EXCELLENCE IN EUROPEAN APPAREL SUPPLY CHAINS: ZARA

By

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Bachelor of Science, Management Science

Submitted to the Zaragoza Logistics Center in Partial Fulfillment of the Requirements for the Degree of

Master of Engineering in Logistics and Supply Chain Management

In the

MIT-Zaragoza International Logistics Program

At the

Zaragoza Logistics Center,
A Research Institute Associated with the University of Zaragoza

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ABSTRACT

The apparel industry is characterized by short product life cycles and labor intensive production processes. The industry is driven by product proliferation, increasingly shorter product life cycles and brand image. Excellence in fashion apparel supply chains is distinguished by the ability to react to changes in customer demand and fashion trends quickly and accurately. Zara, the Spanish Specialty Apparel Retailer, is a company that has set the standard for excellence in supply chain practices by its ability to achieve response times of 10 to 14 days. This case study on Zara analyses its supply chain practices. Just in time, quick response, postponement, local sourcing and production are some of Zara's supply chain practices that help it achieve excellence in supply chain. Zara's supply chain operations support its strategy and philosophy of providing fashion that accurately reflects customer demand as quickly as possible at affordable prices.

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Thank you all for helping me through this learning experience.

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1

INTRODUCTION

This thesis examines the European apparel industry with a case study of the Spanish specialty apparel chain, Zara, as an example of excellence in supply chain practices. This research on the European apparel industry emphasizes the economic and supply chain aspects of Zara's operation. The case study analyses the strategic, operational and supply chain processes that have contributed to the success of Zara's retail operation.

Zara is an appropriate characterization of an excellent apparel supply chain in Europe because it is the only apparel company with the ability to react to fashion trends and customer demands within two weeks time. This extremely short lead time is a result of Zara's excellence in supply chain practices. As a vertically integrated company, Zara is able to create a unique way of achieving its quick response effectively and successfully. Some examples of the contributing factors to Zara's quick response are just in time production, planned capacity underutilization, local sourcing, and local production. Sections five and six explain and analyze these practices and how they work to help Zara attain supply chain excellence.

This is thesis is written as a contribution to the Supply Chain Excellence Research for the MIT Supply Chain 2020 initiative. The MIT Supply Chain 2020 Project is a two phase, multiyear research effort to identify and analyze the factors that are critical to the success of future supply chains for example in the year 2020.

This thesis examines the European apparel industry as a contribution to Phase I of the Supply Chain 2020 project. The objectives of Phase I are to understand excellent supply chains and the underlying strategies, practices, and macro forces that drive them. Phase I is a one-year effort to research the excellent supply chains in nine industries through case studies of various firms and organizations. This research will focus on understanding the evolving business strategies, operating models, practices and principles that improve performance and create competitive advantage. Phase II of the Supply Chain 2020 Project will use the research and insight from Phase I in order to project the future using scenario generation and planning methodologies. The work will highlight what actions organizations should take to help achieve supply chain excellence.

The remaining sections of this thesis will contribute to the characterization of excellent apparel supply chains in Europe and Zara's supply chain practices. Section two is a literature review on the existing works about the strategy, the apparel industry, and Zara that gave the most insight into the research done for this paper. The third section follows with an overview of the apparel industry in Europe with emphasis on supply chain issues. Sections four, five, and six focus on the case study on Zara. An overview of Inditex, Zara's parent company, is given in section four. The next sections look at Zara followed by a further look at Zara's specific supply chain practices. Section seven closes the paper with some conclusions and final thoughts.

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LITERATURE REVIEW

The relevant literature that applies to my research on excellent apparel supply chains using Zara as an example can be categorized into three categories; strategic forward looking readings, industry readings and company specific readings. This section characterizes the readings that were most influential and informative for this thesis.

Michael Porter's "What is Strategy?" paper gives a solid foundation for defining strategy and the structure of a strategy[1]. He establishes a clear difference between strategy and operational excellence. In his paper, strategy that gives a company competitive advantage is viewed as something that is very difficult or impossible to duplicate.

The literature about the apparel industry in general can be found in European Commission Papers, A Stitch in Time by Abernathy el al, case studies on the major apparel retailers, among other resources for literature on the apparel industry. The European Commission Papers is a series of papers written about the dynamics about the European Apparel and Textile industry with statistics on the industry for the EU and the candidate countries[2]. These papers also address issues specific to the Apparel and Textile industry in Europe and the effect of the changing dynamics of the EU on the industry. A Stitch in Time was written in 1999 with connections to the Harvard Center for Textile and Apparel Research.[3] The issues addressed by

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[1] Porter, Micheal E. "What is Strategy?" Harvard Business Review OnPoint (November-December 1996): 59-79.

[2] Economic Competitiveness analysis of the European textile and Clothing Sector in support of the Communication ' The future of the textiles and clothing sector in the enlarged Europe'. 21 Nov. 2003. Commission of the European Communities. 2 Dec. 2004

Euro-Mediterranean Dialogue on the Future of the Textile and Apparel Industry. 16 Feb. 2005. European Commission. 25 Mar. 2005 <http://europa.eu.int/comm/enterprise/textile/euromed/htm>.

Evolution of Trade in Textile and Clothing Worldwide-Trade Figures and Structural Data. 21 Nov. 2003. Commission of the European Communities. 2 Dec. 2004

[3] Abernathy, Fredrick H., et al. A Stitch in Time. New York, Oxford: Oxford UP, 1999.

this book are lean retailing, region based realignment, and various other industry trends such as product proliferation.

Regarding the literature about Inditex and Zara, there are several important case studies written about the retail chain. These include the Harvard Business School's "Zara: Fast Fashion" and Columbia Business School's "Zara."[4] Harvard Business Review's "Rapid Fire Fulfillment" is another work on Zara that specifically addresses Zara's supply chain practices that help the company achieve its success in quick response. There are also two recent books written in Spanish: Zara: El modelo de negocio de Inditex and Amancio Ortega: de cero a Zara. Zara: El modelo de negocio de Inditex means *Zara: The business model of Inditex*. This book was published in June 2004 and is the most recent work about Zara[5]. The book covers the history, business model, strategy, and structure of the company. Amancio Ortega: de cero a Zara can be translated as *Amancio Ortega, from zero to Zara*. This is a biography of the founder of Zara and gives some insight into the beginnings and roots of the company[6]. The Planeta Zara DVD is a documentary in Spanish on the retail chain which covers the store operations and gives an inside look at the company's operations at the corporate headquarters.[7]

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[4] ZARA. Comp. Linda Arrington, et al. 2002. Columbia Business School. 24 Jan. 2005

Ghemawat, Pankaj, and Jose Luis Nueno. "ZARA: Fast Fashion." Harvard Business School (2003).

[5] Fabrega, Fernando. Zara: El modelo de negocio de Inditex. Madrid: Claves de Gestion, 2004.

[6] Blanco, Xabier R., and Jesus Salgado. Amancio Ortega, de cero a Zara. Madrid: La Esfera de los Libros, 2004.

[7] Planeta Zara. Dir. Josep Serra . DVD. Canal Plus, 2002

3

EUROPEAN APPAREL INDUSTRY

This chapter gives an overview of the European apparel industry, its significance in the economy, its status, and implications for the supply chain and the future. The dynamics of the European apparel industry are evolving as the European Union member countries change. Since the European Union is still developing as a governing body, some of the statistics given in this section reflect some of the different stages of its development.

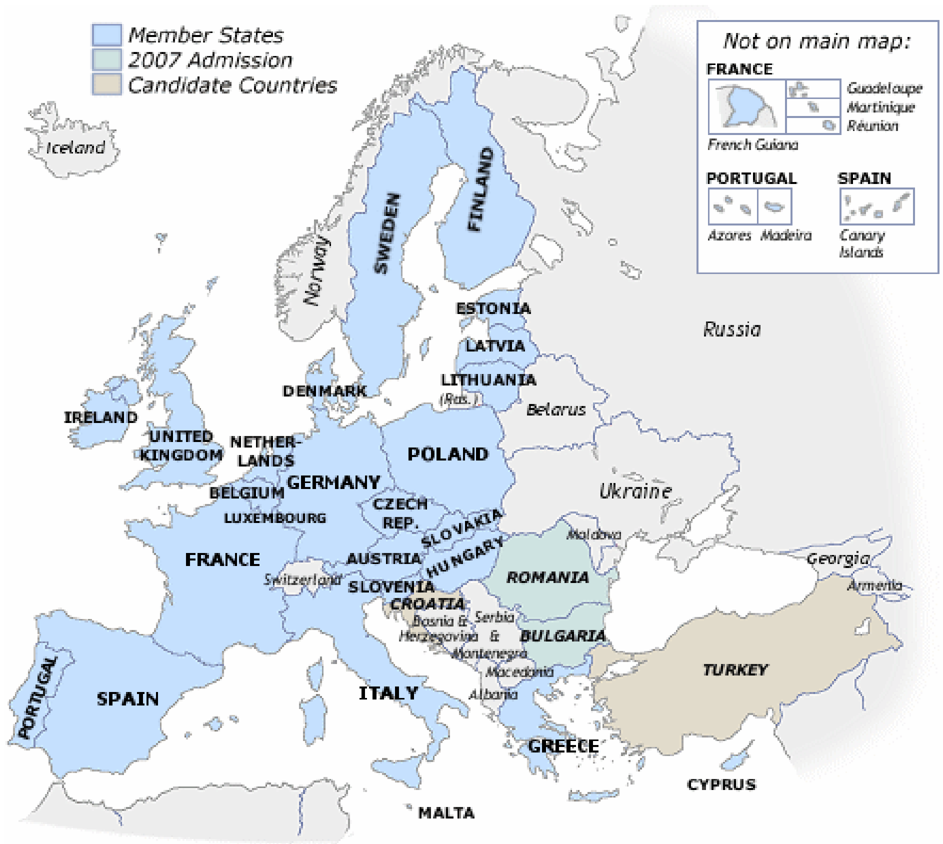
3.1 Europe

The original EU15 countries are defined as Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden, and the United Kingdom. After May 2004, ten more countries joined the European Union, making it the EU25. The EU25 refers to EU15 and the new member states: Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia. The candidate countries such as Bulgaria, Croatia, Romania, and Turkey will also affect the European textile and apparel industry since this industry plays a large role in the economies of these countries.

Using available information about the EU apparel and textile industry, this chapter presents an overview of the industry. The following map depicts the current and candidate members of the EU.

Figure 3-1[8]

Map pf European Union Member States and Candidates



3.1.1 European Economic Status

With a GDP of 12,481,827 million US dollars or 11,323,496 international dollars in 2004, the EU25 is the largest economy in the world. According to figures from the United Nations Development Program, the EU25's economy has had stagnant growth rate and a high average (1992-2002) unemployment rate of 9.26%.[9] The figure below shows the European Union's GDP in trillions of international dollars between 2001 and 2005 and its percentage of

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[8] EU map http://www.answers.com/main/ntquery;jsessionid=enxndxxbobr7?method=4&dsname=Wikipedia+Images&dekey=EU+map+names+isles.png&gwp=8&sbid=lc03b

[9] Economy of Europe, Wikipedia, http://en.wikipedia.org/wiki/Economy_of_Europe

the GWP (Gross World Product). The GDP of the EU is showing slow growth, but its share of the GWP is decreasing at the same time.

Figure 3-2[10]

EU25's GDP as a percentage of GWP (Gross World Product)

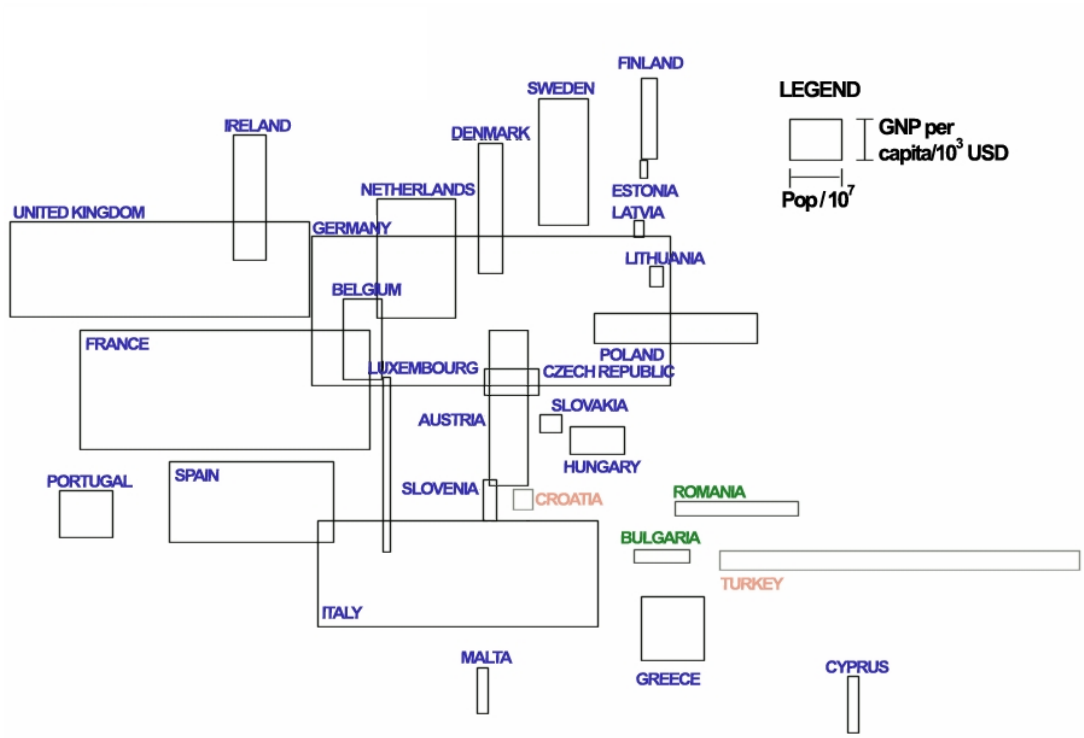
Year	GDP in Trillions	% Change	% of GWP
2001	10.445	N/A	22.60%
2002	10.693	2.40%	22.20%
2003	10.953	2.40%	21.70%
2004	11.323	3.40%	21.30%
2005	11.848	4.60%	21.10%

As the dynamics of the EU change with the addition of more countries, the rate of growth is expected to increase. Meanwhile, the average GDP will likely decrease since the candidate countries are poorer and still developing compared to the current EU countries. The following figure is a visual representation of the European Union and its candidate countries' populations compared to each country's respective GNP per capita. It gives a sense of each country's economic importance with respect to the rest of the EU. We can see from this diagram that the UK, France, Germany, Italy, and Spain carry the most weight in the EU.

[10]Economy of the European Union http://en.wikipedia.org/wiki/Economy_of_the_European_Union

Figure 3.3[11]

European Union: Member States' and Candidates' population and GNP per capita



In 2004, the EU was the number one exporter in the world with 970.6 billion euros in exports. During the same year, the EU imported even more than it exported with imports valued at 1,035 billion euros. Its main trading partners are the United States, Switzerland, and Japan.[12]

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[11] Tai, Kaihsu, European Union Showing Member States and Candidates Population and GNP per capita, Wikipedia (http://en.wikipedia.org/wiki/Economy_of_Europe) 2004

[12] Economy of the European Union http://en.wikipedia.org/wiki/Economy_of_the_European_Union

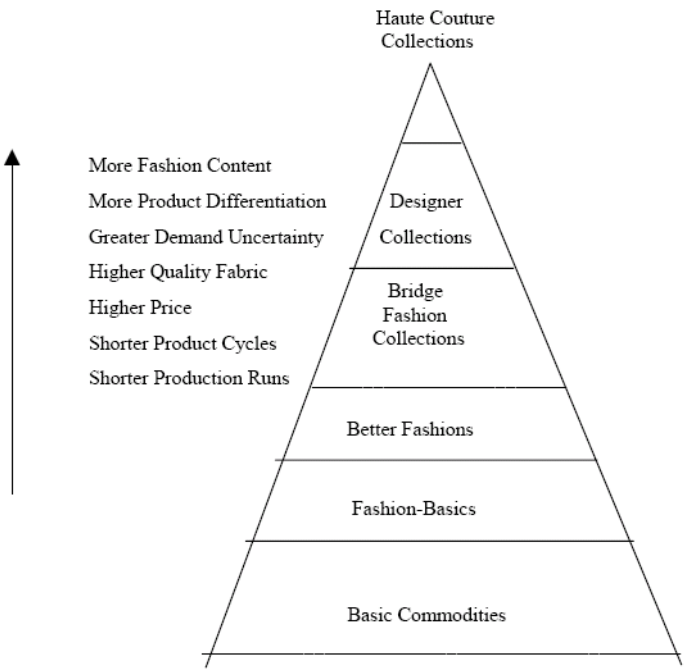
3.2 Apparel Industry Overview

The Apparel-Textile Industry is defined as yarns, threads and filaments, apparel fabrics, technical fabrics and finished items, home textiles, woven garments, knitted garments, and textile floor coverings. This paper will address the apparel-textile industry in general and focus on the fashion apparel aspects of the industry such as ready to wear apparel, footwear and accessories at the specialty apparel retailer level. Ready to wear apparel can be broken down into three main categories: Basic, Fashion-Basic, and Fashion. These categories can be further broken down into more specific categories: Basic, Fashion-Basic, Better Fashions, Bridge Fashion Products, Designer Collections and Haute Couture. As the items get more fashionable, the demand uncertainty, product differentiation, price, and product life cycles for individual SKUs increase.

Figure 3-4 is known as the fashion pyramid which illustrates the aforementioned fashion categories. These categories form a pyramid since the more fashionable the item is, the more scarce it is.

Figure 3.4[13]

The Fashion Pyramid



3.2.1 Apparel Industry in Europe

The European textile and apparel manufacturing industry, based on statistics from the EU15 in 2002, is a 200 billion euro industry consisting of about 177 enterprises employing about 2.1 million employees. Many of these companies are small and medium sized companies with 5-20 employees per company. 38% of the production in the EU15 is garment production while the remaining 62% is textile production. Italy, France, UK, Germany, and Spain account for approximately three quarters in value of all the EU15 apparel and textile production. [14]

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[13] Can Fast Fashion Save the US Apparel Industry? Comp. Sarah Crean, and Peter Doeringer. Vers. Draft. 15 June 2004. <http://www.sase.org/conf2004/papers/doeringer-crean.pdf>.

[14] Economic Competitiveness analysis of the European textile and Clothing Sector in support of the Communication ' The future of the textiles and clothing sector in the enlarged Europe'. 21 Nov. 2003. Commission of the European Communities. 2 Dec. 2004 Commission Staff Working Paper

In 2002, consumer retail spending on apparel, footwear, and accessories was about 324 billion euros based on information on the EU25.[15] Figure 3.5 breaks down this figure by consumer spending on apparel, footwear, and accessories by EU country. We can see that the big five countries, Germany, Italy, UK, France, and Spain, make up over 75% of the consumer spending in this industry.

Figure 3.5[16]

Size and Growth of Western European Apparel Market
Total Apparel Spending by Country
€ billions, ranked by 2000 spending

Country	1997	1998	1999	2000	2001	1997 to 2000 CAGR[1]
Germany	69.5	69.6	70.7	71.6	72.0	0.9%
Italy	58.0	62.2	63.9	64.4	68.3	4.2%
UK	44.8	47.4	50.9	56.3	58.2	6.8%
France	37.2	37.7	38.2	39.0	NA	1.6%
Spain	20.6	21.8	23.5	24.9	NA	6.6%
Netherlands	10.1	10.9	11.5	12.0	NA	6.0%
Greece	8.9	9.0	9.7	10.0	NA	4.0%
Austria	7.2	7.5	7.7	7.7	NA	2.5%
Belgium	6.5	6.7	6.7	7.0	NA	2.1%
Switzerland	6.1	6.2	6.4	6.6	NA	2.8%
Portugal	4.7	5.1	5.4	5.8	NA	7.0%
Norway	3.8	3.7	3.9	4.2	4.4	4.0%
Denmark	3.8	3.9	4.0	4.0	4.1	1.8%
Sweden	3.2	3.2	3.5	3.8	3.6	3.5%
Ireland	2.4	2.7	2.9	3.4	NA	12.1%
Finland	2.5	2.6	2.7	2.8	NA	4.5%
Luxembourg	0.4	0.5	0.5	0.5	0.5	2.3%
Total	289.5	300.6	312.0	324.0	NA	3.8%

[1]Germany, Italy, UK, Norway, Denmark, Sweden, and Luxembourg growth is from 1997 to 2001.

Source: Retail Intelligence and Retail Forward, Inc.

3.2.2 Imports and exports

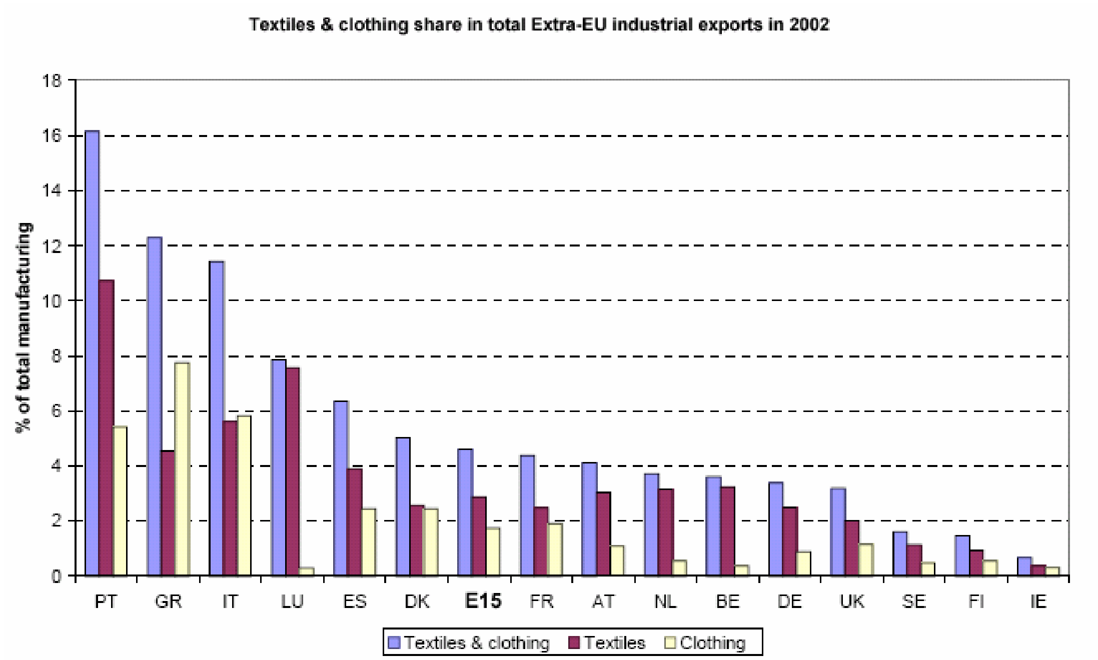
Total textile and clothing trade in 2002 within the EU15 was valued at 13 billion euros. In 1999, the EU15 was the second largest exporter of textile and clothing products after China. This

[15] European apparel retailers face rocky road. 25 Mar. 2003. 2 Dec. 2004 <http://just-style.com>.

[16] European apparel retailers face rocky road. 25 Mar. 2003. 2 Dec. 2004 <http://just-style.com>.

rank would have been number one if trade between the EU15 countries was considered in the figures[17]. In 2000, the EU15 and US combined were responsible for 52% of the world's textile imports and 71% of clothing imports[18]. The following bar graph depicts the value based share of textile and apparel exports made to outside the European Union in each of the EU 15 countries.

Figure 3-6[19]



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[17] Trade Policy. European Commission. 2 Dec. 2004 <http://europa.eu.int/comm/enterprise/textile/trade/htm>.

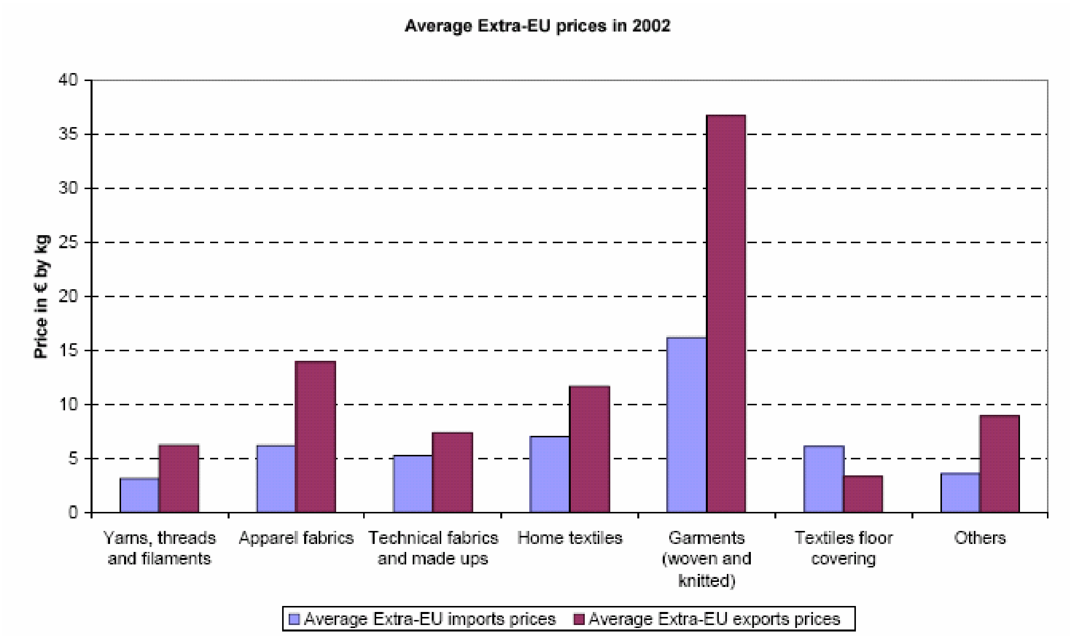
[18] Economic Competitiveness analysis of the European textile and Clothing Sector in support of the Communication ' The future of the textiles and clothing sector in the enlarged Europe'. 21 Nov. 2003. Commission of the European Communities. 2 Dec. 2004

Commission Staff Working Paper

[19] Economic Competitiveness analysis of the European textile and Clothing Sector in support of the Communication ' The future of the textiles and clothing sector in the enlarged Europe'. 21 Nov. 2003. Commission of the European Communities. 2 Dec. 2004

Commission Staff Working Paper, pg 16

Figure 3-7[20]



3.2.3 Customer segments and sales channels

The sales channels for the apparel industry fall into the following categories: supermarket, hypermarket, specialty apparel retailers/fashion specialists, traditional stores, department stores and catalog/mail/online. This paper will further focus on the specialty apparel retail sales channel.

The customer segments are generally Boys, Girls, Infants, Men, and Women. Depending on the company, these categories can be broken down to specific customer segments by other factors such as age group, economic status, or lifestyle.

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[20] Economic Competitiveness analysis of the European textile and Clothing Sector in support of the Communication ' The future of the textiles and clothing sector in the enlarged Europe'. 21 Nov. 2003. Commission of the European Communities. 2 Dec. 2004

Commission Staff Working Paper pg 29

3.2.4 Apparel Industry Characteristics

The Apparel-Textile industry is characterized as a labor intensive industry. In the production process of garments, the sewing and assembly steps are especially labor intensive. The manufacturing aspect of this industry is important for developing nations because historically it is one of the industries that first emerges when a nation is becoming industrialized. National economies tend to rely less on this industry as they become more developed, since intensive processes move to lower cost countries.

Brand plays an important role in the apparel industry. Marketing and brand image are the major factors in fashion apparel sales. In many ways it is the top brands that create fashion trends. These fashion items tend to have short life cycles.

The European apparel industry is also characterized by its strength in innovation, quality, creativity, design and fashion.[21] Since fashion items gain higher margins than basic apparel, this gives the European apparel industry an inherent advantage since the industry can make more revenue and profit from its fashion items.

3.3 Evolution of leading apparel companies

The top companies in the apparel industry characterize the industry with their influences. Some of these leading apparel companies are Adidas, Inditex, Benetton, the Gap, Inc. and H&M.

3.3.1 adidas-Solomon[22]

In the early 1900s, adidas was started by a pair of German brothers, Adi and Rudi Dassler. The Dassler brothers created the shoes at home and by 1926, their first shoe factory was built. The shoes were worn by German athletes in the 1928 Olympic Games and By Jesse Owens in the 1936 Olympic Games. A dispute between the brothers caused them to split their company into adidas and Puma. In the 40s and 50s, Adidas gained success internationally and started to include their logo on other sportswear. In the 60s and 70s, Adidas continued to grow, but competitors such as Nike and Reebok also began to increase their presence in the athletic

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[21] Trade Policy. European Commission. 2 Dec. 2004 <http://europa.eu.int/comm/enterprise/textile/trade/htm>.

[22] "adidas-Solomon" Hoover's. 2005: Hoover's Online Report Builder. 25 Mar. 2005

shoe and sportswear market. In 1989, Bernard Tapie bought adidas and ran the struggling company until 1992. In 1993, Robert Louis-Dreyfus took over and turned the company around by moving production to Asia and strengthening marketing. In 1997, adidas acquired Salomon, a French sporting goods company for $1.4 billion. The company also opened its first high-profile store in Portland, Oregon, that year. The company followed this acquisition with reorganization in 1998 and the resignation of top executives in the company such as the CEO of adidas America and the CEO of adidas-Salomon. In 2000 Adidas consolidated its apparel under the Heritage name. From 2001 to 2002, adidas-Salomon opened adidas Originals retail stores in Tokyo, Berlin and New York City.

3.3.2 Inditex[23]

Inditex's history started when the company's founder Amancio Ortega began his activities in the apparel industry selling house coats in 1963. In 1975, the first Zara store opened in La Coruña, Spain and in 1985, Inditex was created as a corporate group. Starting in 1988 with the first Zara store outside of Spain in Oporto, Portugal, Zara began to expand internationally. In 1991 the Pull and Bear Chain was introduced and 65% of the Massimo Dutti Group was purchased and fully acquired in 1995. Inditex introduced Bershka to Spain and several international markets in 1998. A year later, Stradivarius was acquired, and new stores were opened around the world. In 2001, the IPO of Inditex occurred. Inditex's stock is now offered on the major Spanish stock indexes and international stock indexes with a market cap of over 10 billion. Around the same time, Oysho, Inditex's lingerie chain, opened its first stores. In 2002, Inditex began to construct the Zara Logistics Center at PLAZA in Zaragoza. In 2003 Zara Home was launched in Spain. Also in 2003, the Zara Logistics Center in Zaragoza was completed and to be used.

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[23] Inditex Press Dossier. 2004. 20 Jan. 2005 <http://inditex.com/en>.

3.3.3 GAP, Inc[24]

The Gap was founded in 1969 by Don and Doris Fisher in San Francisco, California. In 1976, the 1.2 million shares of the Gap's stock were offered on the NYSE and PSE. In 1983, Millard Drexler was hired as the president of the Gap division of the Gap, Inc and bought Banana Republic. At this time, Banana Republic had built its business on retail and catalog sales of safari and travel clothing. In 1986, GapKids was introduced. The following year, Millard Drexler became the president of Gap Inc. and the first international store opened in London. The Gap began to expand internationally with stores in Vancouver in 1989 and Paris in 1993. In 1990 the Gap introduced babyGap and in 1994, Old Navy and Gap Outlet were introduced as well. The Gap also began its line of fragrances at the Gap stores called GapScents. In 1995 Millard Drexer became the CEO of the Gap, Inc and that same year, Banana Republic began its line of personal care products and opened its first stores in Canada and the Gap and GapKids were introduced in Japan. The next year, Banana Republic began to sell home products. 1997 was the year that the Gap online sales were introduced on gap.com. In the following years, gapkids.com (1998), babygap.com (1998), bananarepublic.com (1999), and oldnavy.com (2000) online sales were initiated. In 1997 Old Navy achieved $1 billion in annual sales in less than four years of operation. During this period, Banana Republic, the Gap and Old Navy began to offer their own private-label credit cards. In 2001, Old Navy opened its first stores outside of the US, in Canada.

3.3.4 H&M[25]

H&M or Hennes and Mauritz is a Swedish company started by Erling Persson in the 1950's. Originally, the women's apparel company was just Hennes and later became Hennes and Mauritz after the purchase of Mauritz Widforss in 1968. With this acquisition, they began to offer lower priced apparel for both men and women. In 1974, Hennes and Mauritz was listed on the Swedish stock exchange. In the next few years, H & M began offering cosmetics, opened stores in England, Switzerland, and Germany and introduced two new lines of clothing; one for teenagers called Impulse and a line for babies. In 1980, the company acquired a mail-order

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[24] "The Gap, Inc." Hoover's. 2005: Hoover's Online Report Builder. 25 Mar. 2005

[25] "H&M Hennes & Mauritz AB." Hoover's. 2005: Hoover's Online Report Builder. 25 Mar. 2005

company called Rowell. When Stefan Persson took over as CEO in 1982, he began to increase H&M's presence in Europe to 200 stores by 1985 and continued to expand all over Europe. H&M began selling online in Sweden, Denmark and Finland in 1998 and 1999. H&M entered the US and Spain market in 2000 with plans for further expansion in the US. These plans for expansion were not fully carried out because of difficulties in the US market.

3.3.5 Benetton[26]

Benetton is an Italian apparel company that made its beginnings in 1955 by Luciano and Giulana Benetton. Luciano did the marketing for the sweaters that his sister Guiliana made for local customers. After the brother and sister team built a factory in 1955, the first Benetton store opened in 1968 in Belluno, Italy. By 1975 Benetton had 200 stores in Italy and by 1979 the company opened five stores in the US. In the 1980's Benetton aggressively opened stores around the world and also introduced its controversial and sometimes shocking advertising campaign. In 1986 the Benetton was listed on 6 worldwide stock exchanges. Also, Benetton started a production facility in the US to support its 600 retail stores. In the late 80's and 90's Benetton faced strong competition from other chains such as the Gap and the Limited. In 1996, the first United Colors of Benetton mega store opened on Fifth Avenue in New York City. Benetton bought Edizione's sports equipment and apparel collection which consisted of business units such as a ski equipment company named Nordica, 80% of Prince, and Benetton Legs. Combined with Benetton Sportsystem, Benetton renamed the division Playlife in 1998. Benetton sold this line of sports apparel and equipment through its Playlife retail store and other specialty sports stores. Benetton attempted to gain back market share in the US by trying to sell its apparel at Sears department stores in 1998. This effort failed after 2 years as a result of customer complaints about Benetton's controversial advertisements. The following year, in 2001, Benetton's second attempt to regain customers in the US was to open Benetton mega stores. In 2003, Benetton sold its sports apparel and equipment divisions and later on did a reorganization of it internal operations.

[26] "Benetton Group S.p.A." Hoover's. 2005: Hoover's Online Report Builder. 25 Mar. 2005

Currently their production and logistics are handled by Benind, trademarks and commercial activities by Bencom, and IT services and systems by United Web also known as Bentec.

3.4 Apparel Industry Analysis

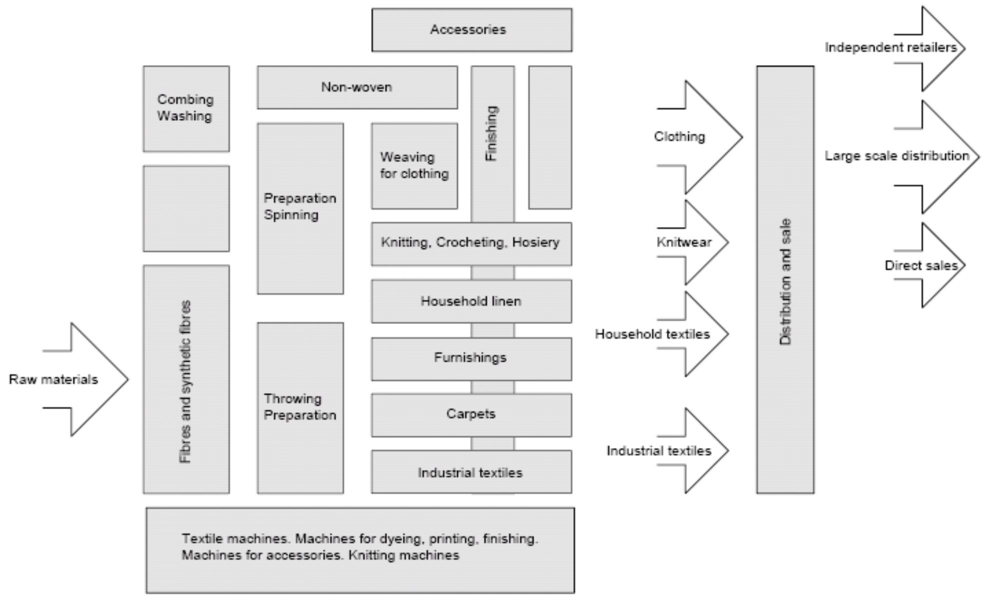
This section builds upon the previous characterization of the apparel industry with an in-depth analysis of the supply chain aspects of the industry. The apparel industry's trends and industry drivers along with supply chain challenges and opportunities are also covered.

3.4.1 Apparel Supply Chain

A typical apparel supply chain starts with the procurement of the raw materials necessary to produce the textile fibers. The raw materials need to be combed, washed and spun into threads and yarns. They are then woven into fabrics or knitted. The textiles are cut, sewn, and assembled into apparel products. They also need to be pressed and finished. They are then distributed through independent retailers, direct sales, large scale (wholesale) distribution. The following diagram shows these typical steps in the apparel supply chain. The products finally reach the customers through the apparel sales channels: supermarket, hypermarket, specialty apparel retailers/fashion specialists, traditional or general merchandise stores, discount stores, department stores and catalog/mail/online.

Figure 3-8[27]

The Apparel Supply Chain



Aside from branding, supply chain issues in the apparel industry are factors that many apparel companies compete on. For example, A Stitch in Time brings attention to the issue of region based realignment. Region based realignment refers to the apparel company's decision to source in areas close to its customer or from low cost countries that are more distant. There is usually a trade off between reduction in lead time and cost. In order to react to customer demand quickly, production can be done locally but at a higher price. Typically, the apparel industry outsources the manufacturing of garments to low cost countries such as China, India, Pakistan, Bangladesh, Thailand or Vietnam. Figure 3-9 shows some of the trade-offs between sourcing in Europe and low cost countries. Generally all basic products are sourced from low cost countries since they are very price competitive and do not require short lead times.

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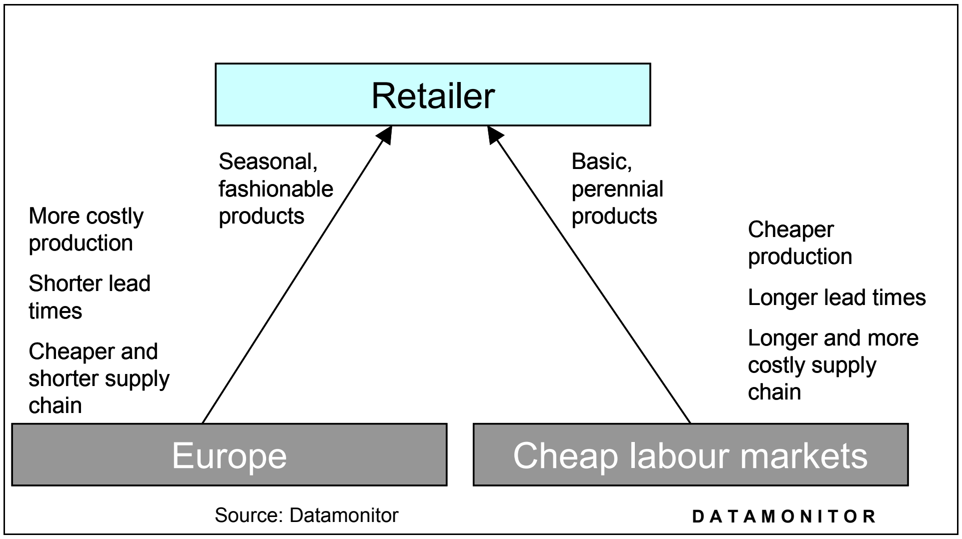
[27] Dunford, Mick. "The Changing Profile and Map of the EU Textile and Clothing Industry" School of European Studies

Figure 3-9[28]

Sourcing Model for European Fashion Retailer



The recent removal of the WTO apparel-textile quota is likely to change the dynamics of the way apparel sourcing is done since this removal of the quota will increase competitiveness among the apparel manufacturers in the low cost countries.

3.4.2 Trends and Industry Drivers

Apparel industry drivers contribute to the evolution of the industry as it is today and the future of the industry. One of these drivers is product proliferation. This is a trend that has been happening across many industries as the market becomes more competitive. Product proliferation refers to an increasing number of differentiated products that are introduced to the market. Along with the proliferation of SKUs, product life cycles are shortening and styles are changing faster. The short product life cycle is pushing the trend of product proliferation because more products have to be introduced into the market in order to keep up with the demand for the next new item.

Technology is also driving some of the trends in apparel industry supply chain practices. Technology in the apparel industry affects customization abilities, information flow and

[28] "European Fashion Logistics: A study of the current and future issues shaping European fashion logistics." . Aug. 2003: 1-20. Datamonitor. 5 Jan. 2005 Reference code: BFAU0115

communication. Retailers are able to create a "mass customization" effect with technologies that allow customers to customize certain features of their product. Examples of companies who have begun to lead this trend are Ralph Lauren, Levis, and Nike. From a supply chain point of view, this will result in an increase of domestic production for these "mass customized" products and higher proliferation of SKU's. Another technological advancement in the apparel industry is internet-based, allowing for real-time information flow of POS data and communication between retailer and vendor. This will drive more customization replenishment and possibilities for CPFR initiatives. [29]

Licensing is also another trend in the fashion apparel business. Since brand is one of the most important factors that drive the apparel industry, licensing the name or trademark of an established brand is a method of building a mega brand. The emphasis on brand image is one of the main factors that determine the success of an apparel company. Licensing established brands to other companies for different markets can simplify the supply chain, but the tradeoff is the lack of control of the brand image. When a brand is licensed, the company can give up control over the design, production, marketing and distribution of the products in certain markets. This will simplify the supply chain, but if the company decides to maintain control over some parts of the supply chain and not others, it may complicate it even further.

There are several other supply chain aspects such as flexible planning, warehouse location and exchange rates which apply to the apparel industry, but which aren't necessarily specific to current supply chain issues and initiatives. For example, flexible planning applies to supply chains in all industries that sell products with variable demand. Exchange rates affect the sourcing strategies for international companies.

3.4.3 Challenges and opportunities

Some of the challenges for the European apparel industry are its weak economy and the presence of big brands. As a result of a generally weak economy in Europe, consumer spending is down, which means that people are spending less on apparel. In addition, companies with strong

[29] Driscoll, Marie, and Yogeesh Wagle. "Industry Surveys, Apparel and Footwear." Standard and Poors (2004).

brand names continue to be strong, while the number of the smaller apparel companies is dwindling.

A challenge in the fashion apparel industry will always be forecasting. Since the designs and trends are constantly changing due to the short product life cycles, there is little or no product history to base the forecasts on for these fashion items.

One of the opportunities and challenges for the apparel and textile industry is the Jan 1, 2005 removal of the World Trade Organization textile and apparel quota. Since this will force garment and textile suppliers from low cost countries to become more competitive and market driven, this will likely result in lower prices. This is a challenge because it will push apparel and textile production away from Europe. It is an opportunity because it will allow European apparel companies to make more margin or lower prices by sourcing from the low cost countries.

In addition, for well established brands, Asia and especially China are becoming markets for both sourcing and selling. Those companies that will be able to take advantage of this opportunity will need to redesign their supply chains. Investments in Logistics Centers in these markets will need to be made in order to avoid redundancy in the supply chain. For example, it makes no sense to source from Asia, send the products to LCs in Europe and then ship them back to Asia to be sold. In these new markets, European apparel companies can take advantage of the fact that European designs are generally known for its innovation and quality.

4

INDITEX

At this point we turn our attention to Inditex, the parent company of Zara. Since Zara is the biggest component of Inditex, an analysis of Inditex is a characterization of Zara as well.

4.1 Inditex Overview:

The Inditex Group or *Industrias de Diseño Textil Sociedad Anónima* is the parent company of Zara, its biggest retail chain store. Inditex is comprised of eight retail chains: Zara, Stradivarius, Oysho, Bershka, Massimo Dutti, Pull and Bear, Kiddy's Class, and Zara Home. Inditex's net sales revenues in 2003 were 4,598.9 million euros. At that time, it had a total of 1,922 retail store locations in 48 countries. Through its eight chains, Inditex sells women's, men's and children's apparel along with lingerie, accessories, shoes, cosmetics and home furnishings. According to Inditex's press dossier, Zara is Inditex's most established chain and makes up 70% of Inditex's total sales while Massimo Dutti and Bershka share the ranking for the 2nd in sales revenue at 8.5% each.[30]

Inditex is a vertically integrated company that owns a large percentage of the processes in its supply chain. In addition to Inditex's 8 retail chains, the Inditex group consists of over 100 companies that are associated with textile design, purchasing, and manufacturing along with companies that deal with retailing, real estate, and logistics and distribution. As of January 2004, Zara employed over 40,000 employees, 200 of which are fashion designers. It introduces about 10,000 new products each year.[31]

4.1.1 Business units:

Inditex's business units consist of its eight chains; Zara, Oysho, Stradivarius, Bershka, Massimo Dutti, Zara Home, Kiddy's Class, and Pull and Bear. Zara is Inditex's leading brand with 713 stores around the world. Inditex sells women's lingerie through a chain called Oysho, which

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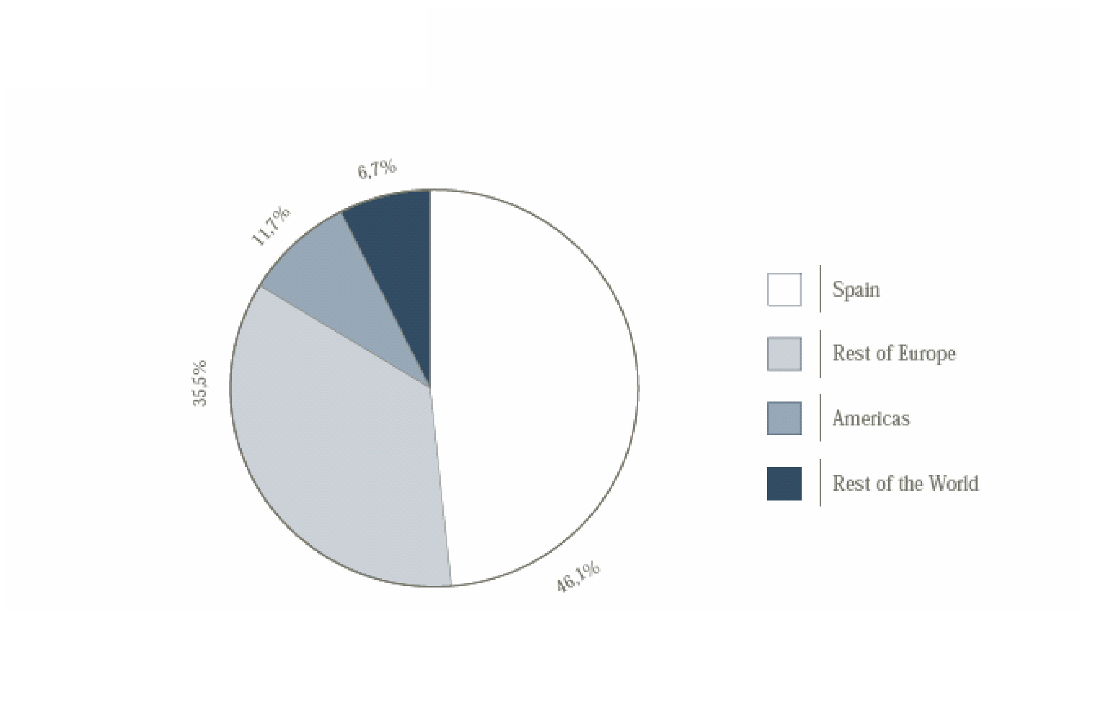
[30] Inditex Annual Report. 2003. 20 Jan. 2005 <http://inditex.com/en>.

[31] Zara Logistics Center Visit, Zaragoza, Spain Jan 24, 2005

now has over 100 stores. Stradivarius and Bershka sell fashionable young women's apparel, shoes and accessories. Stradivarius has about 223 stores and Bershka has about 295 stores mainly in Europe. With 327 international Massimo Dutti retail stores, Inditex sells higher quality and higher priced men's and women's apparel. Kiddy's class is Inditex's children's chain whose 129 stores are mainly present in areas where the Zara chain does not have a children's department. Pull and Bear's 372 stores sell men's and women's apparel, shoes and accessories. Zara Home sells home textiles and decorative items through its 56 retail stores.[32] The following pie charts from the Inditex Press Kit shows the breakdown of sales between the eight Inditex brands and the store sales by region.

Figure 4-1[33]

Inditex Store Sales 2003

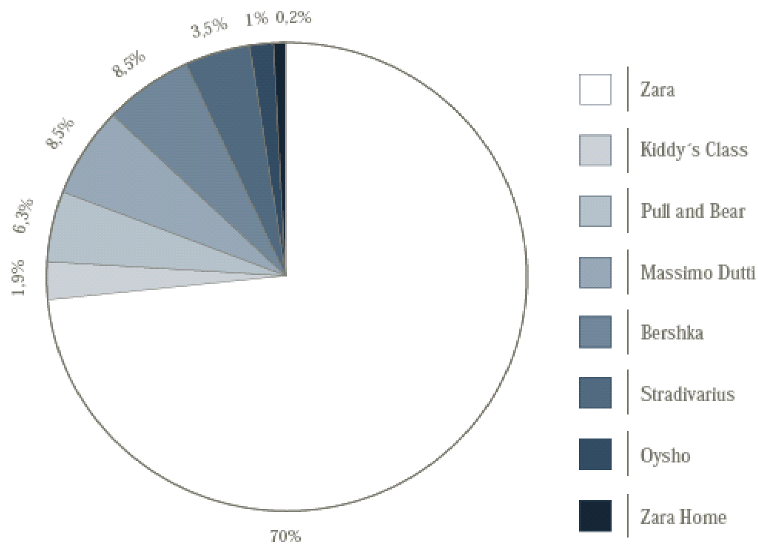


[32] Inditex Press Dossier & Annual Report. 2004/2003. 20 Jan. 2005 <http://inditex.com/en>.

[33] Inditex Press Dossier. 2004. 20 Jan. 2005 <http://inditex.com/en>.

Figure 4-2[34]

Inditex Sales by Chain 2003



4.1.2 Financials

From Inditex's most recent annual report for the fiscal year ending Jan 31, 2004, we can see that Zara generates by far the most revenue for Inditex, though the other chains are gaining percentage in the group's portfolio. One of the key performance indicators is sales per square meter of store space. In 2003 to 2004, Zara generated 5,192 euros per square meter of store space. Compared to the previous year at 5,511 euros per square meter, Zara's revenue per square meter of store space decreased by 6 %. Zara's return on capital expenditure was 33% in 2003 and 41% in 2002. Zara's ROCE has been consistently close to the average of Inditex since it is the biggest

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[34] Inditex Press Dossier. 2004. 20 Jan. 2005 <http://inditex.com/en>.

contributor. Recently, Inditex reported its international sales 65.8% for the fiscal year ending Jan 31, 2005, up 2.3 percent from 2003.[35]

Figure 4-3[36]

Inditex Sales per square meter of store space

Selling area (sqM) in company-managed and franchised stores

	TOTAL SELLING AREA			SALES PER SQM (€)		
	31 JAN 2004	**31 JAN 2003**	**CH % 03/02**	**2003**	**2002**	**VAR % 03/02**
Zara	686,090	561,800	22%	5,192	5,511	-6%
Kiddy's Class	20,614	12,200	69%	5,926	6,145	-4%
Pull & Bear	67,175	51,700	30%	4,819	6,254	-23%
Massimo Dutti	62,060	51,600	20%	7,742	6,720	15%
Bershka	85,835	64,400	33%	5,064	5,028	1%
Stradivarius	49,808	39,100	27%	3,474	3,922	-11%
Oysho	10,932	11,100	-2%	4,371	2,109	107%
Zara Home	5,843	—	—	—	—	n/a
Total	**988,357**	**791,900**	**25%**	**5,220**	**5,525**	**-6%**

35 Inditex Annual Report 2003. 20 Jan. 2005 <http://inditex.com/en>.

36 Inditex Annual Report 2003. 20 Jan. 2005 <http://inditex.com/en>.

Figure 4-4[37]

Inditex EBIT (Earnings Before Interest and Taxes)

	EBIT BY CONCEPT *(Million €)*			% EBIT ON SALES		EBIT BY CONCEPT ON TOTAL (%)	
CONCEPT	2003	2002	% CHNG. 03/02	2003	2002	2003	2002
Zara	476.1	540.4	(12%)	14.8%	18.5%	75.9%	81.9%
Kiddy's Class	18.0	14.1	27%	20.0%	23.4%	2.9%	2.1%
Pull & Bear	18.9	34.9	(46%)	6.6%	13.1%	3.0%	5.3%
Massimo Dutti	60.1	37.5	60%	15.5%	13.1%	9.6%	5.7%
Bershka	57.3	48.1	19%	14.5%	16.1%	9.1%	7.3%
Stradivarius	4.4	8.7	(50%)	2.7%	7.0%	0.7%	1.3%
Oysho	2.1	(14.9)	n/a	4.7%	(63.5%)	0.3%	(2.3%)
Zara Home	(0.5)	0.0	n/a	(4.5%)	n/a	(0.1%)	0.0%
Goodwill	(9.4)	(9.4)	n/a	(0.2%)	(0.2%)	(1.5%)	(1.4%)
Total EBIT	**627.0**	**659.5**	**(5%)**	**13.6%**	**16.6%**	**100.0%**	**100.0%**

Figure 4-5[38]

Inditex's Return on Capital Expenditure

ROCE by concept

	2003	2002
CONCEPT	ROCE	ROCE
Zara	33%	43%
Kiddy's Class	80%	131%
Pull & Bear	16%	39%
Massimo Dutti	56%	49%
Bershka	46%	49%
Stradivarius (*)	5%	12%
Oysho	7%	—
Zara Home	—	—
Total	**32%**	**41%**

(*) Before goodwill amortisation

37 Inditex Annual Report 2003. 20 Jan. 2005 <http://inditex.com/en>.

38 Inditex Annual Report 2003. 20 Jan. 2005 <http://inditex.com/en>.

4.1.3 Business system

Inditex has a four step business system. This is a circular process that includes product design, production, distribution, and sales. Designs are created by following trends in fashion, POS data, media and customer information[39]. The materials are sourced and the garments are manufactured. Inditex sources its fabrics from Italy, France, Spain and low cost countries, marks and cuts the fabric in-house, and subcontracts the labor-intensive sewing process to nearby Galician companies.[40] The logistics function serves to quickly and efficiently deliver the garments to the retail store. There are Logistics Centers for each of Inditex's brands. Zara's Logistics Centers are in Arteixo and Zaragoza. Pull and Bear's LC is located in Narón in Galicia. Bershka, Oysho, Massimo Dutti and Stradivarius are served from each of their LCs located in the Barcelona area. Zara Home and Indisur are served from Madrid. There is one Logistics Center called Tempe in Elche which distributes shoes to all of the Inditex chains[41]. From these LCs the items are shipped by truck to Europe and by airfreight to stores outside of Europe. The retail storefront is where the point of sale data is collected, which acts as a market information collection system.[42]

4.1.4 Business Strategy

Since the late 1980s, Inditex has been assertively establishing itself as an international apparel company by rapidly increasing its presence in countries all over the world.

Inditex's three methods for entering new markets are direct investment, direct implementation through joint ventures, and franchising. Through direct investment, Inditex uses its subsidiaries to open a new store in a new market. Inditex also does direct implementation with other partners when it is necessary. For example, Otto Versand in Germany, Bigi in Japan, and Gruppo Percassi in Italy are instances where joint ventures were necessary to enter those particular markets because of bureaucratic reasons. In some cases, Inditex uses franchising to

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[39] Ghemawat, Pankaj, and Jose Luis Nueno. "ZARA: Fast Fashion." Harvard Business School (2003).

[40] Ghemawat, Pankaj, and Jose Luis Nueno. "ZARA: Fast Fashion." CD-ROM Harvard Business School (2003).

[41] Zara Logistics Center Visit, Zaragoza, Spain Jan 24,2005

[42] Inditex Press Dossier. 2004. 20 Jan. 2005 <http://inditex.com/en>.

enter new markets when cultural differences, economic risk or market size are unfavorable for direct investment.[43] Below is a table of the number of franchised retail stores of each of the eight chains from Inditex's annual report. As we can see, few stores are franchised and even fewer are implemented through joint ventures since they are only done as a necessary method to enter a new market.

Figure 4-6[44]

Comparison between own stores and franchises

	2003				2002			
FORMAT	**OWN CONTROL**	**J.VENTURE**	**FRANCHISES**	**TOTAL**	**OWN CONTROL**	**J.VENTURE**	**FRANCHISES**	**TOTAL**
Zara	520	47	59	626	457	30	44	531
Kiddy's Class	103	—		103	59	—	—	59
Pull & Bear	314	—	36	350	262	—	34	296
Massimo Dutti	195	4	98	297	157	3	88	250
Bershka	246	1	6	253	191	—	6	197
Stradivarius	154	—	37	191	118	—	35	153
Oysho	72	2	2	76	69	2	1	72
Zara Home	26	—	—	26	—	—	—	—
Total	**1,630**	**54**	**238**	**1,922**	**1,315**	**35**	**208**	**1,558**

In addition, Inditex has already begun to build a very strong international presence. They are well established in Europe and have some presence in the Americas and Asia as well. An article by Just Style.com reports that Inditex has recently opened two ZARA stores in Hong Kong and plans to pursue the Hong Kong market which has 7.5 million residents and 25 million tourists annually. Although these statistics show that there are opportunities in this market, Inditex plans to move cautiously into China[45]. Although Inditex is very international, almost half of their stores and sales are in Spain and 81.6% in Europe. The following table and chart from Inditex's press kit illustrates the breakdown in international sales by chain.

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43 Inditex Press Dossier. 2004. 20 Jan. 2005 <http://inditex.com/en>.

44 Inditex Sustainability Report . 2003. 20 Jan. 2005 <http://inditex.com/en>.

45 Corbin, Marie-Helene. Zara takes a cautious step into China. 6 Sept. 2004. 28 Feb. 2005 <http://just-style.com>.

Figure 4-7[46]

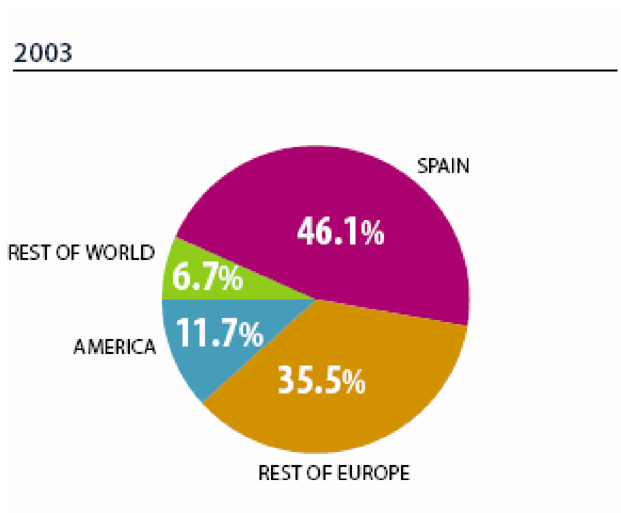
Percentage of International Store Sales by Inditex Chain 2002/2003

% International store sales

CONCEPT	2003	2002
Zara	63.5%	62.5%
Kiddy's Class	13.4%	14.7%
Pull & Bear	31.0%	29.6%
Massimo Dutti	40.9%	40.6%
Bershka	33.8%	32.0%
Stradivarius	16.6%	18.5%
Oysho	35.1%	46.5%
Zara Home	8.5%	n/a
Total sales	**53.9%**	**54.0%**

4-8[47]

Breakdown of Inditex Sales by Region 2003



[46] Inditex Press Dossier. 2004. 20 Jan. 2005 <http://inditex.com/en>.

[47] Inditex Sustainability Report . 2003. 20 Jan. 2005 <http://inditex.com/en>.

Inditex's business structure displays a high level of vertical integration which allows it to maintain control over its product and to have accurate and fast information flow within the company. Inditex uses this to its advantage by making it possible to have a shorter lead time, keep minimal inventory, and take minimal fashion risk. In addition, this allows the company to maintain a flexible structure with a strong customer focus. Logic in this paragraph is confusing

The part of Inditex's business system that distinguishes it from many of the other retailers is the link between its retail step and design. The retailing process closes its business process and it renews its cycle as well by linking customer demand information to the design team. As a result of this link, the retail store is a core element of Inditex. The store is carefully designed with the placement of merchandise in a manner that facilitates browsing. Another critical aspect of the retail stores are its window displays, which are changed by special teams every 2-3 weeks. Inditex gets information about customer demand through POS data and customer feedback through store managers. The company uses this to its advantage by considering the time factor above and beyond production costs and adapting to customer demands as quickly as possible.[48]

The components of Inditex's general business strategy are illustrated in figure 4-9. This diagram from Inditex's Corporate Sustainability Report shows that Inditex uses its creativity and innovation, international presence, multi-format strategy, and vertical integration to reach its customers and to attract them with its products. Inditex concentrates on various business functions that are customer focused in order to achieve this strategy.

[48] Ghemawat, Pankaj, and Jose Luis Nueno. "ZARA: Fast Fashion." CD-ROM Harvard Business School (2003).

Figure 4-9[49]

Inditex Strategy

4.1.5 Sales Channels and Customer Segments:

Inditex's only sales channel is though its company-owned specialty apparel retail stores. Through Zara, the company reaches its broadest range of customers. At the Zara stores, it sells apparel, shoes and accessories for women, men and children. Zara targets its different customer segments by its various Zara lines such as Kids, Trafaluc (TRF), Zara Woman and Zara Man.

[49] Inditex Sustainability Report . 2003. 20 Jan. 2005 <http://inditex.com/en>.

Bershka and Stradivarius both sell apparel, shoes and accessories to the young female market. Massimo Dutti sells apparel for both men and women at all of its stores and childerenswear at select locations. Massimo Dutti's products tend to be slightly more upscale than Zara's. The Pull and Bear chain sells apparel and shoes for urban men and women. Oysho sells lingerie for women and Kiddy's Class sells clothing and footwear for kids.

4.2 Inditex's competition

The apparel industry is highly competitive and is becoming increasingly so as consumer apparel spending trends decreases.[50]An analysis of Inditex's competitors, the Gap, H&M, Mango and Benetton, is an effective way to characterize the company's competitive environment.

4.2.1 Competitor Analysis[51]

Inditex's biggest competitors internationally are H&M and the United Colors of Benetton. The Gap is also one of Inditex's competitors even though it doesn't often compete with Inditex directly. This is because most of the Gap's stores are located in the US and most of Inditex's stores are located in Europe, but they are competitors because they have similar customer segments and store placement. The Gap has also been the number one specialty apparel retailer in the world for several years, so it is considered a major competitor of Inditex. H&M and Benetton are Inditex's closest direct competitors in terms of geographic region and customer segments. These companies, including Inditex, are some of the leading specialty apparel retailers in the world. In Spain, Mango is a major direct competitor of Inditex as well. They are very often located

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[50] Driscoll, Marie, and Yogeesh Wagle. "Industry Surveys, Apparel and Footwear." Standard and Poors (2004).

[51] Ghemawat, Pankaj, and Jose Luis Nueno. "ZARA: Fast Fashion." CD-ROM Harvard Business School (2003).

"H&M Hennes and Mauritz." Hoover's. 2005: Hoover's Online Report Builder. 25 Mar. 2005

"Benetton" Hoover's. 2005: Hoover's Online Report Builder. 25 Mar. 2005

"Inditex" Hoover's. 2005: Hoover's Online Report Builder. 25 Mar. 2005

"Gap Inc.." Hoover's. 2005: Hoover's Online Report Builder. 25 Mar. 2005

Dossier Economico. 5 Apr. 2005 <http://www.company.mango.com/s/comunicacion/dossiereconomico/dossier_ES.pdf>.

in the same shopping districts and target many of the same female customers. Mango is a Spanish specialty apparel retailer based in Barcelona that specializes in women's fashion apparel at a price range comparable to Inditex's brands. These brands will be further compared in the next sections.

Design and Brand Image

The Gap has seen some financial troubles in the past few years. It made several fashion mistakes in 2001 that cost them enormously in revenues[52]. Generally the Gap has been known for khakis and basic casual wear. They have moved towards more fashion in the late 90's, some of which was successful. Benetton's designs have always been basic, with monochromic apparel, but high quality with fashionable designs. H&M is known for its low priced apparel at higher levels of fashion than the Gap and Benetton. In 2004, H&M hired designer Karl Lagerfield to create fall line that was a great success. Depending on the chain, Inditex's products are sold at slightly higher prices than H&M, but also at generally higher quality and fashion levels. Mango and Inditex are very close in price and fashion levels, but Mango tends to have slightly higher prices and fashion.

Outsourcing and Production

Contrary to Inditex's in-house production and local sourcing of its fashion goods, The Gap and H&M outsource most of their production from low cost countries. The Gap outsources 98% of production outside of the US, and H&M outsources much of its production to low cost countries and to other locations in Europe. This gives H&M shorter lead times compared to some other specialty apparel retailers, but which are nowhere near Inditex's lead times. Like Inditex, Benetton concentrates heavily on manufacturing, but unlike Inditex, it concentrates less on retailing. Inditex produces 40-50% of its goods in-house, which is a part of the 80% of total goods sourced in Europe[53]. 18% of the Gap's goods which are manufactured outside of the US come from China[54]. The majority of Mango's garments are produced in Asia.

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52 Ghemawat, Pankaj, and Jose Luis Nueno. "ZARA: Fast Fashion." CD-ROM Harvard Business School (2003).

53 Ghemawat, Pankaj, and Jose Luis Nueno. "ZARA: Fast Fashion." CD-ROM Harvard Business School (2003).

54 "Gap Inc.." Hoover's. 2005: Hoover's Online Report Builder. 25 Mar. 2005

Retailing

The Gap has seen some difficulty expanding internationally so the majority of its stores are concentrated in the US. For example, in 2004, the Gap sold its German division to competitor H&M.[55] H&M has a strong presence in Europe and is beginning to grow in the US market. Benetton has a different structure than the others because it franchises its stores whereas the Gap, Inc, H&M and Inditex own most of their stores. This is because Benetton had previously concentrated on investing in production, but its focus is changing to a more retail-oriented strategy of franchising many of its retail stores.

Marketing

These brands all have different marketing strategies although they are targeting the same general customer base. The Gap markets heavily through many forms of media and famous personalities. Benetton has been known for its controversial and political ad campaign in the 80's and 90's but has since toned down its ads to simple billboards and print ads with the basic "colors of Benetton" theme. Inditex is known for its minimal advertising expenditure at 0.3% of total revenue spent on media advertisement, while other specialty apparel retailers spend 3%-4% on media advertising.[56]

4.2.2 Inditex's position among its competitors:

In this section, we place Inditex among its competitors by comparing their sales, store and employee statistics. Inditiex is a rapidly growing company. It is younger than the Gap, H&M, and Benetton, but older than Mango, which was established in almost 10 years after Zara in 1984. Next, we will place Inditex in a comparison of the sales, store and employee statistics of these competitors. The following bar graphs summarizes these competitors' most recent available financial and company information. This data is taken from annual reports and Hoovers database from 2003-2004:

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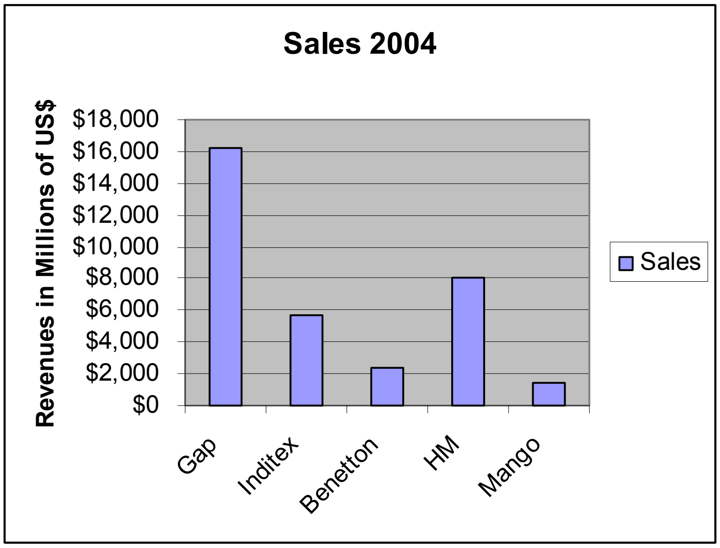
[55] "Gap Inc.." Hoover's. 2005: Hoover's Online Report Builder. 25 Mar. 2005

[56] Ghemawat, Pankaj, and Jose Luis Nueno. "ZARA: Fast Fashion." CD-ROM Harvard Business School (2003).

Figure 4-10

Comparison of Store Sales Among the Competition



In 2004's sales revenue, the Gap continued to dominate Inditex, Benetton, H&M and Mango. This representation gives an overview of each company's presence in the apparel industry. We can see that Inditex and H&M were close in terms of revenue.

Figure 4-11

Comparison of number of Retail Stores Among the Competition

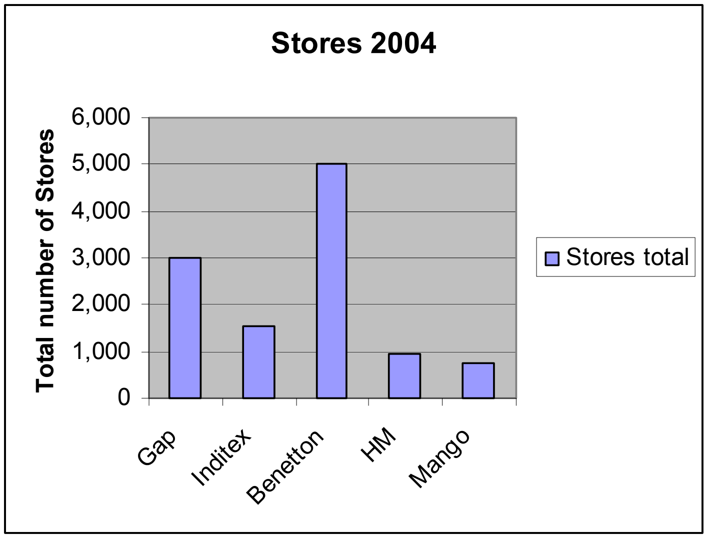


Figure 4-11 shows that Benetton outnumbers all of the other four companies in the number of stores since it franchises its retail stores. Mango also franchises many of its retail stores. We can see here that although Inditex has more stores than H&M, H&M makes more in revenues.

Figure 4-12

Comparison of the Number of Employees Among the Competition

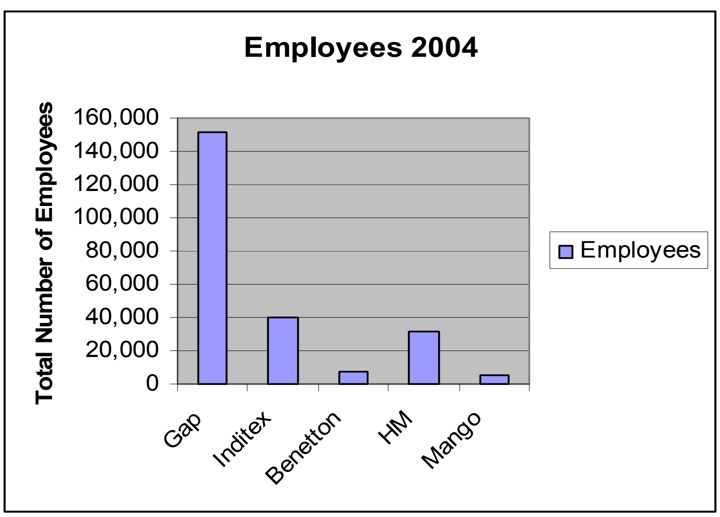


Figure 4-12 compares the number of people employed by each company. The number of employees also reflects each company's franchising policy since employees from franchised are are not included in these figures. In addition, the number of company employees correlates well with total sales.

In these figures, we can see that Inditex and H&M can be considered the closest competitors. Inditex is ranked the number three clothing retailer in the world in Deloitte's 2004 Global Powers of Retailing report. The number one and number two positions are held by the Gap and H&M.[57] Inditex's position among retailers in general is also very promising. A study published in March 2005 by Deloitte and US magazine states that**, "**Inditex is ranked the 15th in the classification of specialist retailers, behind such companies as Best Buy (US, Electronics), Gap (US, fashion), Ikea (Sweden/furniture) or Toys'R'Us (US, toys). Furthermore, Inditex is the sixth fastest growing specialist retailer. In the global ranking of retailers, Inditex occupies the 120th place worldwide. The study, which covers 250 companies, is headed by Wal-Mart and includes only five Spanish companies. Among those, Inditex is the only specialist retailer and it stands out for its sustained growth rhythm, among the 20 best in the ranking."[58]

[57] The Secret to Zara's Success. National Retail Federation: Stores Magazine. 23 Feb. 2005

[58] Inditex Press Dossier. 2004. 20 Jan. 2005 <http://inditex.com/en>.

5

ZARA'S SUPPLY CHAIN

This section describes, in detail, Zara's supply chain and its supply chain practices. It starts with an introduction to Zara as its own entity. Then it focuses on Zara's supply chain operating model and network design. Finally, it covers the supply side, inside, and customer side business process.

5.1 Zara Overview

According to Inditex's 2003 Annual Report, Zara had a revenue of 3,219 million Euros. Zara's 713 retail stores cover on average 1,200-2,000 square meters of floor space. As mentioned in Section Four, Zara is a single channel retailer. Through its retail store, it reaches its broad customer base which ranges from infants to 45 year old men and women. Zara introduces about 300,000 new SKU's annually and about 10,000 new designs.

5.1.1 Zara Products

Zara has three parallel design and supply chain channels for each of its product families: men, women, and children. The majority of Zara's product line consists of women's apparel at 58%. 22% of its products are part of its men's line and 20% are part of its children's line[59]. The design, sales, procurement, and production for each of these product families are distinct.[60] Zara's womens product family has sub-categories or product lines. For example, the women's product family is sold in the retail stores under the Zara Woman, Zara Basic, or TRF labels. Zara Woman is targeted towards the fashionable female with casual fashion, elegant apparel, and businesswear. Zara Basic is solid colored t-shirts, and other non-fashion items. TRF is a line of clothing that is targeted toward the younger female customer segment with fashion jeans, printed t-shirts, printed

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[59] ZARA. Comp. Linda Arrington, et al. 2002. Columbia Business School. 24 Jan. 2005

[60] Ghemawat, Pankaj, and Jose Luis Nueno. "ZARA: Fast Fashion." CD-ROM Harvard Business School (2003).

skirts and other short life cycle garments. In addition to the three product families, Zara retail stores sell shoes, lingerie, accessories, cosmetics, and fragrances.

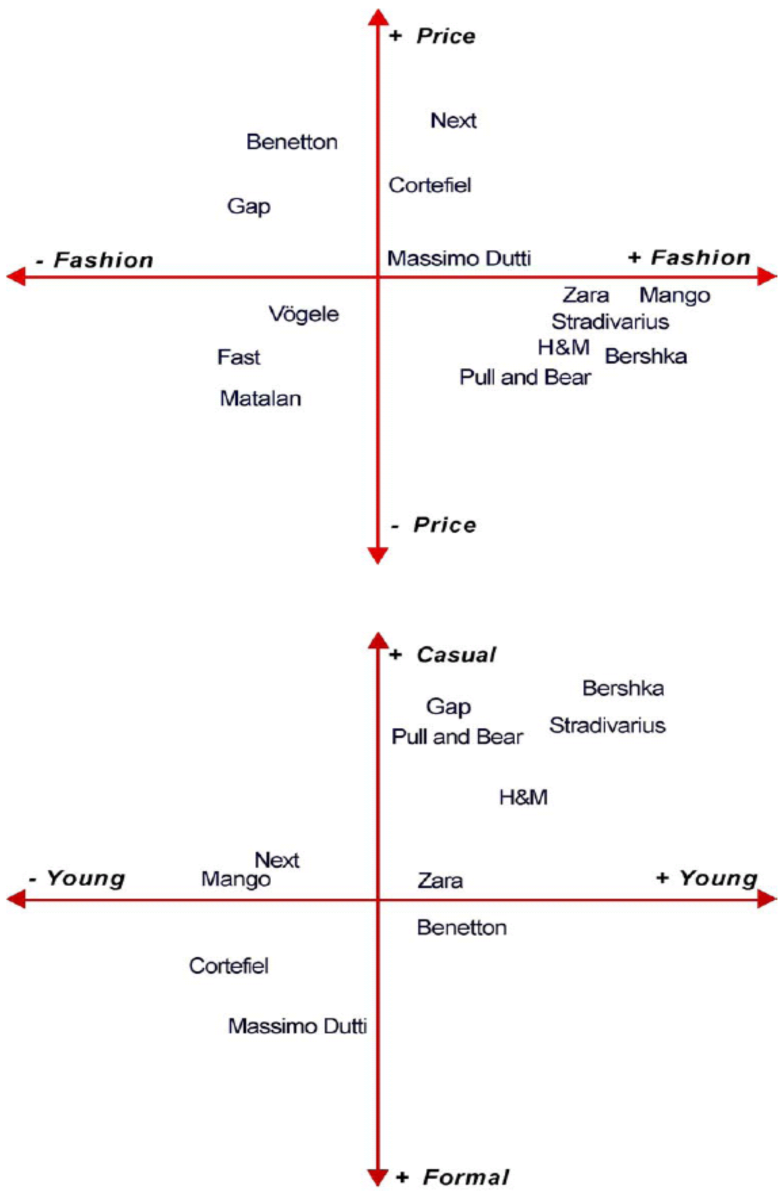
5.1.2 Top competitors and positioning

Since Zara makes up 70% of Inditex's business, the main competitors of Inditex analyzed in Section Four are also top competitors of Zara as well[61]. In addition to the Gap, Benetton, Mango and H & M, Zara also competes with other Inditex chains. In particular, Zara's TRF line directly competes with Inditex's Bershka and Stradivarius chains since they all target the young female customer segment. Zara Woman and Zara Man compete with the Massimo Dutti chain for the more upscale styles. The following positioning graph from the Columbia Business School's case study on Zara illustrates Zara's positioning against some of its main competitors in terms of fashion versus price and in terms of targeted customer age group versus level of formality in style. We can see from the chart that Zara, H&M, Mango, Bershka, and Stradivarius are all clustered around the same area in fashion versus price, but they diverge in the second chart where formality and targeted age groups are compared.

[61] Inditex Press Dossier. 2004. 20 Jan. 2005 <http://inditex.com/en>.

Figure 5-1[62]

Zara's Product Positioning



62 ZARA. Comp. Linda Arrington, et al. 2002. Columbia Business School. 24 Jan. 2005

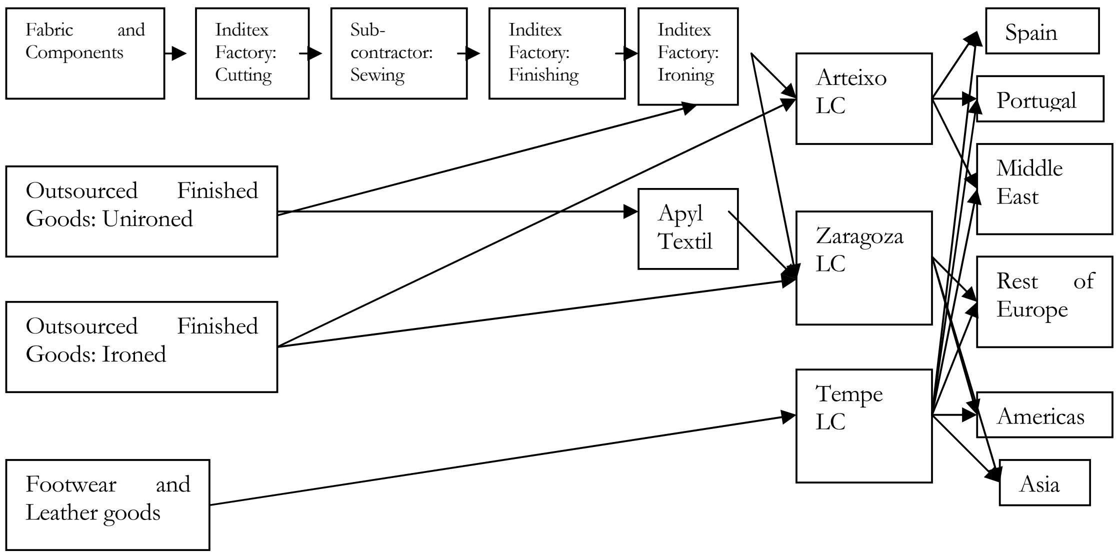
5.2 Operating Model and Supply Chain Network

The diagram below shows a simplified model of the product flow in Zara's supply chain network deduced from the information gathered throughout this research. This supply chain network diagram shows the path of products starting from fabric and component sourcing for in house manufactured garments and for outsourced merchandise. The garments all meet at either the Arteixo or Zaragoza Logistics Center. There are also three satellite distribution centers in Argentina, Mexico, and Brazil which are not included in this supply chain network illustration[63]. We discuss each of the steps in Zara's supply chain in this chapter.

[63] Blanco, Xabier R., and Jesus Salgado. Amancio Ortega, de cero a Zara. Madrid: La Esfera de los Libros, 2004.

Figure 5-2[64]

Zara's Product Flow



5.2.1 Logistics Operating model

In this section, we provide some details on Zara's operations.

About 40% - 50% of Zara's apparel is produced by about 20-21 Inditex owned companies in the Galician area near the Inditex headquarters. The fabric for in house production from Italy, Spain, Germany, Portugal or the Far East is sourced through Inditex owned companies and is

64 Information compiled from: Ghemawat, Pankaj, and Jose Luis Nueno. "ZARA: Fast Fashion." Harvard Business School (2003).

Ferdows, Kasra , Micheal A. Lewis, and Jose A. Machuca. "Rapid-Fire Fulfillment." Harvard Business Review (2004): 104-110.

Fabrega, Fernando. Zara: El modelo de negocio de Inditex. Madrid: Claves de Gestion, 2004.

Zara Logistics Center Visit, Zaragoza, Spain, Jan 24,2005

Garcia, Carolina. Interview, 12 April 2005

shipped by air. The outsourced finished goods are purchased from Europe, Asia, North Africa or Latin America[65].

Store managers send individual store orders to the Zara Logistics Centers twice a week through PDA's connected to the LC's inventory position and ordering system. There are two principal Zara apparel Logistics Centers: Arteixo and Zaragoza. Tempe serves all of Inditex chains' needs for footwear.

The Arteixo LC serves over 350 stores in Spain, Portugal, Middle East, Russia and Asia. The Zaragoza LC serves more than 300 stores in all of Europe except for Spain and Portugal, and the Americas. This LC has four areas: the Flat Garments area, Hanging Garments area, Exports Area and Expedition Area. The Arteixo LC is also connected to 16 of its surrounding Inditex owned factories in Poligono de Sabon by an underground rail network with two main tunnels. The Arteixo LC has almost 500,000 square meters of space. It ships approximately 2.5 million items per week to all of the Zara stores. Also, Arteixo LC employs about 800 regular employees and up to 400 temporary employees during peak periods. This LC is served by two airports, Santiago de Compostela and Porto in Portugal.[66]

The Zaragoza LC fulfills approximately 800,000 to 1,000,000 units of Zara's merchandise twice a week. The Zaragoza LC is in the PLAZA logistics park in close proximity to the Zaragoza airport. This LC also has four areas: the flat garments area, hanging garments area, exports area and expedition Area. The highly automated facility can handle approximately 80,000 garments per hour. As of January 2005, there were about 500 people working at this 123,000 square meter LC.[67]

Inditex employs a third party *just in time* ironing facility at the Zaragoza LC called Apyl Textil S.A. This company receives all of the unironed garments from Inditex suppliers. A tunnel between Apyl's facilities and the Zara LC connects the two companies and serves as a means of transport for the ironed garments. The ironed garments are sent to the Zara LC *just in time* through this tunnel with the timing maintained by a continuously updated computer system.

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65 Fabrega, Fernando. Zara: El modelo de negocio de Inditex. Madrid: Claves de Gestion, 2004.

66 Fabrega, Fernando. Zara: El modelo de negocio de Inditex. Madrid: Claves de Gestion, 2004.

Blanco, Xabier R., and Jesus Salgado. Amancio Ortega, de cero a Zara. Madrid: La Esfera de los Libros, 2004.

67 Zara Logistics Center Visit, Zaragoza, Spain, Jan 24, 2005

Garcia, Carolina. Interview, 12 April 2005

Before this *just in time* system was in place, all of the garments, both ironed and unironed, were first shipped to the Zara Logistics Center in trailers and the unironed garments needed to be separated and sent to the Apyl facility and then sent back to the Zara LC. The current *just in time* system increases efficiency since it saves transportation and handling costs of the unironed garments[68].

5.3 Supply Side Business Processes

As mentioned before, Zara gets its merchandise either by outsourcing the production of finished goods or by manufacturing them in house. Zara needs to decide whether to make the garments in house, outsource the production locally or outsource the production from a low cost region. The decisions to make or source the garments depend on their time sensitivity and price sensitivity. Items that are highly price sensitive and time insensitive will be outsourced to Asia because these are basic items with longer life cycles. Zara's outsourced finished goods could also come from local apparel manufacturers in the Galician area. The garments sourced from the 200+ local manufacturers in Portugal, Spain, North Africa and other parts of Europe have shorter lead times. All goods that are outsourced are produced with Inditex designs. Since Zara's production facilities only produce apparel, merchandise such as shoes, accessories, fragrances and cosmetics are always outsourced either locally or from low cost regions.[69]

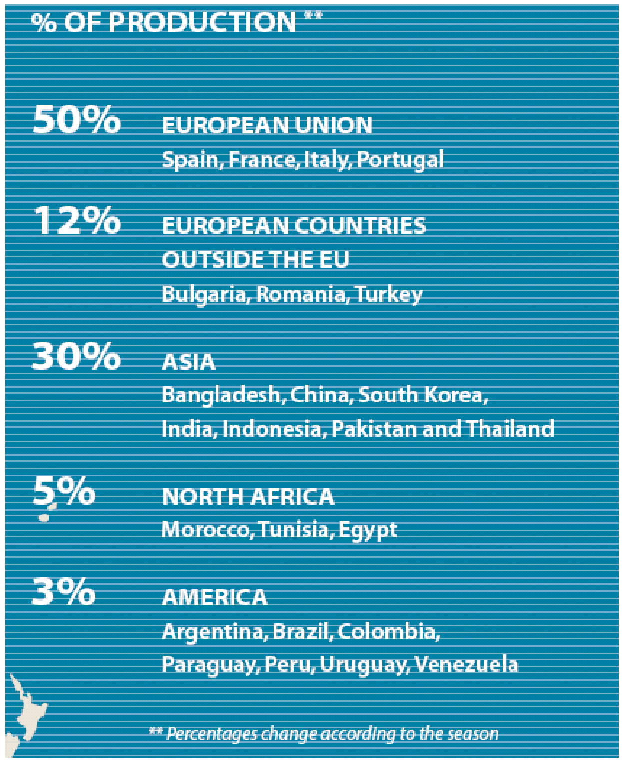
The figure below is a breakdown of where Inditex's garments are produced. Although these are figures for all of Inditex's brands, it gives a good representation of where Zara's production is being done.

[68] Garcia, Carolina. Interview, 12 April 2005

[69] Fabrega, Fernando. Zara: El modelo de negocio de Inditex. Madrid: Claves de Gestion, 2004.

Figure 5.3[70]

Inditex Production



5.3.1 Outsourced Finished Goods

One of the main factors for supplier selection for outsourced finished goods depends on the location of the supplier since this is the major determinant of the lead time. Most of the time, Zara's external suppliers are located in Asia, Europe or North Africa. The most basic finished garments are sourced from Asian countries such as China, Vietnam and Korea. 60%-80% of all of Inditex's outsourced finished goods are produced by local manufacturers and 20%-40% of the finished goods are outsourced to Asian manufacturers. Commitments to the Asian manufactures need to be made approximately six months before the start of the season. Therefore, the least

[70] Inditex Sustainability Report. 2003. 20 Jan. 2005 <http://inditex.com/en>.

time sensitive items are allocated for production in Asia while the more fashionable items are contracted to local suppliers[71].

According to the Harvard Business School's case study, "Zara:Fast Fashion", the cost to outsource production to external suppliers in Asia is about 15%-20% cheaper for than the cost of outsourcing to manufacturers in Europe. Because of this, Zara outsources production of the more price sensitive items to external suppliers in Asia. While Zara maintains strong relationships with at least 20 external suppliers, there are few formal contracts between them. [72] Since these suppliers accounted for at least 70% of all outsourced finished goods and 50%-60% (~55%) of Zara's goods are outsourced, 38.5% (=55% x 70%) of all of Zara's products are primarily produced by 20 manufacturers. One can infer that by the amount of garments and complements that Zara sells, Zara is undoubtedly a significant source of revenue for these manufacturers. This gives Zara the power to be able to conduct business with these companies without strict formal contractual agreements.

5.3.2 Internally manufactured garments

Approximately 40%-50% of Zara's garments are produced in-house. The items that are manufactured internally are the most fashionable, time sensitive and have the riskiest designs. Production is done in small batches. Because of this, Zara can react to changes in fashion trends in as little as 10 days if necessary[73].

The process of Zara's in-house production starts with the procurement of fabric, components, leather and silk. In general, Zara's fabric is sourced from Spain, Portugal, Italy, Germany, or Asia. Glass beads, sequins, crystals and other components come from China. Leather shoes, bags, and garments come from Italy, Turkey, or Morocco. Silk is sourced from Italy or India.[74] Each product family has its own team of procurement specialists to purchase the raw materials needed for production. Inditex owns several subsidiaries through which Zara's fabric is purchased. Comditel S.A. in Barcelona is responsible for the purchase of about 40% of

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[71] Fabrega, Fernando. Zara: El modelo de negocio de Inditex. Madrid: Claves de Gestion, 2004.

[72] Ghemawat, Pankaj, and Jose Luis Nueno. "ZARA: Fast Fashion." Harvard Business School (2003).

[73] Ferdows, Kasra , Micheal A. Lewis, and Jose A. Machuca. "Rapid-Fire Fulfillment." Harvard Business Review (2004): 104-110.

[74] Fabrega, Fernando. Zara: El modelo de negocio de Inditex. Madrid: Claves de Gestion, 2004

Inditex's fabric procurement. Comditel deals with over 200 fabric and raw material suppliers. Since Zara practices postponement in its production process, 50% of Zara's fabric is purchased in greige and then dyed and printed close to the production time. Comditel plays a major role in the postponement process. Comditel performs the dying, printing, and printing of the greige fabric, a process that takes on average one week. Two of the other subsidiaries of Inditex that purchase fabric for Zara are Inditex Asia, Ltd. and Zara Asia, Ltd, are both located in Hong Kong. Inditex Asia and Zara Asia primarily purchase the synthetic and fashion fabrics from Asian suppliers for Zara[75].

5.3.2.1 Production

There are about 20 wholly owned Zara factories in the Galician and Portuguese regions that perform the capital intensive steps of the production process such as pattern making, cutting, finishing and quality assurance. These factories are highly automated and have used *just in time* practices since the early 90's. 16 of these factories are connected to the Arteixo Logistics Center by 211 km of rail through a network of underground tunnels. The other factories are further away and are connected by truck.[76]

After the Zara designers have created styles for production, the designs are sent to one of Zara's factories for pattern design. The pattern designs are carefully designed to optimize the use of the fabric and minimize waste. Once the fabric has been procured, it is cut at another one of Zara's 20 factories. Cutting is considered one of the most important steps in Zara's production process.[77] Zara takes advantage of economies of scale by using machinery that can cut up to 120 layers of cloth at once. Everyday, about 130,000 meters of fabric are cut in Zara's factories using extremely precise machinery[78]. These cut blocks of fabric are then sent to one or more of Zara's 400-450 subcontracted firms in Galicia and Portugal to perform the labor intensive step of sewing, In contrast to the benefits of economies of scale in the fabric cutting process, there are few

[75] Fabrega, Fernando. Zara: El modelo de negocio de Inditex. Madrid: Claves de Gestion, 2004

[76] Ghemawat, Pankaj, and Jose Luis Nueno. "ZARA: Fast Fashion." Harvard Business School (2003).

Ferdows, Kasra , Micheal A. Lewis, and Jose A. Machuca. "Rapid-Fire Fulfillment." Harvard Business Review (2004): 104-110.

[77] Ghemawat, Pankaj, and Jose Luis Nueno. "ZARA: Fast Fashion."CD-ROM Harvard Business School (2003).

[78] Blanco, Xabier R., and Jesus Salgado. Amancio Ortega, de cero a Zara. Madrid: La Esfera de los Libros, 2004.

opportunities to take advantage of economies of scale in the sewing process[79]. The turnaround time for this sewing step is normally 1-2 weeks. The majority of these subcontracted firms are small workshops that employ an average of 20-30 employees. These workshops each specialize in a product type and work in small batches. The relationship between Zara and these subcontractors are usually long-term since many of the companies rely solely on business from Zara. Zara also collaborates with these companies by providing technology, logistics, and financial support. Zara pays these subcontracted sewing firms by predefined rates per garment[80].

After the garments have been sewn, the garments are transported back to Zara's factories in La Coruña for finishing. Here, the garments go through a quality control check, are tagged, and ironed. From the Zara factories, the finished garments are transported, on hangers grouped by model and size, though part of the 211 km network of rails to Zara's Arteixo LC. They are automatically sent from its arrival terminal to its proper entrance in the Arteixo LC. [81] The four areas of both the Arteixo and the Zaragoza LCs are the Hanging Garments area, Folded Garments area, Exports Area, and Expedition area.

5.4 Inside business processes

Zara's inside business processes are comprised of the management of their product portfolio, facility and capacity planning, inventory, production, transportation, and logistics centers.

5.4.1 Product portfolio management

The key product portfolio strategy of Zara is to lead the trend of product proliferation in the apparel industry. With over 300,000 SKU's per year and 10,000 designs, Zara always has new items in its stores[82].

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[79] Ghemawat, Pankaj, and Jose Luis Nueno. "ZARA: Fast Fashion." CD-ROM Harvard Business School (2003).

[80] Ghemawat, Pankaj, and Jose Luis Nueno. "ZARA: Fast Fashion." Harvard Business School (2003).

Fabrega, Fernando. Zara: El modelo de negocio de Inditex. Madrid: Claves de Gestion, 2004

[81] Fabrega, Fernando. Zara: El modelo de negocio de Inditex. Madrid: Claves de Gestion, 2004

[82] Ferdows, Kasra , Micheal A. Lewis, and Jose A. Machuca. "Rapid-Fire Fulfillment." Harvard Business Review (2004): 104-110.

Some of the challenges to having a high variety of styles are replenishment and forecasted demand accuracy. Zara's present supply chain overcomes these challenges with its innovative and sometimes unconventional techniques. To address the issue of replenishing the high variety of styles so that there are always new styles in the store, Zara produces small batches of its fashionable styles either in house or though local manufacturers and can quickly reorder popular items. Also, store deliveries are made by air or truck twice per week with new styles. The production capacity and LC capacity are underutilized in order for Zara to have the capacity to be able to react to peaks in demand and make sure that stores are always stocked with a high variety of styles. The challenge of accurately forecasting demand is aided by the high level communication in Zara's supply chain and the effects of mistakes in design or demand forecast are further mitigated by Zara's supply chain practices. Zara's vertically integrated supply chain greatly reduces the bullwhip effect since there is less amplification of deviations to actual demand. Zara also practices postponement which allows them to delay commitments to fabric color or print until demand is more predictable. The frequent information flow between store managers and corporate headquarters also contributes to increased forecast accuracy. Point of Sale data is continuously updated and customer feedback is transferred by store managers weekly. Because Zara fashion items have short lead times and no inventory is kept at the store, as soon as fashion mistakes are spotted, production can be adjusted and at most only a few weeks of unwanted inventory will be built up. This encourages Zara to create a high variety of styles since Zara's design risk is minimal.

5.4.2 Facility and capacity planning[83]

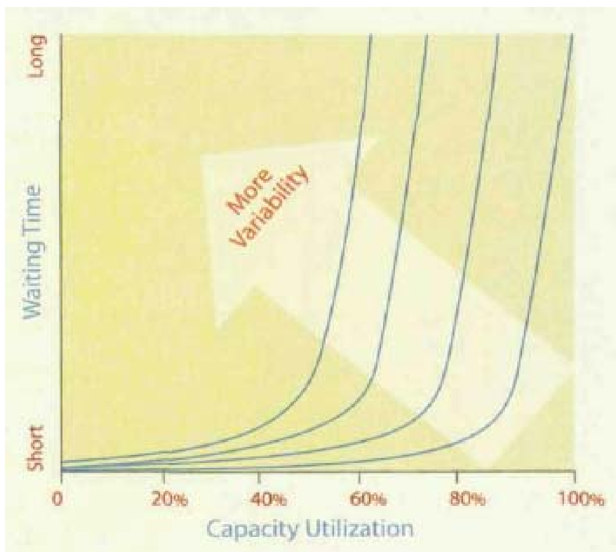
Zara's factories are only scheduled to operate for one shift so that when necessary, they can operate additional shifts in periods of peak demand. The same concept of planning the underutilization of capacity, which is counterintuitive and costly, is applied at Zara's Logistics Centers as well. It doesn't seem to make financial sense to build a factory and only run it for one shift or only operate a 500,000 sq meter LC at 50% capacity. However, according to Harvard Business Review's "Rapid Fire Fulfillment article", Zara's managers do so because of concepts from the queuing theory, which say that waiting time increases exponentially when capacity is tight

[83] Ferdows, Kasra , Micheal A. Lewis, and Jose A. Machuca. "Rapid-Fire Fulfillment." Harvard Business Review (2004): 104-110.

and demand is variable. As a result of tolerating lower capacity utilization in factories and LCs, Zara can react faster to peaks or variations in demand without incurring backorders, since it tries to create an environment where wait time is minimized. This graph from the Harvard Business Review article illustrates the increasing affect of capacity utilization and demand variability on wait time.

Figure 5-4[84]

The Exponential Increase in Wait Time as Variability and Capacity Utilization Increase



5.4.3 Inventory management

From design conception to completion of the production process, each of Zara's three product families operates in distinct supply chains, but in parallel. Even after the supply chains merge, the product families still operate distinctly with respect to information flow. At the LCs, inventory is segmented first by hanging/folded garments, then by model and size. Since the stores themselves do not carry inventory, there is no need to manage inventory at the store level.

[84] Ferdows, Kasra , Micheal A. Lewis, and Jose A. Machuca. "Rapid-Fire Fulfillment." Harvard Business Review (2004): 104-110

5.4.4 Production management[85]

The key consideration of Zara's production management is the time factor. According to Inditex's 2003 Sustainability Report, Zara considers the time factor above and beyond all costs. Zara's factories are highly automated and are specialized by garment type. These factors in conjunction with *just in time* practices help Zara achieve its goal of rapid response to customer demand. Postponement of about 50% of Zara's purchased fabric also allows Zara to overcome the challenge of long lead times for fabric procurement. By having greige fabric on hand, Zara can essentially shorten lead time for fabric procurement to one week, which is the time it takes for Comditel to dye and print the fabric. All of these practices contribute to reducing Zara's products' time to shelf. They have achieved lead times of 4-5 weeks for completely new designs and 10-14 days for modifications to designs with fabric on hand.

5.4.5 Transportation management[86]

The time factor is again the most important factor for Zara in transportation as well. Store deliveries within Europe are made in 24 hours of order placement, in 48 hours to the Americas, and in 72 hours to Asia. 20%-25% of Zara's merchandise is airshipped and the rest is transported by outsourced truck. About 65% of Zara's garments are shipped folded and 35% are shipped hung. Hung garments are expensive to ship compared to the folded garments since they take up more volume, but this is done so that the merchandise can be delivered to the stores floor-ready.

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[85] Fabrega, Fernando. Zara: El modelo de negocio de Inditex. Madrid: Claves de Gestion, 2004

Ghemawat, Pankaj, and Jose Luis Nueno. "ZARA: Fast Fashion." Harvard Business School (2003).

[86] Fabrega, Fernando. Zara: El modelo de negocio de Inditex. Madrid: Claves de Gestion, 2004

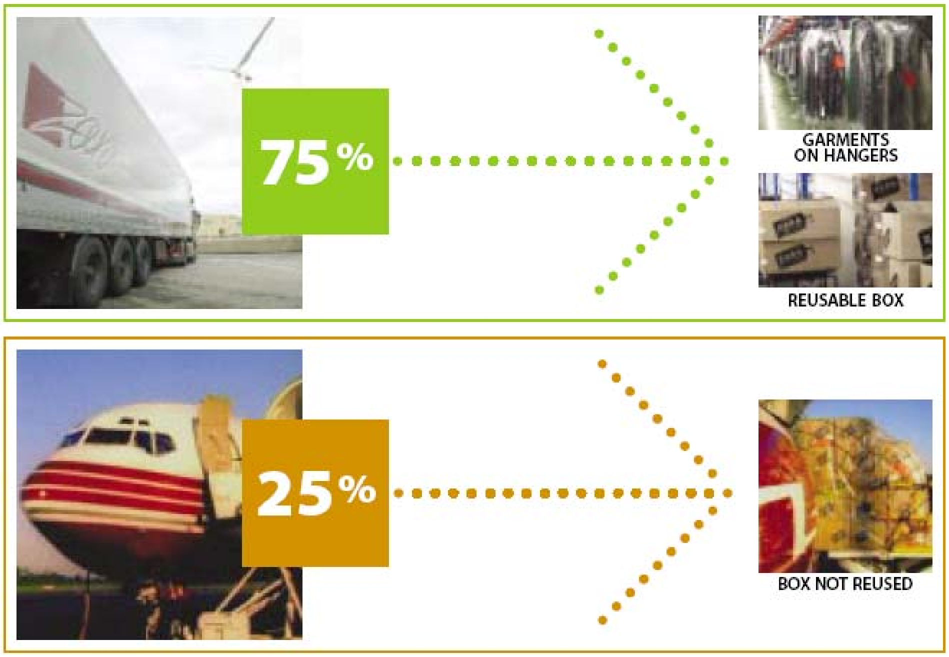
Ferdows, Kasra , Micheal A. Lewis, and Jose A. Machuca. "Rapid-Fire Fulfillment." Harvard Business Review (2004): 104-110.

Inditex Corporate Sustainability Report 2003

Blanco, Xabier R., and Jesus Salgado. Amancio Ortega, de cero a Zara. Madrid: La Esfera de los Libros, 2004.

Figure 5-5[87]

Zara Transportation



5.4.6 Logistics Center management

All of Zara's Logistics Centers are fully owned and managed by Inditex. The key considerations for the location of the warehouse vary for each LC. The Arteixo LC is located in La Coruña, in the northwest corner of Spain, close to Portugal. Since the founder of the company Amancio Ortega, has his roots in Galicia and had built up his production facilities there, the Arteixo LC was built central to these production facilities. The new Zara LC is located in Zaragoza at a state-of-the-art logistics center, PLAZA, with direct access to transportation by air and land (rail and road network). The Tempe LC is located in Elche in the southeastern region of Spain.

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87 Inditex Sustainability Report. 2003. 20 Jan. 2005 <http://inditex.com/en>.

5.5 Customer Side Business Processes

This subsection will address that business processes that directly address Zara's store needs. These include the management of the distribution channels, demand planning, markdowns, order fulfillment and returns.

5.5.1 Distribution channel management[88]

From the LCs, subcontracted trucks and planes transport goods to all retail stores two times per week. Trucks leave from LCs four times per week for the airport and stores in Europe. Each LC makes deliveries four days a week. The deliveries are segmented by region: two days to one region, and two to another. Orders are usually filled within eight hours of receiving the order. The orders are placed by store managers at the same two times every week though communication by PDAs. Through these PDAs, the store managers are able to see what inventory is available at the logistics centers. If there is not enough stock to fill the orders, the merchandise is allocated by the historical sales of the individual store. The store managers walk around the store making note of everything that needs to be ordered. At the end of the day, the PDA's are connected to Logistics Centers and a unique order for each store is generated. Orders are made two times a week during regular sales seasons and three times a week during sales seasons in January and July.

5.5.2 Demand Planning and Forecasting[89]

Zara's quick and integrated supply chain creates an environment with short lead times which reduces the need to forecast far in advance. Since fashion items are constantly changing and there is little historical data to base the forecasts on, Zara's short lead time is very advantageous in keeping forecast errors minimal. Fabric procurement has a long lead time so it usually needs to be forecasted early. Since Zara practices postponement for half of its fabric, much of the commitment can be delayed. If fashion mistakes are made, there is only a few weeks worth on inventory in the pipeline and these mistakes are not as costly as they would be with longer lead times.

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[88] Ghemawat, Pankaj, and Jose Luis Nueno. "ZARA: Fast Fashion." Harvard Business School (2003).

Ferdows, Kasra , Micheal A. Lewis, and Jose A. Machuca. "Rapid-Fire Fulfillment." Harvard Business Review (2004): 104-110.

[89] Ferdows, Kasra , Micheal A. Lewis, and Jose A. Machuca. "Rapid-Fire Fulfillment." Harvard Business Review (2004): 104-110.

5.5.3 Channel and sales management

Zara's only sales channel is its retail store. Each retail store is managed by a store manager who runs the store as a small or medium sized business. At some of the larger retail stores, each of the three product families has its own manager and the manager of the women's department serves as a store manager. Only small numbers of each style are stocked in each store, making stock outs of popular styles frequent. Zara uses this factor as a sales technique. Because customers know that an item that is in the store at the moment may not be there the next day, they are therefore more likely to buy the item that day.

5.5.4 Markdown management

Zara's policy on markdown management is to minimize the presence of markdowns in the retail stores. There are two sales periods which are usually in January and July. Zara never has marked down items in the store during the rest of the year. Minimizing markdowns in the store preserves Zara's culture of exclusivity and scarcity. Items that are slow to sell are sent back to LC's within two to three weeks to even further reduce the presence of markdowns even during the sales periods.[90]

5.5.5 Order fulfillment

Store orders are made by store managers two times per week at scheduled times based on region. If an ordering time is missed, the store manager will have to wait until the next opportunity to place an order. These orders are made to the Logistics center that serves that store. The store managers communicate the orders through a hand held PDA which also allows them to see the availability of items in the Logistics Center. If there is a shortage of a particular style, the Logistics Center will allocate the items based on the historical performance of the store. Stores with higher historical sales are more likely to receive the item. At the Logistics Centers in

[90] Ferdows, Kasra , Micheal A. Lewis, and Jose A. Machuca. "Rapid-Fire Fulfillment." Harvard Business Review (2004): 104-110.

Zaragoza and Arteixo, orders are usually filled within eight hours of receiving the store order and usually arrive in Europe in 24 hours, the Americas in 48 hours, and Asia in 72 hours.[91]

5.5.6 Returns management[92]

In order to maintain Zara's brand image and culture of exclusivity, Zara makes a conscious effort to reduce the presence of markdowns in the retail store. Slow moving styles are monitored by store managers and items that have not been sold within 2-3 weeks at the retail store are sent back to Zara LCs. At the LC, the returned items are either reallocated to other Zara stores, a separate chain of Zara outlet stores called Lefties, or are to be sold in lots or in bulk to third parties. One of the services that Apyl Textil, located next to the Zaragoza LC, performs is the handling of the returns to be sold to 3rd parties. All the items that cannot be resold in Europe are sent to Apyl for classification and value added services such as additional tagging and packaging. Unsold items are sold in bulk to various countries around the world such as China, USA and Russia.

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91 Ferdows, Kasra , Micheal A. Lewis, and Jose A. Machuca. "Rapid-Fire Fulfillment." Harvard Business Review (2004): 104-110.

92 Zara Logistics Center Visit, Zaragoza, Spain, Jan 24, 2005

Garcia, Carolina. Interview, 12 April 2005

6

ZARA'S SUPPLY CHAIN FRAMEWORK

This section will address Zara's strategy, supporting operating model, operational objectives, and tailored business processes. In an ideal environment, Zara's supply chain framework directly follows from its overall strategy. Its operating model reflects the goals of its strategy and its operational objectives allow it to continue to reach its goals.

6.1 Business Strategy

According to the proceedings of the European Advisory Council kickoff meeting for the MIT Supply Chain 2020 project, "Zara's strategy is to provide unique and innovative fashion products at low prices. The retailer ensures that consumers quickly buy a product when they see it by creating and fostering scarcity." [93]

As a general statement, this describes Zara's overall strategy, but in addition to this statement there is more to Zara's overarching strategy and philosophy. Zara's philosophy is to attain total control over its product from conception at the design level until it leaves the retail store. According to Amancio Ortega, the founder of Zara, "you need to have five fingers touching the factory and five touching the customer."[94] "Unique and innovative fashion products" can also be described as a high variety of quality fashion products which brings high value at a low cost to its customers. The limited quantity of the latest fashion items is what brings high value to Zara's merchandise. Since Zara can sell these items at relatively low prices compared to the high fashion designer labels, Zara's customers get high utility from Zara's merchandise. This creates a sustainable competitive advantage.[95] The speed at which Zara brings their products to the store is what makes its products fashionable and unique. The uniqueness of a product is important in order to be fashionable because once a product becomes common and too popular,

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[93] Meyer, Dana , and Andrea Myer. Proceedings of the Supply Chain 2020 Project's European Advisory Council (IAC). 8 Sept. 2004. MIT Center for Transportation & Logistics. <http://www.supplychain2020.net>.

[94] Ferdows, Kasra , Micheal A. Lewis, and Jose A. Machuca. "Rapid-Fire Fulfillment." Harvard Business Review (2004): 104-110.

[95] Porter, Micheal E. "What is Strategy?" Harvard Business Review OnPoint (November-December 1996): 59-79.

it is no longer considered fashionable. The fashion conscious consumers that Zara target are constantly looking to be ahead of the general public in fashion trends. The high variety of products that Zara produces is another key factor in the uniqueness of its styles. Since there are so many different styles, there is never just one style that dominates Zara's collection of merchandise and there are always new styles in the store. This creates the motivation for customers to make frequent visits to the store in search of the latest style. Also, as a result of the scarcity of each style, once the customer has "discovered" the new trend, and the item is the correct size and an affordable price, Zara creates a sense of urgency for the customer to purchase the item since it may not be there the next day.

6.2 Operating Model[96]

Zara's operating model to support its strategy is to respond quickly to new styles and changes in demand. This is done through Zara's fast, efficient and flexible supply chain, which allows Zara to create small batches of designs that follow fashion trends and customer feedback to bring them to the store in a short time. Zara's integrated supply chain, *just in time* practices, postponement, and operational efficiency allow Zara to realize their strategy. Vertical integration supports Zara's philosophy of having complete control over its product by owning most of its processes from conception of the design to the retail store. The diagram below is an illustration of how a flexible supply chain supports Zara's strategy of providing innovative products at an affordable price while taking minimal fashion risk. Zara takes minimal fashion risk by achieving short lead times and producing in small batches. This diagram also shows how a flexible supply chain leads to Zara's success factors such as price advantage, strong brand identity, and aggressive expansion.

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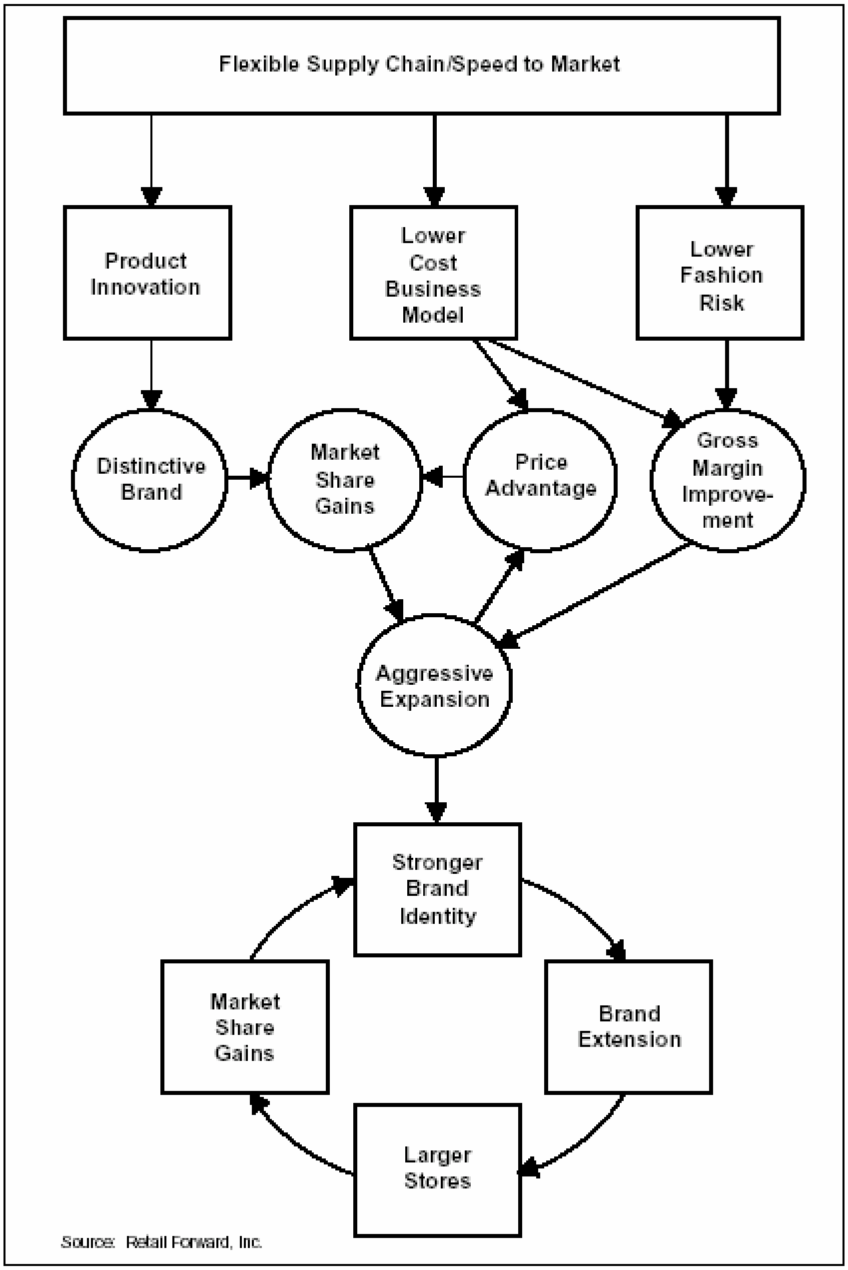
[96] Meyer, Dana , and Andrea Myer. Proceedings of the Supply Chain 2020 Project's European Advisory Council (IAC). 8 Sept. 2004. MIT Center for Transportation & Logistics. <http://www.supplychain2020.net>.

Figure 6-1[97]

Flexible Supply Chain



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[97] European apparel retailers face rocky road. 25 Mar. 2003. 2 Dec. 2004 <http://just-style.com>.

6.3 Operational Objectives

Zara's operational objectives belong to general categories such as customer response metrics, efficiency metrics, and asset utilization. Given how closely held Zara's specific operating information is, descriptions of Zara's specific operational objectives and metrics must be based on inference. Because of this, it is difficult to assess how well Zara´s operational objectives support their operating model. Below, I make such inferences dealing with customer response, efficiency, and asset utilization.

Customer response metrics and objectives

At the LCs, the objective is to respond to store orders quickly, usually within eight hours of receiving the order from the store. Since the orders are frequent and come in relatively small batches, the objective is to exploit the automated picking and packing processes at the LC in order to achieve quick response. Suitable metrics here would measure the accuracy of the order, the conformance of the picking and packing process to the shipping schedule and the adherence of truck departures to the same schedule. In order to achieve Zara's unique stocking principle that strives to stock a wide variety of items and sizes, but very few of each, Zara fills orders frequently. Often times, there is only one of each item in each of the sizes. Since the stores managers are responsible for accurately ordering what the customer will buy and have the incentives to reflect customer demand through their orders, one of the customer response metrics could be to sell an item within a certain number of days of receiving it. This is evident in Zara's policy to send back merchandise that hasn't sold within 2 or 3 weeks to reduce the presence of markdowns at the end of the season[98]. This also conserves valuable store space, and is a way that the stores facilitate the rhythmic operation of the supply chain at the downstream point.

[98] Ferdows, Kasra , Micheal A. Lewis, and Jose A. Machuca. "Rapid-Fire Fulfillment." Harvard Business Review (2004): 104-110.

Efficiency metrics and objectives[99]

In order to run an efficient supply chain, Zara aims to maintain a rhythm throughout the supply chain. For example, there is a schedule for Zara managers to place orders and they must be done at the same time. Also at the LC level, there are set delivery schedules and one of the efficiency metrics could be a percentage of how often it was necessary to stray from the established schedule. Zara's measure of efficiency is counterintuitively determined by adherence to the schedule, not necessarily by the most efficient use of resources. For example, Zara will go so far to minimize deviations to the schedule as to have sent out half empty trucks when making deliveries. Zara needs to continuously update its schedule to modify for the ever increasing number of stores.

Asset Utilization metrics and objectives

As with most companies, the most concrete metrics and objectives come from the company's financials. We assume that, like most businesses, Zara strives to make profits and increase sales. This can be measured by sales per square meter of store space, increase in percentage in same store sales, and total sales. Days of inventory is another metric of asset utilization. Since the merchandise itself is one of Zara's assets, the fewer number of days the garments are kept in inventory, the higher the returns on that asset. The objective here would be to minimize days of inventory while maintaining the ability to serve customers.

6.4 Tailored Business Processes

Zara has three tailored business processes that contribute to the success of the company and to the excellence of its supply chain. The tailored business processes that make Zara stand out from the other specialty apparel retailers are the production, replenishment, and design processes. These tailored business processes support Zara's overall strategy and operating model while reinforcing each other at the same time.

Zara's production process ties into its strategy and operating model to make it possible for Zara to have a high level of control over the complete life cycle of a product. This means that Zara has the ability to create a product that is a current trend in a short amount of time and bring

[99] Ferdows, Kasra , Micheal A. Lewis, and Jose A. Machuca. "Rapid-Fire Fulfillment." Harvard Business Review (2004): 104-110.

such unique and innovative products to the customers when they want them. This is the essence of Zara's operating model. It allows Zara to quickly respond to fashion trends and customer demand. Zara's production process also fosters scarcity which is another aspect of Zara's overall strategy. In the tailored production process, fashion garments are created in small batches, which means that there are never large amounts of one style in each store. This manufactured scarcity causes Zara's customers to buy a product they like when they see it. The product may not be available again due to the small amount of merchandise in the pipeline that Zara maintains for each style. The production process is enabled by its *just in time* practices in its Inditex-owned factories, postponement at the procurement level, and local sourcing of materials and labor.

The rapid replenishment process is enabled by the logistics function of the company. Through its Logistics Centers, Zara is able to fill orders and deliver twice a week to the retail stores. This is one of the essentials of Zara's operating model since it is one of the factors that keeps the lead time short. The frequent and fast order fulfillment process supports Zara's strategy by allowing stores to offer a high variety of products and allowing Zara to keep products scarce but still meet customer demand. The speed and frequency of the replenishment process also allows Zara to offer its products as "fashion" items since fashion is characterized as having a short product life-cycle. In addition, Zara's underutilization of capacity allows it to maintain the same level of responsiveness even during peak demand periods.

The design process is enabled by the information collected from POS data, customer demand and research on fashion trends. The fast transfer of this information is made possible by the weekly communication with store managers and the real time transfer of POS data to Inditex headquarters. From a strategic viewpoint, the design process is integral in achieving Zara's strategic goal. The innovative design of the clothing is the fashion that Zara is selling. The closer the designs are to the actual consumer preferences, the closer Zara can get to achieving its goal of providing a high variety of fashion to its customers. In order to support Zara's operating model of quick response, Zara's design team is closely linked with the POS data and customer demand data transferred by the store managers.

All of these tailored business processes fit together and reinforce each other to make it possible for Zara to achieve its impressive quick response which is their key competitive advantage. The design process initiates the cycle by starting the production process. Once the garments are produced, the Logistics Centers handle the replenishment process and make sure the right mix of merchandise reaches the retail stores twice a week. The retailing process happens when the floor-ready garments are in the store, ready to be sold. The information collected at the retailing process such as POS information and customer information is transferred back to the La Coruña headquarters to reinforce and renew the design process.

The accurate representation of fashion trends and customer demand and Zara's quick response cross-optimize each other because the quick response allows Zara's accurate representation of fashion trends to reach the consumer when it is demanded by customers. Without quick response, Zara's use of the information collected about trends and customer demand is not optimized since fashion changes rapidly. On the other hand, the effectiveness of Zara's methods to respond quickly to customer demands are also optimized by its quality designs since the benefits from exerting effort and money to respond quickly are optimized by responding with designs that reflect accurate demand preferences.

7

CONCLUSIONS

This thesis has characterized excellence in the European apparel industry through the example of Zara. It has covered the European apparel industry, its supply chain characteristics and Zara's supply chain operation. The analysis on Zara described its strategy, operating model and objectives, and its tailored business processes that have contributed to its position in the industry today. Zara's supply chain practices have put this company in the spotlight over the past few years with several academic and business articles written about Zara's impressive two week lead time achievements. Although Zara's vertically integrated structure differs from many of the other apparel retailers since many of them concentrate solely on production or retailing, Zara's excellence across the entire supply chain makes it an ideal company to analyze.

One of the key factors to Zara's quick response is the close proximity of its sourcing and production to its customers. Zara is perceived as a very international company with stores in 48 countries, but one of they success factors of their supply chain is the fact that the majority of their stores are in Europe and concentrated in Spain. Zara can offer its reasonable prices and short lead times because it can still source locally and sell locally. If Zara continues to expand internationally, and create major markets in new geographical regions, it will be forced to consider replicating their supply chain in these regions in order to serve those areas as they do in Europe. Zara is still currently concentrating on its opportunities for growth in the European region so it will be some time before other areas become dominant markets for Zara[100]. In terms of achieving its strategy of providing innovative designs at low prices, Zara can currently only do so in the European region. In other areas Zara's designs are innovative and fashionable around the world, but the prices are higher outside of Europe.[101]

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[100] Ghemawat, Pankaj, and Jose Luis Nueno. "ZARA: Fast Fashion." CD-ROM Harvard Business School (2003). Roundtable discussion

[101] Ghemawat, Pankaj, and Jose Luis Nueno. "ZARA: Fast Fashion." CD-ROM Harvard Business School (2003). Roundtable discussion

In this paper, we have focused on the success of Zara's super-responsive supply chain. Zara's success as a company is attributed to not only its fast and flexible supply chain, but also its consistently fashionable design. In apparel, marketing and the brand image drive demand which are the biggest contributors to the success of a company. Zara's consistent fashionable design is one of the main factors that maintains its brand image as a highly fashionable retailer. Its quick response supply chain practices make sure that its designs reach the customer while they are still in demand.

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