sales or replenishments occur.

Cross-Docking/Direct Store Delivery

Cross-Docking or *“Flow-Through Distribution”* is a direct flow of merchandise/ product from receiving to shipping, thus eliminating additional handling and storage steps in the distribution cycle . The idea of cross-docking is analogous to *‘Direct Store Delivery’*, in which manufacturers deliver products directly to the retailer, bypassing the wholesaler to eliminate warehouse handling.

Activity-based costing

Activity-Based Costing is a new costing tool which works on the principle that activities (as opposed to product volumes or labour in traditional accounting) are what really affect costs. ABC offers a better understanding of how profits are generated, as it increases the visibility of costs in a particular environment. It can be used to gain top management commitment and leadership to support the implementation of ECR and its key elements.

7.6: MAKING THE CHANGE TO ECR

The range of management techniques and technological initiatives described above have proved highly successful in the United States. The obvious benefits to be gained from ECR have led to its adoption by some companies in Europe, though with a different motivation. In order to make the ECR initiative work, there is a need for major changes in a company's culture, traditions and business practice. Proponents of ECR believe that companies within the supply chain must move from win/lose adversarial relationships to win/win relationships between trading partners. Many companies find the process of making these changes challenging. However, only when all parties within the supply chain work together to increase efficiency and remove costs from the chain will they be able to provide greater value to consumers. Then the use of technologies to automate these efficient business processes will remove further time and costs from the supply chain.

7.7: ADOPTION ISSUE

ECR education

Both US and European respondents viewed "trade association conventions /seminars/conferences" and "trade association publications", as well as "an inside champion of ECR" as important sources in obtaining information and learning about ECR. Thus, in both regions, industry/trade associations play an important role in initiating the adoption of ECR by companies through the communication and education process. Both US and European companies view system vendors and academics as not particularly useful in understanding the ECR concept.

Change management

Both US and European manufacturers and retailers viewed "heavy and visible personal commitment" as one of the most effective and widely used ECR change management approaches. "Pilot programs with suppliers or customers" and "cross-functional or multi-discipline action teams" were reported as widely-used approaches among European manufacturers and retailers. The concept of "business process reengineering" appears to be quite popular in Europe and was also viewed by some American retailers as a satisfactory change management approach.

Creating Performance Measures

There was considerable agreement by both regions on the need to create performance measures which:

- focus more on customer/consumer satisfaction
- place more emphasis on productivity gains
- place more emphasis on Activity-Based Costing to understand the real profitability of products and customers.

Level of program and technology implementation

The US 1995 survey indicates that Category Management and Continuous Replenishment Program were progressing significantly among American manufacturers and retailers. The 1995/6 European survey showed that these were the least widely implemented practices (quite possibly because the much smaller European inventory holdings made implementing these processes less urgent). The 1997 findings, however, indicate an improvement in the implementation level of Category Management in Europe. Increased levels of implementation of technologies such as EDI, particularly among manufacturer respondents (who generally lagged behind retailers in IT implementation), were also identified. The annual tracking surveys used in this study suggest that the level of maturity of Cross Docking/Direct Store Delivery implementation was higher in Europe than in America. DSD has been widely implemented by large European retailers. However the EDI implementation levels are still relatively low in both regions. The highest EDI capabilities found in both regions were in purchase order transactions and invoice transactions.

7.8: OBSTACLES AND BENEFITS

Obstacles

The 1994 and 1995 US surveys indicate that “lack of a clear roadmap” was viewed as one of the major obstacles to ECR implementation, particularly among retailers. “Shortage of skilled personnel”, and “inflexible IS” are also major obstacles. Table 4 lists, in rank order, the six problems most commonly identified by US manufacturers and retailers, based on the 1995 survey. In Europe, most frequent reasons given by manufacturers and retailers for not implementing ECR in both surveys, were “shortage of adequately skilled people” and “Lack of understanding of ECR. Manufacturers in

both regions view “reluctance of customers to share information” as one of the major problems encountered. Table 5 lists the six problems most commonly identified by European manufacturers and retailers, based on the 1997 survey findings.

Benefits

The US 1995 survey results indicate that distributors/retailers believed they had gained some benefits from ECR, and that the projected benefits had increased over the years. These benefits included: increased sales and gross margin, reductions in warehouse inventories, reductions in retailer inventories, increased variety of goods offered to customers, reductions in the numbers of SKUs (stock keeping units), and reductions in expenses for all key operating areas. Similarly, the US manufacturers and brokers both expected and experienced such benefits as: increased sales, increased profit projections, reductions in costs of goods, reductions in packaging, raw materials, manufacturing and other expenses, reduction in out-of-stock problems, reduction in finish-product inventory, smoother product flows, and better information. In Europe, manufacturers expect to see ECR benefits continue to improve in regards to: reductions in finished goods inventories, reductions in invoice deductions and out-of-stocks, increased in sales, and improved profits. European retailers also expect reductions in all their costs, reductions in warehouse inventories, improved sales, gross margins and sales per square meter, slight reductions in transaction size, and an increase in store traffic.

7.9 : DISCUSSION AND CONCLUSIONS

These comparisons suggest that the ECR initiative has gained some acceptance by the European grocery supply chain, although the level of ECR investment and the rate of growth are still lower in Europe than in the US. The decline from 1995 to 1997 in the rate of ECR implementation in Europe may indicate that the European grocery supply chain does not take ECR as seriously as does the US supply chain. A further possible reason may be that there is less competitive push driving the ECR adoption process in Europe. However, the already advanced technology of most European retailers could provide a strong foundation for ECR implementation, if these retailers became convinced of the advantages of ECR. ECR implementation in Europe is generally

initiated by the larger trading partners. In both America and Europe, changes in attitude to establish partnerships and facilitate information sharing is still the most challenging issue. However, it is argued that more companies in both US and Europe are now actively pursuing the ECR partnership in order to improve the overall performance of the supply chain. Based on the most commonly cited implementation obstacles by survey respondents in both US and Europe, in order to promote ECR implementation in both regions, there is still a need for:

- investments in communication both in a technological and behavioural sense to address the reluctance in sharing information between trading partners.
- training to address the inadequacy of skilled personnel and to develop clear road maps for the implementation process.
- investments in IS to achieve compatibility between organisations.
- reassessment of priorities for resources
- improving the strategic use of ECR to longer term business growth to overcome the problem of conflicting priorities.

The surveys used in this study show that manufacturers and retailers in both regions have experienced some benefits in terms of increased sales, improved profit and reduced costs. However, neither group in the US nor Europe has actually reached what could be termed critical mass (30%-35% of industry volume) the point at which the real benefits of ECR can be reaped. While the surveys do not provide evidence to show whether ECR has produced improvements in turnover or market shares, this is clearly an important indicator of the long-term success of ECR. In this regard, further research is needed to identify how ECR improves turnover or market shares of companies.

7.10: FUTURE RESEARCH

Despite the potential benefits obtainable from ECR, it must be reiterated that the adoption of ECR has been slow in both regions. Clearly, there is a need to explore the reasons for the slow uptake of ECR in each of these regions, and to determine whether these reasons differ between region. Such understanding could assist in the development of techniques for promoting wider ECR implementation. On the other hand, further study of low adoption levels may require a revisiting of assumptions about information sharing which underlie the ECR concept. It is perhaps significant that the ECR strategy least studied thus far in the surveys has been “product introduction”, a factor which especially touches on the fine balance between collaboration and competition in the grocery industry.

CHAPTER 8 : CONCLUSIONS

Supply chain management has emerged as one of the major areas for companies to gain a competitive edge. Managing supply chains effectively is a complex and challenging task, due to the current business trends of expanding product variety, short product life cycle, increasing outsourcing, globalization of businesses, and continuous advances in information technology. Because of shorter and shorter product life cycles, the pressure for dynamically adjusting and adapting a company's supply chain strategy is mounting. Zara and Benetton have different approaches that enable at the same result : satisfy customer's demand. ECR is an important suggest to supply chain management that had produced substantial results in other industry and that can be adopted as well in the clothing industry.

CHAPTER 9: PLANNING

In this chapter is described the time scheduling of the phases of the project, whit a chart that show in detail the processes and times needed for its realization. As we can seen later, in this planning there are two different schedules.

9.1 : INITIAL PROJECT PLANNING

One of the first things to do while starting a project is the time scheduling; first of all it needs to be done a list of the activities to do and secondly to assign a duration to these activities.

This initial planning it was useful to know in each moment where it had to be the project and where it really was.

ACTIVIDADES\SEMANAS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PLANNING	█														
REPORT		█													
INTRODUCTION			█												
HISTORY AND ORIGIN			█												
BOOK READING*				█	█	█									
ARTICLES READING		█	█	█	█	█	█	█							
ZARA'S BUSINESS MODEL					█	█	█								
BENETTON'S BUSINESS MODEL					█	█	█								
ZARA'S STRATEGY								█	█						
BENETTON'S STRATEGY										█	█				
ZARA'S STRENGTHS								█	█						
BENETTON'S STRENGTHS										█	█				
COMPARISON OF THE TWO BUSINESS MODEL												█	█		
DESIGN OF INFORMATION SYSTEM													█	█	
CONCLUSIONS															█
BIBLIOGRAPHY															█
REVISION														█	█

Figure 9.1: initial planning

The initial planning is about 15 weeks so:

$$(15 * 10 * 5 = 750h) + (15 * 6 = 90h) = 840h$$

Where during the week I've worked 10 hours a day and on Saturday only 6 hours. In particular, during the week from 9 a.m. to 1 p.m. and from 2 p.m. to 8 p.m.. And on Saturday from 10 a.m. to 1 p.m. and from 2 p.m. to 5 p.m.

9.2: REAL TIME PLANNING

Once finished the project, it was done the calculation of the real hours spent in the project, with the relative distribution. In the following table there is scheduled the final order.

ACTIVIDADES\SEMANAS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLANIFICATION	■															
REPORT		■														
INTRODUCTION			■													
VERTICAL INTEGRATION			■													
HISTORY			■	■												
BOOK READING				■	■		■									
ARTICLES READING		■	■	■	■		■	■	■	■						
ZARA'S BUSINESS MODEL				■	■		■									
BENETTON'S BUSINESS MODEL									■	■	■					
ZARA'S MATHEMATICAL MODEL							■	■	■							
BENETTON'S INFORMATION SYSTEM											■	■	■			
ZARA'S FINANCIAL DATA					■				■							
BENETTON'S FINANCIAL DATA											■		■			
ZARA'S COMPETITORS									■							
BENETTON'S COMPETITORS													■			
COMPARISON							■				■			■	■	■
ECR															■	■
CONCLUSIONS															■	■
BIBLIOGRAFY																■
REVIEW														■	■	■

Figure 9.2: real planning

This work started the first week of March and ended the 20th of June.

At the end of the project work's total hours are calculated as follows:

REAL TIME :

$$(15 * 10 * 5 = 750h) + (15 * 6 = 90h) = 840h$$

9.3: JUSTIFICATIONS

At this point are analysed the reason why the two tables present such differences.

Studying in detail the two charts we can elicit different conclusions:

First of all, during my research and reading the articles, I found correct to change the index to underline a specific point of view of the comparison : the vertical integration.

Secondly, I finish my work one week later due to my trip to Italy to finish all the bureaucracy concerning with the final project.

All the other differences are due to a obvious inequality with what is theoretical and what is real such as: time for learning, researching, writing, amount of information, write in a different language.

9.4: ECONOMIC ANALYSIS

This analysis is concerning with the amount of work's hours and their relative costs. In fact, considering the total hours (840) and the cost per hour of an engineer(30€):

$$840 * 30€ = 25200€$$

Beside this fundamental cost there are also others additional costs such as the cost concerning the use of the computers ; the value of my pc is about 890€, his residual value is about 100€ and his useful life is 3 years (156 weeks). My project's duration is 15 weeks, so the depreciation charge per week is:

$$(890-100) / 156 = 5,064€$$

And the depreciation charge of the project : $5,064 * 15 = 75,96€$

The usage of Internet is a relevant component of the calculation of the project's costs. A cost per month is 29,90€; using it for 4 months :

$$29,90 * 4 = 119,6€$$

Another important cost to take into account is the cost of printing all the material that I considered important for the project. Considering a cost per sheet of 0,03 € :

$$300 * 0,03 = 9€$$

At least, we have to add the cost of the book "The delta project" : 26€

As a result, the whole cost of the project is:

VOICE	COST
ENGINEER	25200€
PC	75,96€
INTERNET	119,6€
PRINT	9€
BOOK	26€
TOT	25430,56€

Figure 9.3: table of cost

CHAPTER 10: REFERENCES

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