

# Zara supply chain: overview

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A network and flow explanation to Zara' success Angel Diaz and Luis Solis Instituto de Empresa, Maria de Molina 12, 5°, Madrid 28006, Spain E-mails: angel.[email protected]edu; luis.[email protected]edu Abstract Zara is a Spanish fashion manufacturer and retailer that has known swift success. Spaniards have become used to visiting Zara frequently, as there is always a new product. Zara launches 100 different collections every year, with over 11000 models, none lasting more than five weeks in production and with an average lead-time (design to store delivery) of four weeks.

Inditex, the group to which the brand Zara belongs owns five brands with over 1000 stores in more than 30 countries. Although its global sales are still one sixth those of Gap, its sales have increased at an average 30% per year over the last three years, with net benefits over sales of close to 12% in the same period. In this paper we examine Zara' production and distribution systems, looking for clues to its mass-customization capabilities. We argue that the key to Zara' success is its Supply Chain (network and flows) approach.

The production network is made of a tightly integrated net of product specialized factories, intensive in capital and run under Toyota's principles, and a secondary network of over 400 micro enterprises, tightly controlled by Inditex but independent. All these are located in the same small geographical area, Galicia (northwest Spain). The swift flow is facilitated through advanced automation and logistics systems, with emphasis on postponement.

We compare these network and flow approaches to those of Benetton and Gap, and argue that the key to Zara' success is this combination of a tightly integrated local network coupled to the most advanced flow systems. A final consideration is the sustainability of these orderwinners over time.

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Intense competition in the global marketplace is forcing organizations to consider new practices by which they could enhance and sustain their competitive capabilities.

Network configurations and alliances is such one option through which an organization can leverage its resources to compete effectively against fast and nimble competitors. Furthermore, the emphasis on supplier integration in supply chain management has contributed to the growing interest on strategic supplier alliances by companies around the world. Strategic network alliances are innovative and interesting forms of relationships between buyers and suppliers, however, successful supplier alliances have proved to be very elusive for the most part (Landeros and Monczka, 1991).

Despite that academic and practitioner literatures have devoted considerable attention to supply network alliances issues, its dynamics has yet many unanswered questions. Furthermore, most of the literature has focused on cases in few developed countries like USA. There is a need to expand our understanding about international cases since more and more global supply chain networks are becoming more important. The study of the ZARA supply chain network in Spain is a contribution in this direction.

The Spanish integrated manufacturer-retailer of apparel Zara has been defined as the Armani for the masses. Although sales of Zara (close to two billion dollars, comparable to Benetton) are much lower than that of the clothing retailer leader Gap, its financial performance has been bright. Net profits of Inditex in 2001 were 340, 4 million €, 31% more than the previous year, out of sales of 3. 249, 8 million €, a growth of 24% with respect to 2000. Zara launches over 100 collections per year (11. 00 new garments) and has a total design-to-store cycle time of less than 4 weeks. Every garment will be on sale for a maximum of 5 weeks, after which is removed and sent to discount stores or destroyed. Zara invests close to zero percent of its sales in advertisement (5% of sales for Gap), relying instead on keeping customers perpetually interested in finding new surprises (Zara's customers visit the conveniently located stores an average 17 times a year). While Gap brands, Zara intrigues.

We argue in this paper that the success of Zara is explained by a business approach in which a highly automated and largely local production and distribution network facilitates very fast response times as the key competitive advantage, and that this design can be due to cultural and market characteristics of Spain. History The founder of Zara, Amancio Ortega started a small garment factory in La Coruna, Galicia in 1963. In 1975 Ortega integrated downstream by opening his first store, Zara. By the end of the decade six stores with that name were located in Galicia.

The eighties saw important changes. Ortega created the parent company of Zara, Inditex (stands for Textile Design Industry) announcing a movement

toward integrated design-fabrication-retail operations. Also in this period an ex-IBM salesman, Jose Maria Castellano, the actual Vice-president of Inditex, imposed a vision of time-based competition sustained on the intensive use of technology that was to dominate the holding in the future. By the end of this decade Zara had 82 stores in Spain and six abroad.

In the nineties the group developed the quick response, integrated logistics network described in this case. An important milestone was the adoption at the beginning of the decade, and well ahead of other Spanish companies, of Just in Time and lean production practices, with knowledge provided by Toyota, Japan. By the end of the century, Inditex added four new brands, each for a different market niche and with their own distribution channels. At the closing of the 2001 exercise the group had 1080 stores (449 of Zara, that represents almost 80% of total sales) in 33 countries, over 20.000 employees and the impressive profitability and growth figures mentioned in the introduction. Networks and Alliances Researchers have provided some evidence that companies relying on strategic network alliances are more profitable since closer buyer-supplier relationships may offer many technical, financial, and strategic advantages over spot market transactions and vertical integration (Mohr and Speckman, 1994). Furthermore, strategic alliances provide an effective alternative to improve economies of scale and scope.

Different scholars have studied the antecedents that lead to different forms of network alliances. These studies suggest that assets type involved will impact the type of relationships (Dwyer, Schurr, and Oh, 1987). A different

stream of research has studied the relationship between environmental uncertainty and resource interdependence with the nature of relationships. Handy, 1995; and Mohr and Spekman, 1994, have conducted empirical exploratory studies on the formation and evolution of inter-organizational relationships. Production and logistics are largely regional at Inditex, with much less outsourcing than is common in this sector. Why the network evolved into this configuration can be due to cultural characteristics of Spain. There exist a rich literature on collaboration. According to this Industry Networks, a set of organizations that have developed recurring ties when serving a particular market, is a variation of the old idea of industrial districts (Ebers & Jarillo, 1998).

The drivers for collaboration have been extensively analyzed in the literature and can be synthesized in strategies of coespecialization; the search for mutual learning to support fastest product developments, better information and product flows (resulting in cost and time reductions, a dominating theme in logistics); the creation of virtual scale and scope economies; and in the creation of entry barriers, among others (Cervilla and Lorenzo, 2000).

Hofstede characterizes Spain? culture as risk avoidance, hierarchical inclined (Granell, 1997). Solis et al. (2000) show that in Spain companies, integration and closer relationships with local and global suppliers in critical processes are becoming paramount. Strategic network alliances require time and resources to be built and sustained. In getting the benefits of integration and synchronization with suppliers, building trust represents the most critical issue for supply network managers.

Important for successful strategic supplier alliances is the communication expected behaviour, particularly the quality of information and participation, and the extent to which relevant information is transparent to suppliers. No less important for alliance success is the existence for a formal purchasing commodity selection process and a formal supplier assessment and selection process. These factors plus a comparatively low degree of outsourcing activity in Spain can explain the formation of this type of network.

Factories Inditex owns 25 factories, each dedicated to capital-intensive activities (dye, cutting) and the production of a family items. The large majority of these are located in La Coruna. Inditex has additionally developed a network of external micro-companies, many households, that provide labor-intensive services, mainly sewing, which has proven difficult to automate. According to Mr. Castellano the local work force has higher labor cost but also faster reaction time (than outsourced production in a low-cost area).

Distribution Inditex owns a single logistics center in La Coruna. This large facility (400, 000 square meters) is largely automated, with 2 carrousel for fold garments (60, 000 per hour) and 200 kilometers of elevated tracks. Products are transported directly to stores using outsourced but dedicated carriers (Azkar for land transportation -some 80% of deliveries in 2000, and different airlines for exporting, all taking-off from local Galician airports).

Flows Two distinct flows can be appreciated at Inditex. One consists of long-term cycles, i. e. purchasing of raw materials and the other a short-term

cycle, i. e. , design, fabrication and distribution. The long cycle starts three to six months before each fashion season and consists in the acquisition of two thirds of the raw materials required, mainly cloth (90% of which is sourced from India, China, Morocco, Mauricio, Korea, Italy Germany and Turkey -the remaining one third is supplied during the season), and of one half of all garments (15%-20% is acquired in advance, 50%-60% at the beginning of the season and the rest during the season).

These are those items that are thought to be stable, i. e. , basic products for which demand is fairly predictable. The rest of the garments (those thought to have a higher risk) are produced inhouse in the short cycle described bellow. The short cycle start with design. This is totally an in-house affair in which over 200 designer work simultaneously on three season collections, the current one for modifications and improvements and the next two (winter 2002 is being currently worked on in the Spring of 2002).

Target pricing and low scale customer acceptance trials are usual practices at this step. Patterns are scanned and sent electronically to the manufacturing plants. Here capitalintensive activities such as dying and cutting are performed, while sewing is manually done by the micro-companies described above. Processes in the plants are kept flexible using lean production principles such as multi-skilled and flexible work forces (with an enviable strike record) and simple Japanese-like control systems.

Production is thus pushed into the stores (15% at the beginning of the season, the rest according to demand), where the manager uses hand-held devices (currently Cassiopeia PDAs) to send feedback in close to real time



about what moves and what doesn't (colors, sizes, models), allowing for fast adjustments to the production plan. Replenishment to stores is done twice or three times a week, with a lead-time for existing (or subject to slight design modifications) items of two weeks, and of five weeks for new products.

### Comments

It is interesting to compare the strategy of Zara/Inditex to that of Benetton (a similar sized competitor) and of the market leader Gap. Of the three the more integrated, both upstream and downstream is Zara/Inditex. Benetton produces through a network of mainly regional subcontractors, distributes from a centralized, automated warehouse and retails through franchises. Gap subcontracts production to a network of global producers (over 3000 in more than 70 countries) and has a network of global warehouses and distribution centers.

Design	Zara	Benetton	Gap	Own-	continuous	Own-
periodic	Own-periodic	Production	Distribution	0% own	regional	factories
Centralized	D. C.	50% subcontractors	Own stores	Regional	subcontractors	
Global	subcontractors	Centralized	D. C.	Franchises	Decentralized	warehouses
and D. C	Zara/Inditex	model is not a fashionable	global, outsourced	network.		

It evolved as a probable consequence of limitations in the Spanish market, but has proven that a vertically integrated local network when linked to advanced manufacturing and information technology practices can result in quick response times with little stock or waste, a by-product of the synchronization of offer and demand that the integration nature of the process allows.

Postponement of the (in-house) fabrication of fashion items considered of high uncertainty, plus the flexibility and quick response implicit in the lean and automated process results in low levels of stock (40% less than Gap, is proportion to sales) An important question is now whether the organization of Mr. Ortega and Castellano can maintain its characteristics and stellar performance as global growth takes place. Due to European expansion a new distribution center is being built in Zaragoza, close to the French border and facilities for production in Mexico are being considered.

Labor shortages in the small Galician area have also been reported. The organization could then decide to play in a niche market position and remain as it is, duplicate the actual local Galician network in other regions (e. g. , Mexico) or move towards a global and more externalized network. If the last, and arguably most probable option is pursuit, the challenge for Zara/Inditex will be to maintain their current flexibility. References Cervilla y Lorenzo (2000): " Redes de empresas y tecnologías de informacion: copciones para el desarrollo de la PYME". Debates IESA.

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