Microeconomics of Competitiveness

Apparel Cluster in Galicia (Spain)

May 8th, 2009

Team members

Gulcan Bozdemir

Joaquim Cristia Oliva

Pablo Jerez

Elixabete Larrea Tamayo

Selected Galician designer sketches taken from La Voz de Galicia, www.mujeraldia.com, www.yodona.com

Table of Contents

Note: There are two team members from Spain (Joaquim Cristia and Elixabete Larrea) in the project team

1. Country analysis

1.1. Spain at a glance

Spain is located on the most Southwestern part of Europe, in the Iberian Peninsula, bordering France and Portugal. Spain's location has been historically strategic as main passage between continental Europe and the Atlantic Ocean.

Recent Spanish history has been marked by four relevant periods. First, the 1970s marked the transition to democracy, after Franco's dictatorship. Second, the 1980s saw the consolidation of democracy after a failed coup d'etat in 1981 and Spain's inclusion in the European Union in 1986. Third, the 1990s marked the deepening of economic integration with Europe, with the joining to the European Monetary Union in 1990 and with the conversion to the Euro currency in 2002. Finally, the 2000s are shaping a new period in Spain's history after a strong economic boom in the first half of the decade, followed by an equally big burst of the housing bubble and global economic crisis in 2008.

The country currently has 45.5 million inhabitants (9.1% of total EU-27 population[1]), almost 80% of which are Catholics. Spain's main official language is Spanish but has three additional regional languages; Catalan, Basque and Galician[2].

Politically, the country is divided in 17 autonomous communities or regions in which all of them have their own directly elected authorities, parliament and government. Due to the decentralized system in Spain the different Comunidades Autónomas (regions) have for example, the ability to manage their own regional education and health systems. Moreover, The Basque Country and Navarre can also manage their own public finances through some historical rights called "Fueros". This level of decentralization generates some conflict between the central government and autonomous regions[3].

Because of its long colonial history, Spain has close ties to the Latin American Spanish-speaking markets providing advantageous bilateral economic and trade relations.

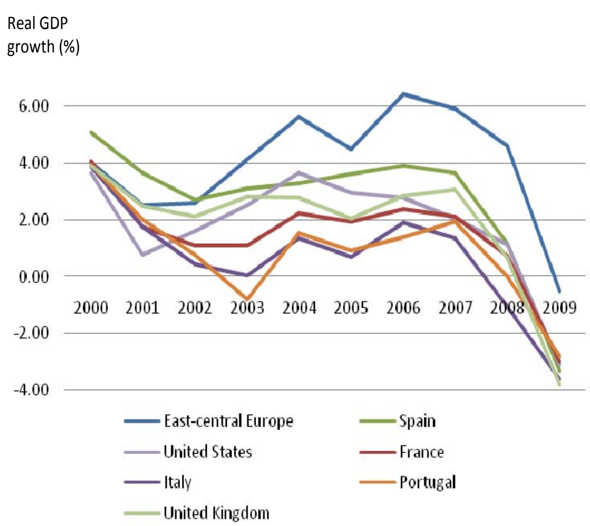
The location endowed Spain with a mild Mediterranean climate which is very suitable for the production of high quality agricultural products and which has contributed to the tourism sector, with a mix of leisure (beaches) and historic activities.

1.2.Spanish economic performance

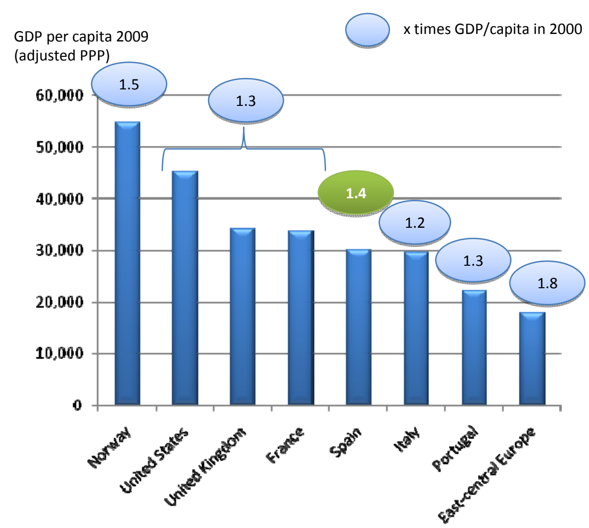
Spain's GDP in 2007 was US$1.4 trillion and has had a yearly average real growth of 3.61% in the 2000-2007 period, higher than the average 2.7% during the 1990s decade[4]. The country's real GDP growth was in the 3-4% range for 2002-2007, see Figure 1A, above the 2% of European-15 growth average. Also, Spain has increased its GDP per capita 1.4 times in the last 8 years, which is in the higher range for European countries which have similar geographical advantages and similar macroeconomic and trade policy environments, see Figure 1B.

Figure 1 – Selected statistics of Spain's economic performance[5]

A – Real GDP growth rates 2000-2009



B – GDP per capita comparison



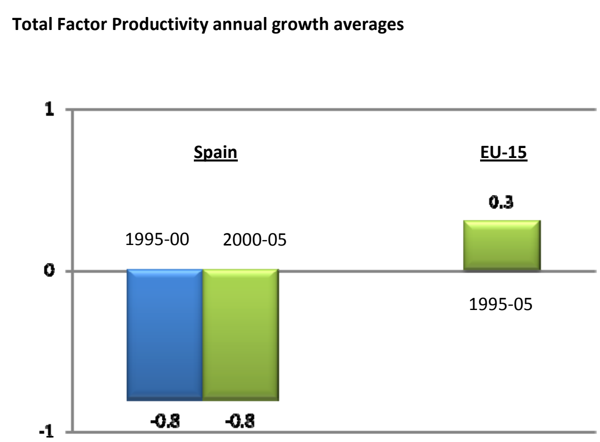
Spain's entry in the European integration efforts (EU, EMU and Euro currency) has been a major driver of the country's growth, through increased trade with the region and improved macroeconomic credibility.

The above has helped Spain in increasing capital inflows to the country, especially Foreign Direct Investments (FDI). The levels of FDI in the 2000s have been higher in average than those in the 1990s; with 3.78% of average

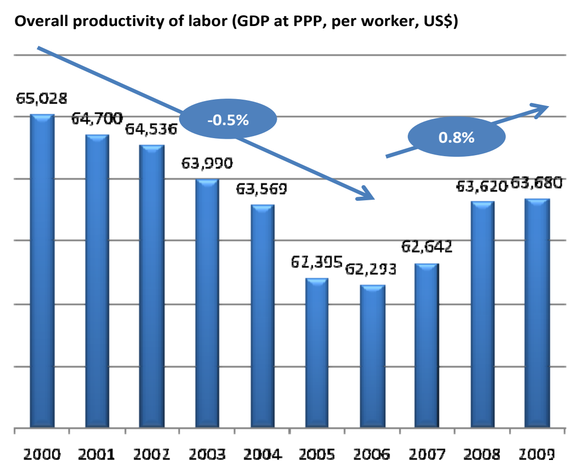
FDI as percentage of GDP for the 2000-2007 period and 2.32% in the 1990s decade. However, after 2005 FDI into Spain has slowed down. One possible explanation for Spain's slow down in FDI in the middle of the 2000s decade is that new less developed countries became part of the EU, bringing 10 more member countries competing for the attraction of capital inflows beside the structural and cohesion funds, which were an important resource for the rural development of the country in the past and helped the country increase its sophisticated demand expansion at home. In spite of the above, the growth in the Spanish economy has been accompanied with sustained decreases in productivity, both total productivity factors and labor productivity, figure 2A and 2B.

Figure 2 – Productivity indicators evolution in Spain

A – Total factor productivity evolution



B – Labor productivity evolution

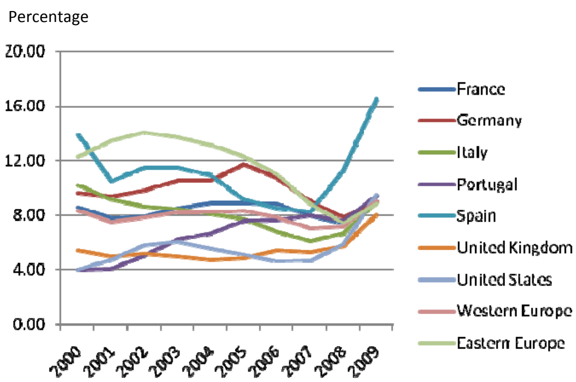


This counterintuitive evolution of productivity is mainly explained by three elements. First, Spain has experienced increasing immigration of unskilled labor from Latin America and North of Africa (jumping from a 2.4% to a 10% of total population during the 2000-2007 period)[6], mainly in the construction sector, which has reduced average productivity. Second, the main economic growth in Spain's economy has been in less productive sectors; for example, construction in 2004 accounted for 23% of employment generation. Third, a chronic low level of R&D investment in the country (below EU averages) has reinforced the dependence on low productivity sectors. Hence, the higher GDP growth rates in Spain were attained by the higher participation rates of the immigrants and women[7] rather than from technological upgrade of industries or increase in labor productivity rates.

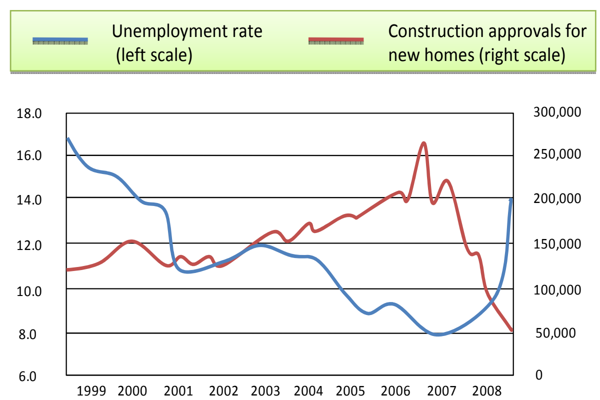
As previously shown, GDP growth rates for 2008 and 2009 are much lower than in previous years. This is explained mainly by the burst of the housing bubble in the Spanish real estate market and the impact of the global economic crisis. This has translated into large unemployment in the Spanish economy, which could reach 20% by the end of 2010, see figure 3A and 3B.

Figure 3 – Unemployment statistics for Spain[8]

A – Unemployment rate in Spain



B – Construction and unemployment



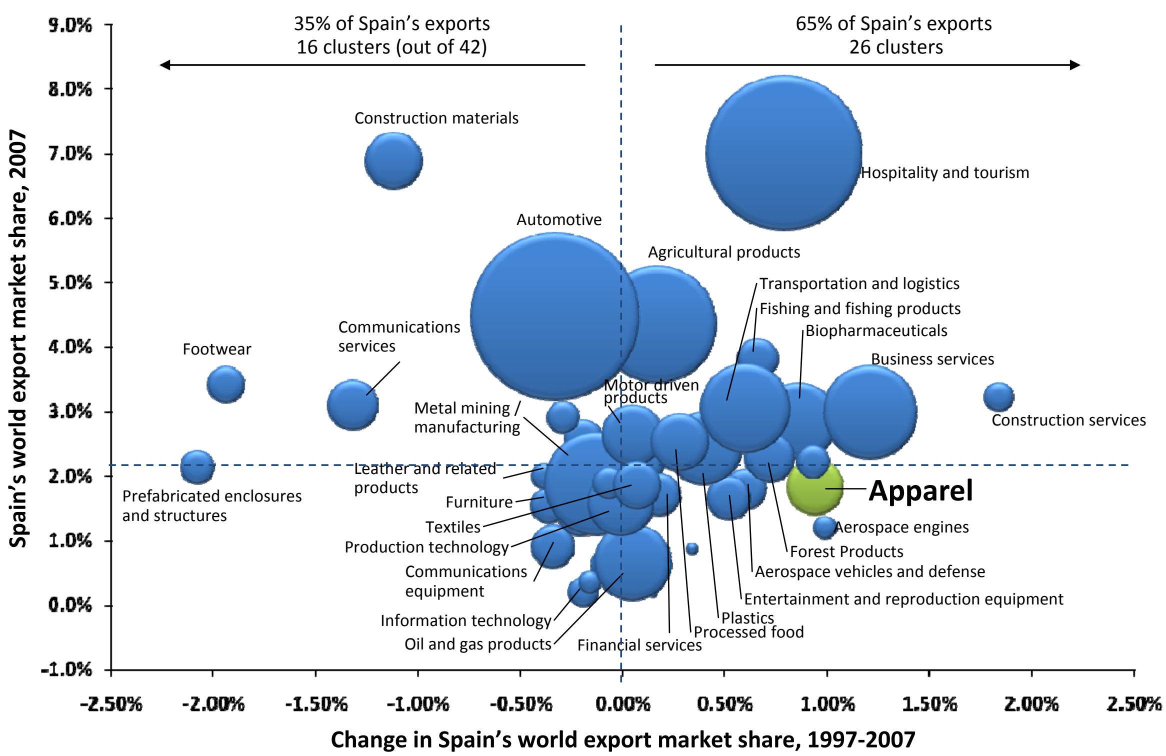
The fact that Spain is heading into a deep recession is very worrisome. First, it will change priorities in the government. For example, Spain's Prime Minister José Luis Zapatero initial agenda of deepening ties with the region through foreign policy will most likely be postponed to solving the current crisis. Moreover, the crisis will probably force the government to reduce revenues (less economic activity) and increase expenditure (e.g. stimulus and recovery packages to the housing sector) to reduce the impact of the crisis. With this intervention, Spain's fiscal deficits could reach 10.1% of GDP in 2010[9]. Additionally, the structural problems in the Spanish economy will slow the economy's recovery. As will be detailed later, these problems include lack of investment in R&D for innovation and rigid labor markets. Unfortunately, a slow recovery together with high unemployment rates and large population of immigrants encompass a significant risk of social unrest.

1.3.Cluster diversification of Spain's economy

As figure 4 shows, the majority of Spain's exporting clusters are increasing their share in the world (65% of Spain's exports and 26 out of 42 clusters). They are being lead by the large and fast growing hospitality and tourism cluster, which has made Spain the second most visited country in the world after France. Another cluster that has become large, and is also dependent on Spain's natural endowments, is the agricultural products sector. The construction services cluster has been the fastest one in gaining share in world exports; it will be interesting to see if it can survive the crisis. Finally, the apparel cluster, which will be analyzed in detail later, is the fourth fastest growing cluster in Spain.

Contrastingly, only 16 of the exporting clusters (35% of exports) are decreasing their world share. The losing clusters are being lead mainly by two relatively bigger clusters: metal mining and manufacturing and automotive. Particularly metal manufacturing and automotive have seen increasing competition from emerging countries.

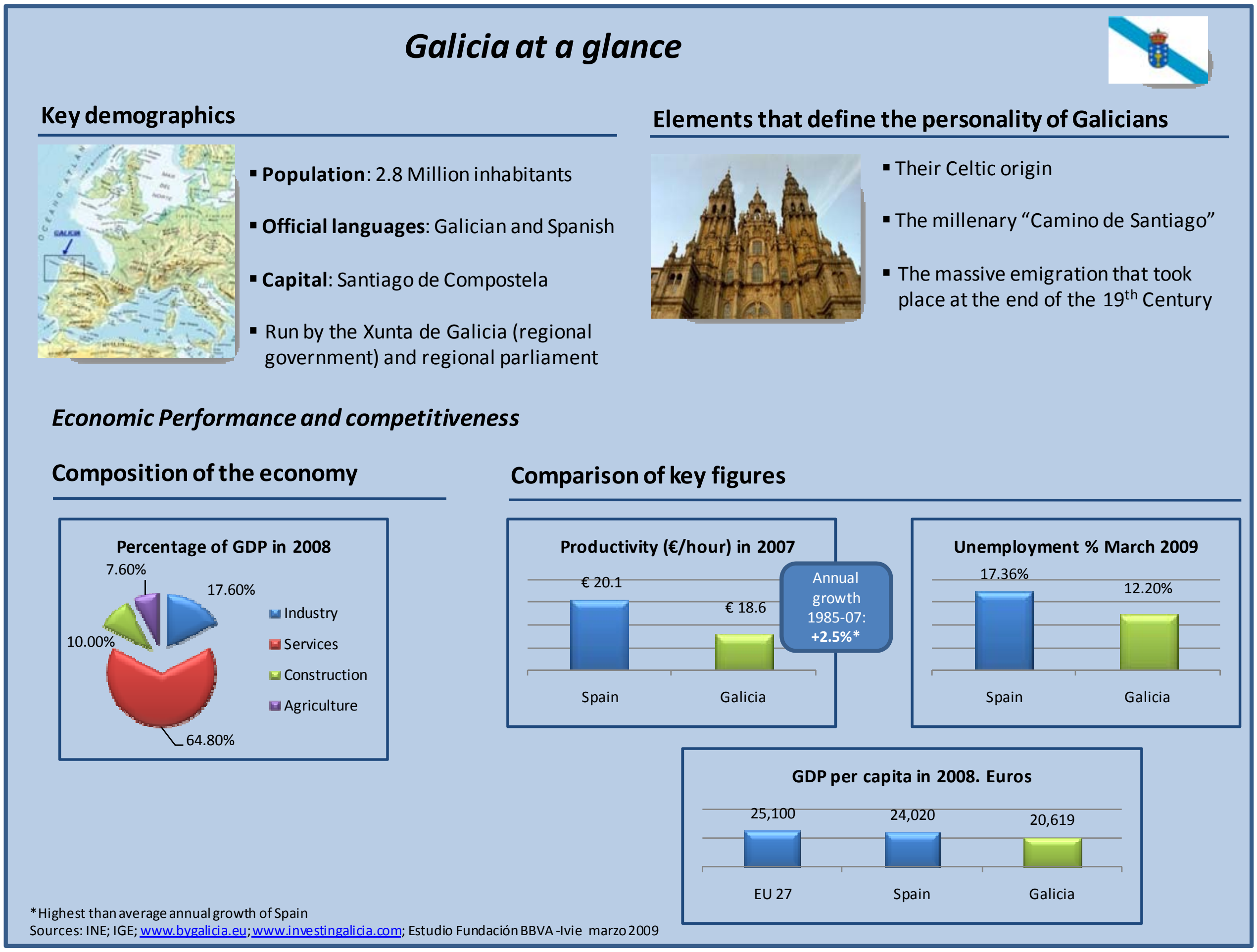
Figure 4 - Spain national cluster export portfolio[10]



1.4. Galicia at a glance

Figure 5 provides a summary of Galicia's economic and demographic context. It is interesting to see that although less productive and poorer than the rest of Spain, this autonomous community has a much lower unemployment rate.

Figure 5 - summary of Galicia's economic and demographic context



1.5. Assessment of country competitiveness

Although Spain has been considered as a growth example in Europe over the last three decades, golden days seem to be coming to an end as the country's competitiveness is presenting clear signs of erosion. It is undeniable that Spain's transformation during the last thirty years has been remarkable, however, the magnitude of the challenges that lay ahead demands another wave of transformations that will need to be done urgently.

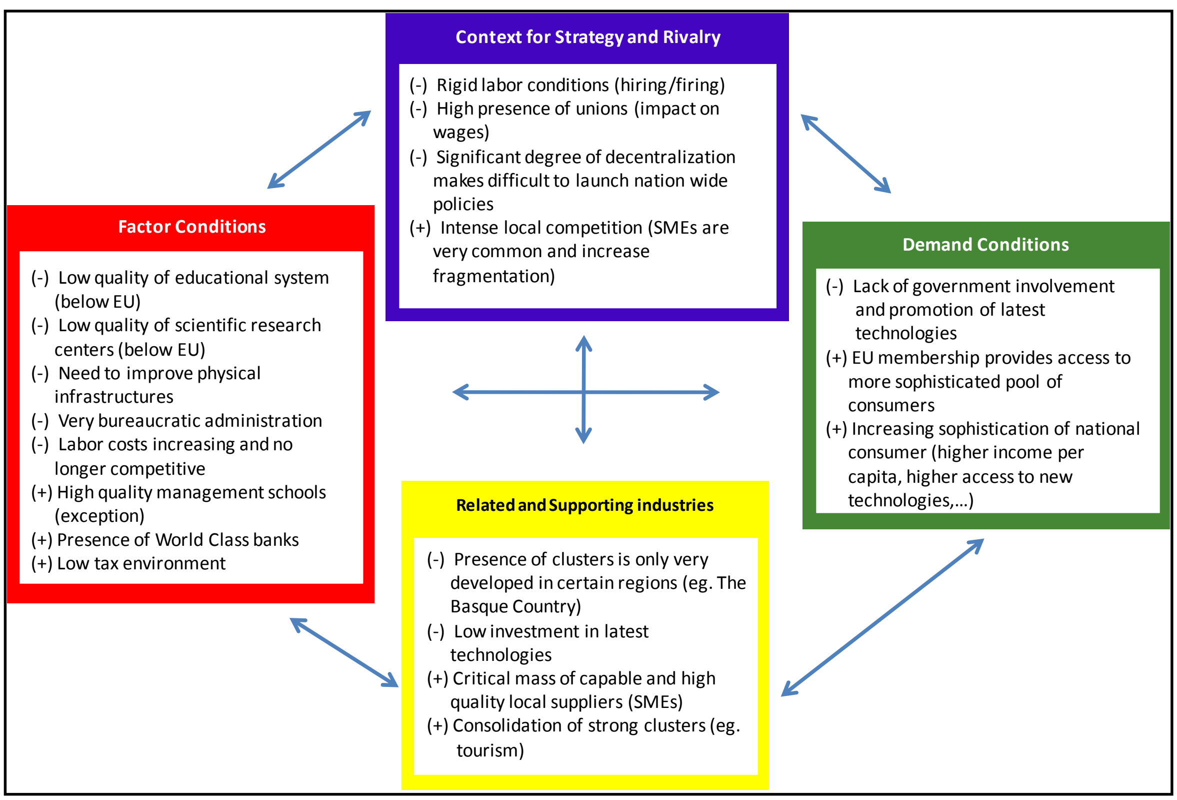
According to the Global Competitiveness Ranking[11], Spain has lost six positions in the last seven years going from being ranked 23rd to 29th relative to GDP per capita. This decrease is mainly driven by the decline experimented in the elements related to the country's business environment (from 24th to 33rd in the last seven years).

Figure 6 – Analysis on Microeconomic Competitiveness

A. Global Competitiveness Ranking analysis

Rank	Category	Strengths are focused on the quality and quantity of local suppliers		Weaknesses are particularly evident in factor conditions and context for strategy and rivalry		Decline 2001-08
30	Company operations and strategy	Extent of marketing	14	Firm level technology absorption	50	-14
				Degree of customer orientation	43	-13
				Extent of staff training	66	-25
				Extent of regional sales	62	-27
31	Factor Conditions	Doing business, paying low taxes	7	Quality of math and science education	88	-30
		Soundness of banks	18	Quality of educational system	67	-43
		Domestic credit to private sector	11	Quality of telephone infrastructure	68	-18
		Quality of management schools	5	Ease of starting a new business	84	-17
		Brain drain	18	Burden of government regulation	110	-52
				Time required to start a business	102	+9
				Number of procedures to star a business	75	-10
37	Demand conditions	Presence of demanding regulatory standards	23	Government success in ICT promotion	95	-36
				Government procurement of advanced technology products	57	-23
25	Supporting and relating industries and clusters	Local supplier quantity	10	Availability of latest technologies	45	-5
		Local supplier quality	25	Extent of cluster policy	44	n/a
		Local availability of process machinery	12			
44	Context for strategy and rivalry	Low tariff rate	6	Rigidity of employment	114	1
		Low extent of market dominance by groups	8	Quality of competition in ISP sector	97	n/a
		Intensity of local competition	16	Pay and productivity	89	-27
				Distortive effect of taxes	82	-43
				Business impact of rules on FDI	82	-52
				Restriction on capital flows	79	n/a

B. Spain's national "diamond" analysis



Strengths

In terms of **factor conditions**, there are some elements that present clear opportunities for Spain. First of all, Spain is home to some of the strongest banks in the world (SCH Bank and BBVA with capitalizations of €69.5 and €42.8 thousand million)[12]. It is almost unbelievable how such world class banks have been developed in a country with challenges such as lack of innovation, high level of bureaucratization and rigid labor market. As the Economist suggested in its latest country overview *both Santander and BBVA have a strong capital and deposit base and have largely stuck to commercial banking, eschewing investment banking and derivatives*[13]. Apart from the strength of banks Spain presents a low tax environment in comparison to other European countries, which in principle should be good news for those interested in doing business in the country.

Regarding **context for strategy and rivalry**, the most remarkable factor is the intensity of the local competition which makes upgrading and constant evolution an imperative to survive in the competitive landscape. The number of SMEs in Spain[i] is higher than the average of the European Union countries[14] with strong world class competitors. However, there is also a group of companies that are continuously struggling to upgrade and to meet the standards to avoid getting stuck in the middle. With the current economic and financial crisis, it is expected that some of them will disappear.

In regards to **demand conditions** in the country, EU membership has provided a great access to a more sophisticated pool of consumers and has raised the Spanish consumer’s standards, acquisition power and access to new education and technologies. Nowadays, the Spanish consumer is likely to be at par with its EU counterparts.

Finally, in terms of **related and supporting industries**, as mentioned above, there is a critical mass of capable and high quality local suppliers, mainly SMEs as well. Spain has particularly strong suppliers in the area of the automotive and aerospace (eg. ITP, Gamesa and Aernova), hospitality (Sol Melia and NH) and transportation and logistics industries (eg. CAF and Irizar)[15]. Moreover, strong clusters in the economy such as the hospitality and tourism have consolidated in the last decade[16]. Spain is nowadays a top destination for tourism (2nd in number of tourists)[17] with very high quality offer and a wide range of services.

---

[i] More than 3,000,000 in January 2006 which represents 7.1 SMEs for each 100 inhabitants

Challenges

In terms of Spain's micro competitiveness challenges, there are three overarching areas of concern that could be found across all components of the national diamond. These three barriers to being competitive present the basis and priority for improving the country's performance in the next years.

1. Difficulty of starting and doing business

According to the "Doing Business Rank 2008" from the World Bank[18], Spain ranks 140 out of 181 countries participating in the study in terms of difficulty of starting businesses in the country. More precisely, the number of procedures to start a business in Spain is double the average for OECD countries (10 versus 5.8 days), the number of days needed to open a business is almost four times higher than the OECD equivalent (47 versus 13.4 days), and finally, the cost of doing this is approximately 3 times higher (14.9% vs 4.9% GNI/capita).

These numbers are particularly striking if compared to the position in the rank of the Latin American countries were Spanish companies open new businesses (Spain is the major foreign direct investor in many Latin American countries). For instance, Brazil ranks 127, Chile 55, Argentina 135 and Mexico 115. This suggests that for a Spanish company it is easier to start a business in Latin America than in Spain.

Regarding the difficulty of employing and firing people, which talks about the flexibility of the labor market, the rank presents a more negative outlook, with Spain ranking 160 out of the 181 countries in the study. This means that Spain is doing even more poorly than a worldwide example of worst practices in this area, Indonesia (rank 157). It is three times more difficult to hire people in Spain than the average OECD country and approximately two times more costly to fire people (56 weeks salary in Spain vs 25.8 average in OECD countries) [ii].

There are two main reasons to explain Spain's lack of labor flexibility and difficulty to start new businesses. First, there is a strong presence of unions in the country which adds rigidity to the labor market. Spain lost more than 60 working days due to strikes per year and per 1,000 inhabitants during the 2000-04 period which is the highest number in Europe followed by Italy with 32 days[19]. Second, the huge bureaucratic burden in the administration makes it very difficult to start new ventures.

[ii] Only main indexes from these indicators have been considered (difficulty of hiring index, rigidity of hours index and firing cost index)

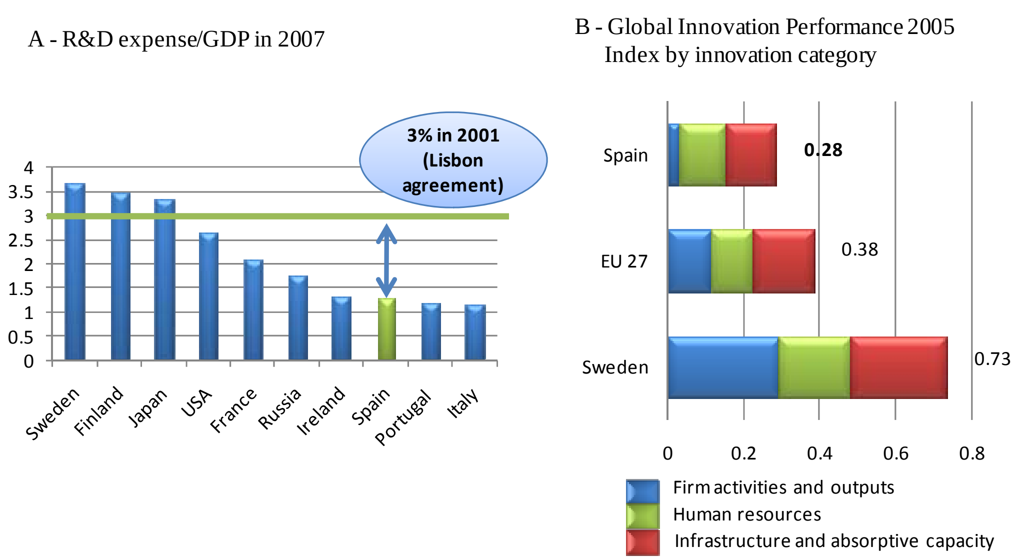
In order to fight against this remarkable constraint, the Spanish government has recently launched several measures to combat bureaucracy as part of the national economic recovery plan. They have set the goal to reduce the administrative burden by 30% in the next years. This goal is extremely ambitious and there are some complaints, especially among the business community, about the lack of effectiveness and slow implementation pace of the actual measures[20].

2. Lack of innovation mindset

Spain is lagging behind in innovation which presents a remarkable challenge for the country's competitiveness. Spain's R&D expense as a percentage of GDP in 2007 was 1.27% which is significantly lower than the 3% Lisbon agenda agreement and the 1.87% EU27 average[21]. This lack of investment is reflected, for example, in a poor innovative performance with 29.27 patent applications per million inhabitants vs 105.65 for EU27 countries. This number makes Spain one of the least innovative countries in Europe after some Eastern European countries such as Poland, Romania and Bulgaria[22].

Regarding the breakdown by innovation category, Spain has particularly low results in firm activities and produced outputs, and the overall infrastructure of the company[23].

Figure 7 – Main innovation indicators



The Spanish government has publicly stated that innovation needs to be a priority. In order to foster this, Prime Minister Rodriguez Zapatero created last year the first Science and Innovation Ministry in the history of the country. This ministry has been working on several national plans to place innovation in the agenda of not only the government but also the private sector and more importantly, the society in general. However, little progress has been observed to date although it is still too early to evaluate these measures as their impact should appear over the medium/long term[24]. In addition, it is uncertain how will the Spanish government face the deep economic crisis in Spain in terms of government spending and how this is going to impact R&D expenditure.

3. Low educational quality at all levels

Education is also a major issue in the country both at basic and high level. In terms of primary and secondary education, there are two main areas of concern. First, the number of school dropouts in Spain is significant reaching 31% in 2007 (only outpaced by Portugal with a 36.3%)[25]. This number is well above the EU27 average of 14.8% and, which is even more worrying, it has been recently experiencing a negative trend. Second, some questions need to be also raised in terms of the quality of this education as Spain ranks 20/30 (well below the OECD average) in math and science score according to education specialized PISA survey's latest results[26].

Concerning high education, Spain is still lagging behind in number of graduates with 11.6 graduates for every 1000 people between the age of 20 and 29 in the country (versus 13 graduates in EU27 average)[27]. However, it is also fair mentioning the fact that Spain is home to three of the most reputed non-US business schools (Instituto de Empresa, ESADE and IESE) according to Business Week rank[28].

The Government also recognizes the need to address a solid and effective educational reform. The recently appointed (April 2009) Minister of Education, Ángel Gabilondo, has clearly stated that the two main priorities in the short/medium term will be to fulfill the requirements to get up to speed with the Bologna agreement and to reduce the number of school dropouts through a reform to the current educational policy. Although it seems that the priorities are clear and address key areas, it is still to be seen how they will address them and even more importantly, if they actually arrive too late as the opposition states[29].

2. Galicia's Apparel Cluster analysis

2.1. Evolution of the Galician apparel cluster

Historically Galician women used to sew at home as a way to get some additional income while their husbands where fishing in the sea for long periods of time. The products were mainly handcrafts which included linens, tablecloths and clothing. In this indirect way, the sewing skills started to develop in the female population which was key to the evolution of the cluster[30]. Given that Galicia was poor compared to big centers in Spain, cheap labor was widely available, especially women that had less participation in the workforce. Alternatively, female workers were also employed in the fabrication of processed of food during the first half of the 20th century.

Complementarily, the remote location of Galicia and its poor economic conditions gave Galicians no choice but to create their own businesses to earn a living. Hence, a long entrepreneurial tradition in the region exists. Some studies suggest that Galicia's first entrepreneurs date back to the beginning of the 18th century[31].

In the cluster, this entrepreneurial drive is ratified by the fact that a great majority of the apparel companies in the cluster were created by entrepreneurs in small Galician villages. For example, Roberto Verino was created in the small town of Verin, Boiro homes Jesús Alonso's Jealfer and Arteixo has been the nest for Amancio Ortega's Inditex empire. The recent history of the apparel cluster in Galicia has had three distinct phases:

During the 1960s and early 1970s, Spain was still under a dictatorial regime and the country was relatively poor with low purchasing power in the population. The demand for apparel was unsophisticated, demanding cheap and functional products. Also, due to the increased mechanization in the food processing industry many women in this industry switched to textiles and apparel, increasing the supply of cheap available sewing ladies. The entrepreneurial drive started to appear in the cluster with the founding of small workshops that produced apparel. In the late 1970s, with Spain's transition to democracy and opening to the world, the increasing purchasing power of Spaniards produced a major shift in demand towards higher quality products, giving a boost to the cluster.

In the 1980s and 1990s, Inditex, founded by emblematic Galician entrepreneur Amancio Ortega in mid 1980s, revolutionized the industry with the fast-fashion concept, flooding the market with stylish and trendy yet affordable products[32]. This internationally successful company allowed "Galician fashion" to take off, increasing the investment in technology and innovation by Galician companies. This period saw the consolidation not only of Inditex but of other brands and designers like Adolfo Domínguez, Caramelo, Antonio Pernas and Roberto Verino, that brought characteristic trendy designs.

In early 2000s Spain liberalized trade, allowing the entry of Chinese products. This increased product competition and started a trend among companies to relocate manufacturing facilities to emerging countries to take advantage of cheaper labor conditions. For example, from minimal in early 1990s Inditex's sourcing from Asia was 22% in 2002 and 34% in 2006[33]. Delocalization of manufacturing was followed by an increase in reliance for outsourced design. Designers would produce designs tailored to local markets but would have the manufacturing offshore[34]. Delocalization and design outsourcing are current trends in the apparel cluster in Galicia and the global apparel industry. Hence, the Galician apparel cluster is in a decisive moment in its history: will the cluster be able to upgrade to a new level in spite of having its value chain disentangled around the world?

2.2.Geographic context

Galicia is located in the most northwestern part of Spain. Historically, Galicia has been a region isolated from the rest of Spain and Europe. In fact, up until the discovery of America, Europeans used to called this region Finisterre (end of the world) because it was considered the last piece of land to the west[35]. As described above, being in this remote location shaped the entrepreneurial and strong-will character of Galicians.

Activities in Galicia's apparel cluster are concentrated along a diagonal line that crosses the region passing through A Coruña and going southeast through Ourense, including smaller cities like Lalín and Verín[36].

Figure 8 – The "fashion diagonal" that crosses Galicia from end to end

A Coruña: The fast-fashion province

At the north of Galicia and starting the "fashion diagonal", A Coruña is the biggest province in the Galicia apparel cluster. It is home to 56% of the companies and represents 52% of the apparel employment in Galicia. Moreover, it generates 97% of the total exports of the cluster[37]. The export position of this province is explained by the presence of Inditex, the biggest company in the cluster. The company produces the most internationally renowned brands of the cluster, including Zara and Massimo Dutti.

Ourense: The high-fashion province

This province is located on the mid-southern part of Galicia and within the "fashion diagonal". Most of the high-fashion designers and companies in the cluster are located here; including Adolfo Domínguez, Purificación García, Carolina Herrera, Caramelo and Lonia Textil. The province represents only 2% of exports, but employs 32% of the workers in the apparel cluster.

Pontevedra: The kids-fashion province

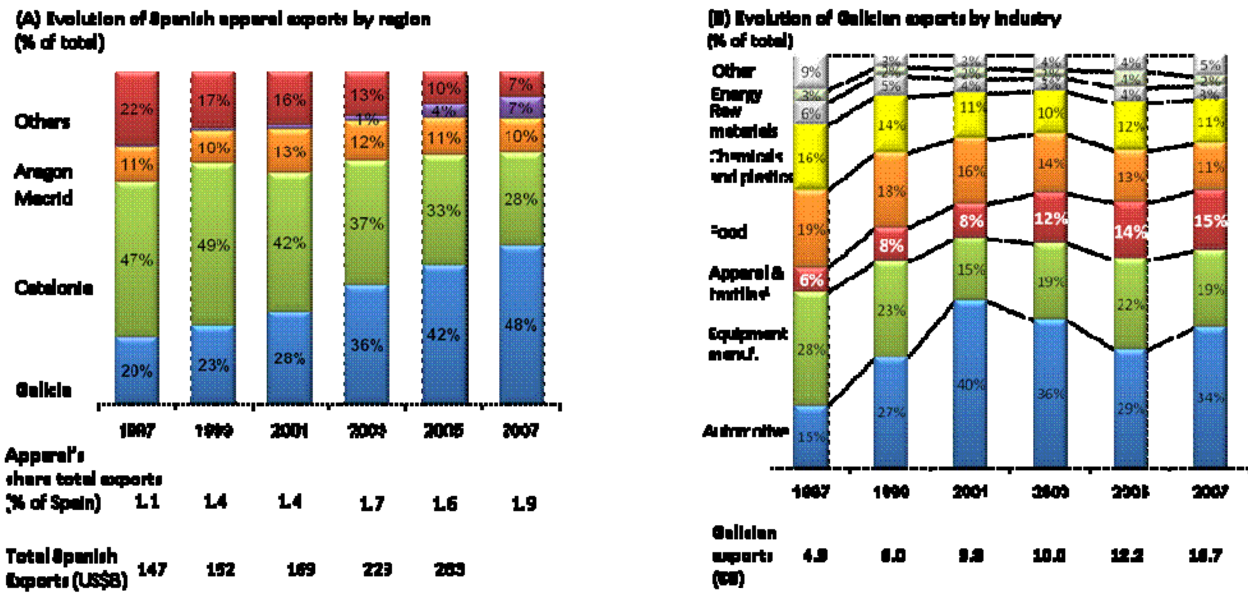
Outside the fashion diagonal and on the south-western side of Galicia, the Pontevedra province represents 16% of the employment and 1.5% of the exports of the cluster. Vigo is the city with the largest apparel activity in the province and homes many of the growing kids-fashion brands in the cluster like Pili Carrera and Nanos.

2.3.Performance of the cluster

The growth of exports of the Galician apparel cluster has been stellar with an average growth year of 24% between 1997 and 2007. In 1997 Galicia represented only 20% of total Spanish exports second to Catalonia with 47%, see Figure 9A. A decade later, Galicia is by far the largest apparel exporting region of Spain, with 48%[38]. In a short time Catalonia with a much richer and longer history of apparel could not retain its export dominance in Spain.

In the Galician context, the growth of the apparel cluster has allowed the region to diversify away from its traditional exports in equipment manufacturing and food, and avoid the overdependence on the fast growing automotive cluster (with 23% yearly average growth between 1997 and 2007), see Figure 9B.

Figure 9 – evolution of Spanish apparel exports and Galician total exports



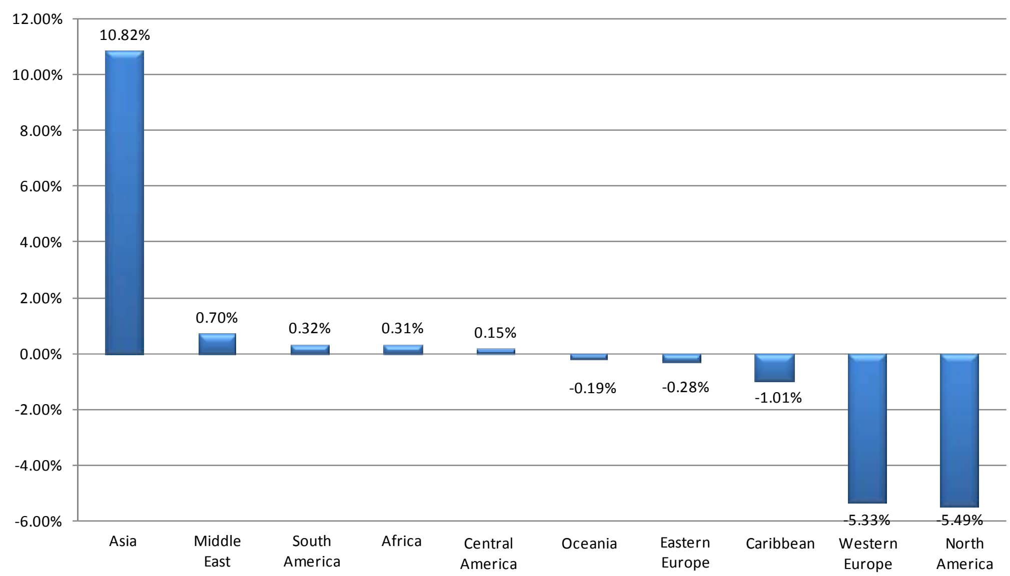
Although the apparel cluster has been the most dynamic in Galicia its profitability has been decreasing. Profit margins dropped from 9% in 1993 (peak of 12% in 1996) to 5% in 2007. Several factors have affected profitability: increased international competition, lower productivity, increases in raw materials prices and transportation costs.

2.4.Industry trends

Demand trends: The current economic downturn has given way to the "recession fashion" concept, which is basically trendy but cheaper clothes. Galician apparel products are well positioned in such price and quality range. This could provide a good timing opportunity to further penetrate higher demanding segments that are willing to trade-down. However, the current clientele for middle market Galician products could be trading down as well.

Industry trends: The industry has been transforming in the last decade driven by increased retail consolidation, displacement of traditional brands to private-labels and consumer migration. This has diminished the power of apparel brands against large retailers. Many apparel companies have refocused their businesses into a few key brands and developed proprietary retail channels to distribute their products[39]. For Galician brands these issues will be particularly relevant, as they increase in size and try to reach new markets they will need to develop distribution channels and avoid the frontal competition with private-label brands. In terms of production, many apparel producers have delocalized their manufacturing and sourcing to emerging countries in the last decade. This has allowed apparel companies to take advantage of lower overall manufacturing costs, particularly because of cheap labor in such countries, counterbalancing in part the pressure on margins due to the increased power of retailers. As figure 10 shows, the share of apparel exports of developed regions decreased between 1997 and 2007, while emerging countries, particularly Asia (China leading the growth) increased their share.

Figure 10 – change in share of apparel exports (%) by region (1997-2007)



2.5.Competing locations

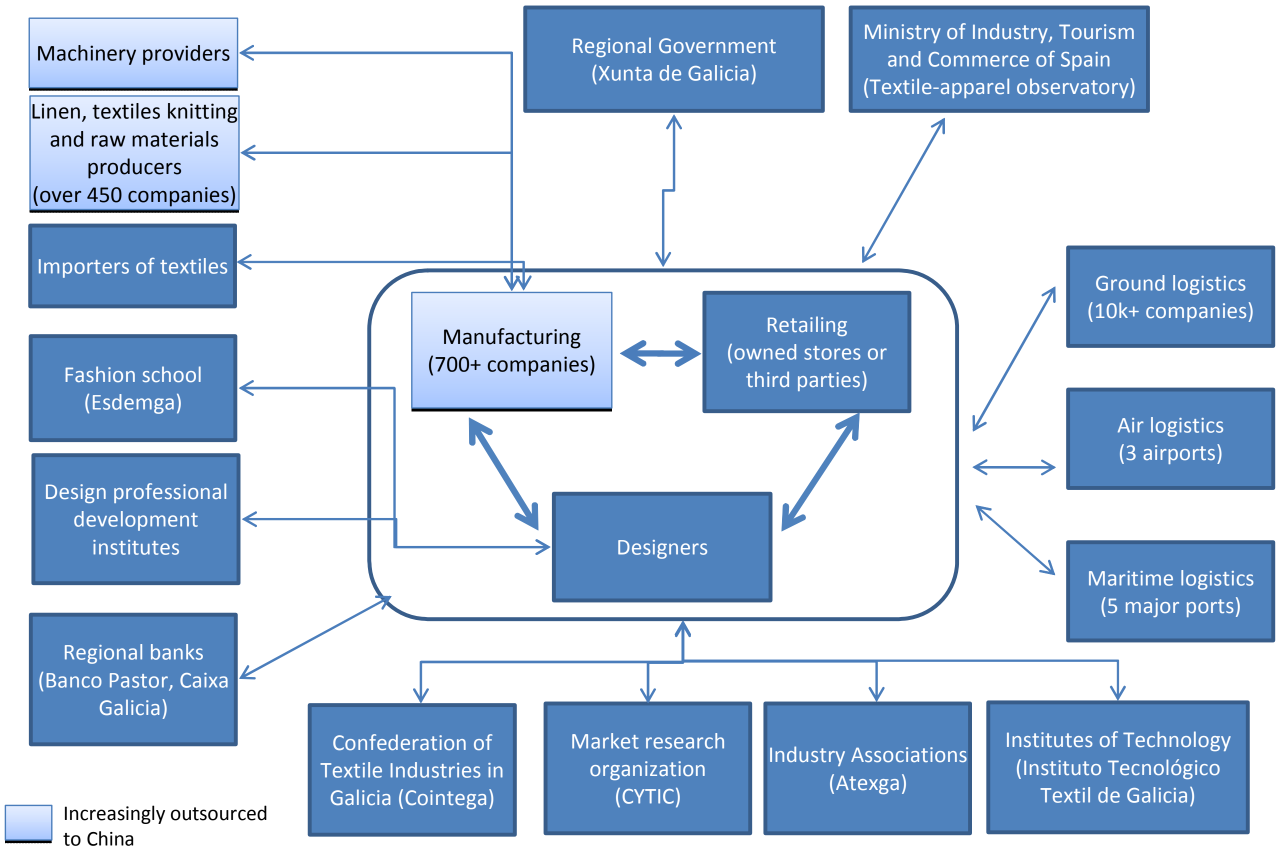
The main competing locations in Spain for Galicia in apparel today are Catalonia and Madrid because of their size and long history in the sector. When adding textiles exports to apparel, Catalonia represents 37% of total Spanish apparel and textiles exports, followed by Galicia with 31% and Madrid with 9%. However, in terms of growth, Catalonia's total apparel and textiles is growing at 3% per year much below Galicia with 24% and below Madrid with 8%. One key reason for Catalonia's slow growth in apparel and textiles is delocalization of manufacturing to emerging countries, which is more pronounced in the textiles industry than in apparel. The main advantages for the Catalonian cluster today is its highly developed human capital and education infrastructure specific for the sector (most renowned fashion schools in Spain are located there), large presence of specific fashion magazine and publishing companies (none present in Galicia)[40]. In terms of labor costs, Galicia has one of the lowest total labor costs in Spain with €16.33/hr per worker, whereas Catalonia and Madrid are among the highest with €20.01/hr and €20.79/hr per worker respectively.

Internationally, the north of Portugal is the closest location with similar labor conditions and relevant expertise in the industry. In March 2009, a joint initiative between the Spanish and Portuguese apparel clusters was launched to develop common agendas for improvement[41]. This should result in cooperative rather than competitive dynamics between both locations. Other international players in Europe are France and Italy, but they have much higher labor costs and are currently positioned as the centers of high-fashion (haute couture) in the world. Finally, globally the delocalization to emerging countries is allowing such countries to becoming competing locations.

2.6.Cluster map

The cluster map in Galicia, shown in figure 11, is characterized by various elements; first, a nucleus of vertically and non-vertically integrated manufacturers, designers and retailers. Zara's Inditex is one example of a fully integrated player; whereas smaller designers might only do designing and manufacturing. A second feature of the cluster map is the increasing delocalization and sourcing from emerging countries of machinery and raw materials for apparel, and manufacturing. Third, there is a complex system of logistics that provides transportation services to the cluster either for final product commercialization or in-process inventories and raw materials. Fourth, there are several supporting services companies in the cluster, such as banks and education institutions. Third, there are various institutions for collaboration, however their coordination and strength is not sufficient to reinforce the cluster as will be seen later. One player not present in the Galician apparel cluster that exists in the Catalonian apparel cluster is the publishing / magazines companies, which help market products locally and abroad.

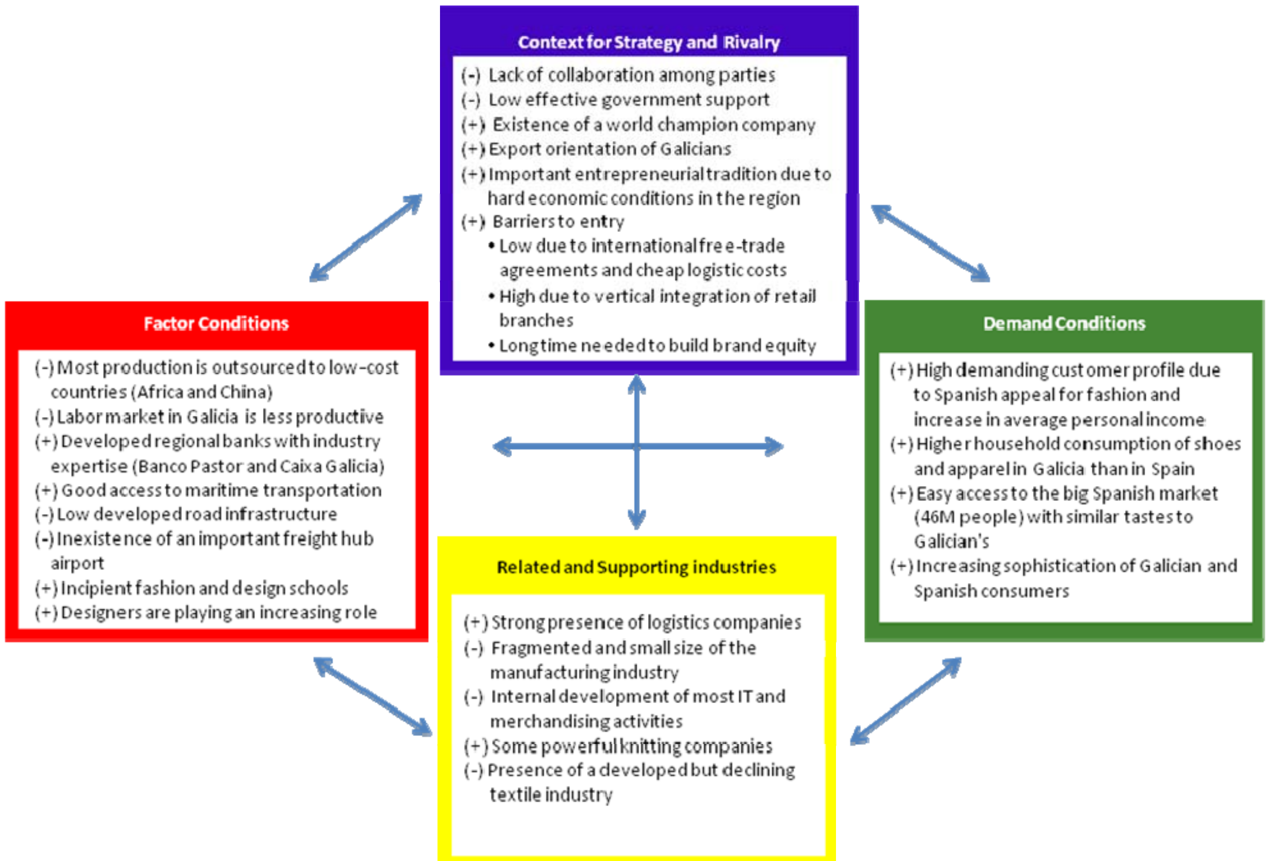
Figure 11 – Galicia's apparel cluster map



2.7.Galician apparel cluster diamond

The Galician Apparel Cluster is heavily affected by the outsourcing of manufacturing to countries with low cost labor. Therefore, the cluster has had to balance that challenge by taking advantage of new opportunities that have enabled to upgrade the cluster to its current level. The shift from manufacturing to logistics and specially to design accounts for most of the characteristics we can appreciate today in the cluster's diamond. The presence of a world champion like Inditex (Zara, Massimo Dutti and other brands) has had a significant positive effect in the cluster, boosting logistics and strengthening the activities of the related and supporting industries. Finally, what remain unchanged are the highly demanding customers that gave birth to the cluster many years ago. Today, these customers have become even more sophisticated and dedicate a higher than average percentage of their income to purchase apparel.

Figure 12 – Galicia's apparel cluster diamond



Factor (input) Conditions

Important role of designers

The evolution of the cluster to higher value addition has generated the transition from manufacturing to designing. Fashion schools play an important role on improving human capital although their capacity is still limited. The most important schools in Galicia are Esdemga and Goymar, but they have not yet achieved recognition abroad.

Less productive labor force

Galician labor force is less productive than the Spanish average (18.6 €/hour in Galicia vs 20.1 €/hour in Spain)[42], while Spanish productivity is lower than other OECD countries[43]. Nonetheless, the Galician workforce has been the fastest to improve productivity in Spain; with an average annual output increase of 2.5% in the last 22 years.

Good general infrastructure

Being at "the end of the world" (Finisterre), Galicia enjoys a good access to maritime transportation; key to receive the product manufactured in China. Main ports include A Coruna and Vigo. Galicia has also the highest ratio of km of road per habitant in Spain, although most of these roads are tiny and with plenty of curves. Highway connects main Galician cities with Madrid, the capital of Spain (see map below for the principal roads connecting Galicia). There are also three small airports in the region, which compete with each other rather than collaborate to create a big freight hub.

Figure 13 – Main Galician infrastructures

Context for Strategy and Rivalry

The presence of Inditex as a world champion of the cluster, the entrepreneurial tradition and the export orientation of Galicians have allowed the cluster to develop in the past and will be crucial strengths going forward. There is a high level of rivalry or competition within the cluster, with many players competing (over 700 companies) with each other but also with foreign competitors. Also, this sector is not subsidized by the Government. Hence, the ability of the cluster companies' to endure in the Spanish and global markets means this cluster has so far passed the "market test" by producing profitable and sustainable companies.

However, there are certain elements that affect negatively the cluster. First, the government is not supporting sufficient activities to promote the cluster. Although the regional government helped in the creation of the Textile Technological Center in Galicia early this year, it has not invested on the internationalization of the Galician textile and apparel industries. Also, as in the rest of Spain, the complexity of opening new businesses is pushing back entrepreneurial efforts in Galicia. This is a signal of a more important issue, the lack of collaboration among players. Currently, no common initiative to develop the apparel cluster has been formalized and the ones that have started are too incipient or limited in scope to be effective[44]. Finally, free-trade agreements and lower barriers to entry are increasing competition. Although beneficial for innovation and deepening of the cluster, the cluster can be in danger due to difficulties for new designers' brands to build critical mass in distribution and brand equity.

Lack of collaboration[45]

Government, Galician companies and Institutes for Collaboration do not have a formal forum to work together. This prevents the success of most of the initiatives that the different actors launch. Even the different stages of the government do not coordinate their actions with each other, especially when promoting overseas. Private companies consider the government actions to be ineffective and usually do not support them. The existing Institutions for Collaboration rather than promote collaboration, center their activities in specific and stand alone activities such as training, promotion and statistical reports.

Low effective government support

The government has limited its support to the apparel industry to very concrete and specific campaigns that have had no continuity over time (e.g. "moda gallega", which is already discontinued). Therefore, government actions have been mostly ineffective[46]. Certainly, this cluster still exists due to the efforts of the private sector.

Highly competitive market

Galicia is a small region within Spain, yet it concentrates the most number of apparel companies per capita in the country. This makes the Galician market very competitive. In addition to internal competition, free barriers to international trade have increased competition in manufacturing. Effective since 2002, the World Trade Organization agreed to restrict tariffs and quotas to textile imports and exports worldwide. Apparel is a product cheap to transport, allowing manufacturing has become a global, given the relatively low costs of transportation.

Entrepreneurship spirit of Galicians

Hard life conditions in the most western edge of Continental Europe have forced Galicians to either emigrate or become entrepreneurs with a clear export mindset. Galicia's location "at the end of the world" did not give many opportunities to its inhabitants. Therefore Galicians are open to move and explore new things, and they know they are on their own to survive. This entrepreneurial spirit goes beyond Galicia's borders. Not surprisingly, most of the entrepreneurs that founded big companies in Cuba and Mexico in the early 1900's were Galicians.

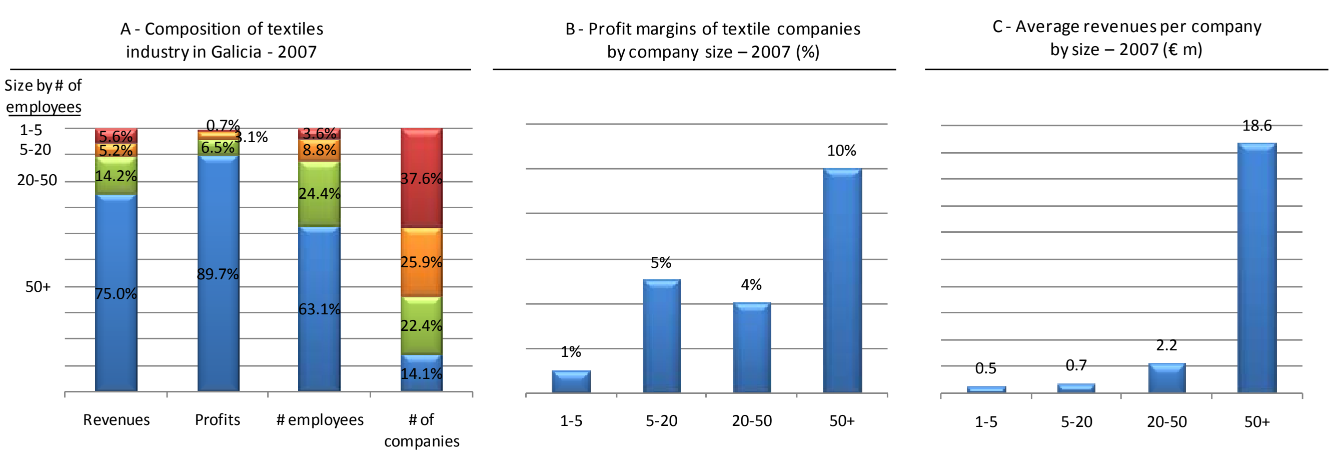
Related and Supporting industries

Galician textile manufacturers are small and with low profitability

Nowadays, low cost labor countries account for the bulk of the textile production, and just niche and highly competitive companies remain in Galicia. China and India have posed serious competition and today they produce most of the non-seasonal apparel. Closer countries such as Portugal and Morocco produce seasonal apparel, that needs short lead times and which design can change rapidly. Today, one of the keys of the apparel business is to quickly react to the customers' preferences, particularly in the fast-fashion segments. That prevents China from getting more of the market production despite their low cost, but the North of Africa is close enough to be a serious competitor on the seasonal products. Consequently, Galician manufacturers are today small in importance.

Looking deeply into the financials of the Galician apparel companies (Inditex excluded), we can see that 115 companies had net losses in 2007[47]. The industry as a whole had a profit margin of only 4.5%. If we exclude the companies with net losses, the profit margin raises to only 7%. This scarcity of profits does not allow the necessary investments in technology to increase productivity, see figure 14.

Figure 14 – Concentration of revenues and profits of Galician textile companies



Relevant presence of knitting manufacturing players

Knitting companies are the exception in the manufacturing decline, as they have grown through investment in high-end technology and quality manufacturing. Main players include Montoto, Viriato and Jealfer, which today they supply to both Galician and worldwide companies.

Strong presence of logistics companies

Most international air and maritime transportation companies are present in Galicia and more than 3,000 ground transportation companies operate in the region.

Demand Conditions

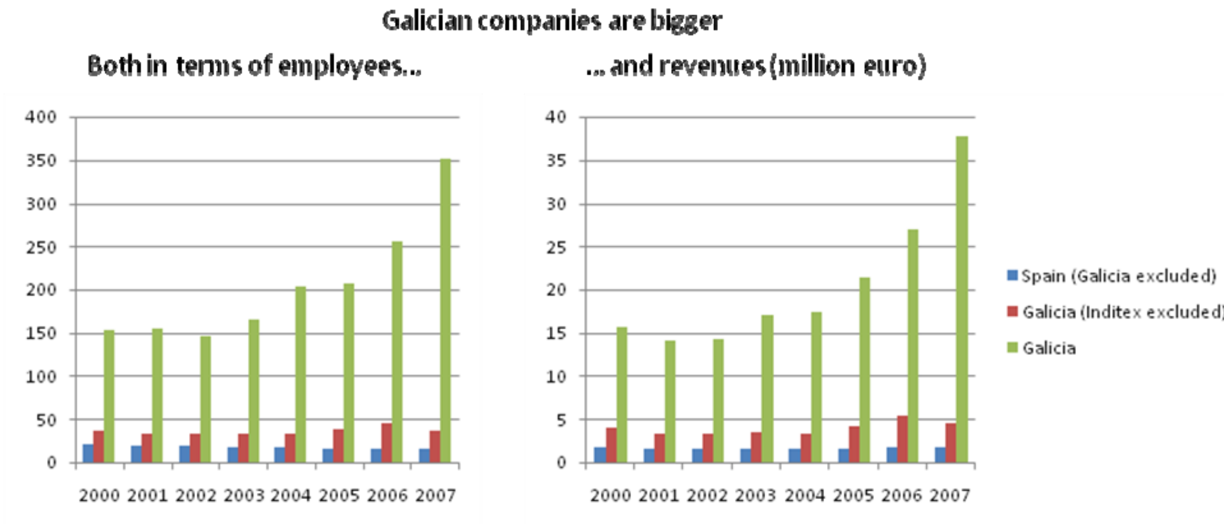
High demanding customer profile

One of the most important conditions that allowed the cluster to appear is the high demanding customer profile of Galicians, which is today what keeps the cluster competitive in a global environment . Spaniards and Galicians in particular, have a special appeal for fashion. Continued increase in per capita income has enabled Galicians to upgrade its apparel purchases, thus contributing to the upgrade of the cluster. Proof of this is that Galicians have a higher household consumption of shoes and apparel than Spanish average (9.3% vs 7.2%)[48].

Galicia as a fashion laboratory with easy access to the big Spanish market

Galicia is a small but demanding market (2.78 million inhabitants)[49], which enables companies in the cluster to start testing the market tastes with low commitment of resources.. After passing the first market test in Galicia, apparel companies can have a second test with the Spanish market, a large (45.5 million people[50]) and equally highly demanding market, before doing the third and more difficult test in international markets. This additional test, has allowed Galician companies to grow healthier and quicker than their Spanish counterparts and today they are bigger in average, both in terms of revenues and number of employees (Inditex excluded).

Figure 15 – Relative size of Galician companies



Increasing sophistication of Galician and Spanish consumers

Design and quality are the most valued attributes. Even male customers are starting to show interest for fashion.

Challenges:

The Cluster's diamond analysis highlights three major challenges for the future of the Galician Apparel Cluster:

1. Further delocalization in the value chain:

Cheap manufacturing was a key factor that allowed the Galician Apparel cluster to appear long time ago. Today, this advantage is vanishing as the world becomes global and the barriers to international trade evaporate. Consequently, an inevitable trend towards manufacturing in low cost countries has appeared. This is by far the most important factor affecting the cluster, and its effects can already be seen. Export of textile raw materials in Spain has dropped 20% in 2008[51], which reflects the decrease of Spain as a manufacturing country. Textile manufacturing is a labor intensive activity. As barriers to international trade in textiles disappear, production is shifting towards countries with cheap labor. China and India are the emerging new world champions in textile production, posing serious competition to textile companies all around the globe. In addition, Galicia faces the competition of close countries such as Portugal, Morocco and Tunisia, all of them with lower labor costs. Mass market consumers, which drive the bulk of the business, are very cost-conscious, despite their appeal for fashion, and are very difficult to resist the cost pressures. Galician Apparel Cluster appeared when the wives of the fishermen (a very important economic activity in the region) increased the amount of free time to generating additional income, thus becoming “the sewing ladies”. Their work became a low cost way of producing and manufacturing textile products and this provided an advantage to the apparel companies that emerged. Fifty years have passed between the appearance of those initial apparel companies and the current cluster in Galicia.

The outsourcing of manufacturing in isolation is not the biggest challenge for this cluster. In fact, nowadays most of the manufacturing is not even done in Galicia, and yet the cluster remains healthy. Our fear is that what happened in Galicia can happen now in Morocco or even in China. The presence of strong manufacturing actors in Morocco can facilitate the appearance of other actors in different parts of the value chain. These companies would benefit from the proximity of the manufacturing actors to get efficiencies from reduced lead times or lower logistic costs. Similarly to Galicia’s evolution, Moroccan companies can start designing and even commercializing apparel products. Hence, Galicia faces a significant danger due to increased competing locations.

Clay Christensen’s[52] theory of Integration-Disintegration, further supports this view, as companies in low cost labor countries will do more and more activities, while at the same time passing these efficiencies to the apparel companies in Galicia. Apparel companies in Galicia will be happy to outsource more activities, as low cost labor companies do them more efficiently while the Galician companies keep increasing profits. At some point, the low cost labor companies will be in almost all activities across the value chain, and one day they might decide to create a new brand. This day, Galician companies may realize that their pursuit of benefits might have led them to their own self-destruction as their participation in the value chain becomes marginal, if any.

2. Need to upgrade human capital:

To avoid the outsourcing of more activities from the value chain to low cost labor countries, Galicia needs to improve productivity and to concentrate in the value added activities of the chain.

Although most manufacturing has been already outsourced to low cost labor countries, some activities are still performed in Galicia, especially in knitting. Keeping some manufacturing in Galicia is key to the apparel cluster as it will enable it to react quickly to market trends. Fashion has become a just-in-time industry because the tastes of the customers are somehow unpredictable. The ability to quickly react once a specific item has more demand than originally expected can earn substantial benefits to the apparel companies. To do so, they need to have efficient manufacturing facilities at a short distance from the final consumer. The more the delocalization the lower the incentives the companies have to contribute to develop the local human capital, thus creating a vicious cycle: "more delocalization and less training". This will aggravate the productivity problem Galician workers already have, as noted above. This is aggravated by the low level of "professionalism" of the apparel and textile manufacturing industry (25% of workers are informally employed) in Galicia, which prevents workers necessary training. Global competition requires superior training of the labor force to remain competitive.

As competitive advantage of low cost labor companies enables them to keep gaining activities of the value chain, it is even more important to protect those activities where Galicia still has superior capabilities. Thus improving the creative skills of Galician designers is the only way to upgrade the cluster towards a high value-added product. Fashion schools should play an important role in boosting creativity, but currently there is only one University in Galicia offering design and fashion studies (University of Pontevedra: Esdemga) and a few design professional development institutes. This is insufficient to create competition among schools and to train enough designers.

3. Lack of collaboration

Probably the trickiest challenge is the lack of collaboration among actors, including the different government agencies, the private sector and the institutes for collaboration. Although it seems an easy challenge to overcome, it is not. There are three main forces driving the actors not to collaborate:

A low effective government support and leadership: The "One size fits all" strategy that the government has historically followed has not prioritized the most efficient activities. At the same time, there has not been continuity in the government's actions, therefore lowering their effectiveness. The discontinuation of the "Moda Gallega" campaign is the clearest example. Finally, the government's lack of influence on the cluster limits the effectiveness of its actions. They tried to launch a formal cluster in 2007 with no success, lowering even more their credibility to other actors in the cluster.

Individualistic character of designers: By definition, designers, who are artists in some sense, have very individualistic approaches. They have high egos, and they fiercely compete with each other to have a name on the scene. In addition, their product is linked to their personal brand, which in many times is their own name, making it even more difficult for them to collaborate.

Spirit of survival: Companies have been suffering for many years the fierce Chinese competition on manufacturing, together with an increasing pressure in costs. Therefore, their priority has been to adapt to the new environment and come up with new ways of increasing profitability. That has not enabled them neither time nor resources to establish collaboration among their private sector counterparts.

3. Recommendations

3.1. Country level recommendations

In order to address the country specific challenges we recommend four main reforms that should positively impact the country's microeconomic competitiveness, and macroeconomic and social environment.

1. Reform in the labor market

Spain needs to tackle the rigid conditions of its labor market through a more flexible contract system. Moreover, there is also an urgent need to reduce union power and liberalize some of the collective bargaining procedures. This presents an undeniable challenge because it means to go against years of union control of major labor politics. However, and although we do recognize the magnitude of the task, we strongly believe in the need to making the labor market more flexible specially in crisis times as the one we are now going through.

Additionally, greater labor flexibility could be attained by facilitating part time and temporary job opportunities in the market through new legislation and by reducing dismissal and hiring costs. It would be unacceptable to continue with the same practices that placed the country at the bottom ranking for difficulty of firing and hiring people. Addressing this will positively impact inward FDI and the competitiveness of the private sector.

2. Achieve a lean government

As mentioned before, the government is highly bureaucratic, which needs to be dramatically improved. The administrative burden reduction target set by the current government is a good start but it would be key to do it through aiming an e-government model which will make easier and more convenient each administrative activity.

Apart from promoting the online channel, the government needs to work on designing leaner procedures to start new businesses. We recommend the creation of a taskforce comprised by government officials, private sector individuals, citizens and key leaders from countries that have already done it. This will allow to identify the real bottlenecks and to put in place more effective, less costly and quicker systems to start new businesses in Spain.

3. Reform in educational system

In terms of primary and secondary education a reform needs to be launched to improve the quality of education (for example, through performance driven systems that link teacher compensation to student performance) and reduce the number of school dropouts (for example, with a stronger presence of social workers in schools)

In higher education we recommend to reinforce again the quality of the education to be able to compete against other European universities now that they will be competing not only for Spanish but also for European talent. Some of the actions that should be taken include a substantial improvement of the curriculum with more focus on innovation and new technologies, a shift towards a performance-driven system similar to the one previously proposed and a shift towards a more practical education, in line with what it is offered in France and Germany.

Finally, there is also a need to improve training in the workspace. We support the need to create a law to enforce the compliance of training requisites in companies (high quality and somewhat customized training has to become a right for the employee). Additionally, vocational training offering should increase to fill specific industry needs.

4. Boost in innovation culture

Finally, Spain needs to change its mindset to embrace the innovation culture that exists in other countries if they want to survive in the increasingly competitive environment. Spain has historically been a country which relied in a cost advantage. However, this is no longer the case and the only way the Spanish companies, the government and the society in general could address is through innovation. The forthcoming challenge for medium-sized Spanish companies is to innovate from a no longer sustainable business model to a new and disruptive model.

To do this two main actions should be taken. First, there is a need to reinforce the innovation mindset in society and this is competence not only of the government but also of private companies, universities and the individual citizen. In order to achieve this shift in mindset we recommend to organize innovation related international fairs and events in Spain (put innovation in the front page of newspapers and TV news broadcasting), to create incubators and finally, to reinforce the innovation related curriculum in universities through specific incentives.

The second set of actions includes a dramatic increase in R&D spending. Although difficult to do in current crisis times, there is no way for Spain to survive if it does not put R&D among the priorities. It is an action that will bear its fruits in the long run. Thus, we think that the government should promote private and public R&D centers linked to universities and should increase benefits derived from innovating (for example, giving tax credits or public recognition). Moreover, Spain needs to create measurement systems to control the level of improvement, facilitate the identification of issues and increase accountability, through a Spanish Innovation Scorecard.

3.2.Cluster level recommendations

As seen before, the cluster faces today a crucial stage which can reinforce and upgrade it or can make it disappear in a short period of time. Decisive actions involving all the actors must be taken to adapt the cluster to the new and competitive world environment. The central action to be taken is to promote a cluster development initiative by 1) creating a coordinating body, 2) launching a strategy with focus on promoting design and brand and 3) ensuring the overall process is run smoothly and effectively.

1. Create a coordinating body

The government should lead the creation of a coordinating body that will orchestrate the new initiative. This body should be representative of the cluster, involving the key leaders in the government and the industry (private companies, government, universities, industry associations, technology centers, etc.). The objective is to foster collaboration among actors and ensure the participation of prestigious and successful companies from the cluster (especially Inditex and Adolfo Dominguez). A consulting firm should be hired to help to assess the situation and plan the creation of the coordinating body, whose first stages would be financed by the government. Once the coordinating body is set up, it would receive annual funds from both the government and the private sector.

2. Launch a new strategy focused on design and brand creation

The coordinating body should be the institution leading all the collaborative actions within the cluster. Apart from boosting collaborating among actors, the coordinating body should lead the launching of a strategy to promote Galician design and brands. This strategy should start with the creation of an umbrella brand for new young Galician designers, which are not yet well known by the general public. That should provide them with a platform to show their innovations and should compensate the market inefficiencies by which new designers, irrespectively of their product, cannot reach commercialization channels. The new brand must be promoted through joint fashion catalogues, where most new designers would participate and through a "New-Designers Fashion Week" to be held in Galicia, Barcelona and Madrid. Spanish celebrities with worldwide recognition (such as Penelope Cruz or Rafael Nadal) would promote the brand and wear some of its products. The private sector should endorse and support these activities by actively hire the winning and most successful designers.

Another task for the coordinating body should be to support new designers to enter into retail channel. Nowadays, retail is the key to success, because it is the true market test. Getting access to the retail channel is extremely difficult and the new designers see it as an unbeatable challenge. Many apparel companies own a proprietary retail channel by which they distribute their product, while the rest distribute the product through multi-brand retailers. New designers cannot access the proprietary retail branches, and access to multi-brand retail is expensive and risky. Therefore, new designers can not show their product and pass the market test. The coordinating body should overcome this market inefficiency by facilitating them access to retail. This would be done by grouping designers to increase their leverage against big department stores and by launching an e-commerce site as an alternative and cheap shopping channel.

Access to capital might be another market inefficiency that the coordinating body should aim to address. In a region with no seed capital companies, entrepreneurial designers will not be able to raise the money to sustain and expand their businesses. In order to correct this and support entrepreneurship, the coordinating body should create a "New-Designers Competition" to link designers to capital and management teams. Additionally, designers´ incubators would be created and supported as a way to sustain innovation in design. These incubators would be financed through a fund created by the regional savings banks, which would benefit thereafter with the capital gains of successful projects.

Finally, the coordinating body should focus on upgrading human capital by helping to increase capacity and quality of fashion and design schools. Regional Foundations (such as Fundación Pedro Barrié De La Maza) would fund new scholarships to get the best talent. Finally, Universities would foster collaboration with fine arts academies and other creative careers.

3. Ensure efficiency in the process

For all this to happen, it will be necessary that the overall process is run on an effective way. In addition to hiring an external consultant to support the coordinating body functions, it would be necessary that strong leaders and influential sponsors are appointed to lead each of the initiatives launched. These leaders should report to the board of the coordinating body, where the government, the private sector and the Institutions for Collaboration would be represented. The coordinating body should also create new mechanisms to communicate and coordinate with the different actors, especially with the Institutions for Collaboration. These mechanisms should include monthly meetings, the launch of an online portal and a newsletter. Finally, in an effort to pursue efficiency and transparency, a performance management tool should be defined and implemented to track the results obtained.

Some of the existing Institutions for Collaboration should merge to avoid redundancies, making sure each of the resulting ones has a clear and exclusive objective. Today we have different organizations performing the same analysis and statistics, thus throwing precious resources that could be used in a more efficient way. These Institutions should also work hard to achieve membership from most of the cluster actors. Today, many companies do not belong to any Institute for Collaboration, posing a serious threat to the representativeness of these Institutions. All private companies in the cluster should be encouraged to be involved and to actively support these Institutions, as they are an important part of the coordinating body.

Finally, the different government agencies should improve synergies among them to ensure they work together on the same direction. As an example, the fashion promotion efforts could leverage on the tourism promotion agency by doing activities together thus lowering the costs for both parties.

We believe the Apparel Cluster in Galicia faces today a crucial stage where it can start its definitive decline or where it can receive the definitive improvement that will consolidate it. We are confident our recommendations will take the cluster to the second option, contributing to develop the region of Galicia and improve the economic conditions of its population. Decisive and coordinated action needs to be taken soon. Galicia cannot miss this opportunity.

End notes

[1] Population database, Eurostat, accessed April 2009

[2] Spain Country Report, Economic Intelligence Unit, April 2009

[3] Jose M. Colomer (2002), "Political Institutions in Europe", Edition: 2, Routledge

[4] Spain economic indicators, Eurostat, accessed April 2009

[5] Spain economic indicators, Eurostat, accessed April 2009

[6] Diego Comín (2009), "Spain: Can the house resist the storm", Harvard Business School.

[7] Employment by gender, OECD Economic Survey of Spain 2008, accessed April 2009

[8] Unemployment indicators Spain and construction activity, EIU, accessed March 2009

[9] Spain Country Report, Economic Intelligence Unit, accessed April 2009

[10] Spain's cluster portfolio, Institute for Strategy and Competitiveness, accessed March 2009

[11] The Global Competitiveness Report developed by the Institute for Strategy and Competitiveness, Harvard Business School, 2009. (www.weforum.org/gcr)

[12] www.labolsa.com accessed April 15th 2009

[13] The Economist (Nov 6th, 2008). Special report on Spain. "The Spanish Legion"

[14] Ministerio de Industria. "Retrato de la PYME 2007", área de estadística y publicaciones.

[15] Based on interviews

[16] International Cluster Competitiveness Site, Institute for Strategy and Competitiveness, Harvard Business School, 2009. (htpp://data.isc.hbs.edu/iccp/)

[17] Ministry of Industry, Tourism and Commerce of Spain

[18] World Bank (2008). "Doing Business Rank 2008". Country profile for Spain.

[19] ILO Yearbook of Labor Statistics 2006

[20] Ministry of Industry. National Economic Plan "PLANE" and article on www.elpais.com,"Los empresarios se quejan de la lentitud del plan 'antiburocracia'" ("Business community complains about the slow implementation of the 'anti bureaucracy' measures"), accessed March 2009

[21] Pro Imno Europe (2009). Report on European Innovation Score card (EIS) 2009.

[22] Economist Intelligence Unit, Country Data, www.eiu.com, accessed April 2009.

[23] Pro Imno Europe (2009). Report on European Innovation Score card (EIS) 2009.

[24] Based on interviews

[25] Colectivo ioe (2008). Informe sobre la situación de la educación en España.

[26] Informe PISA (2006). "Programa para la evaluación internacional de alumnos".

[27] Economist Intelligence Unit, Country Data, www.eiu.com, accessed April 2009.

[28] Business Week, http://www.businessweek.com/bschools/rankings/, accessed April 2009.

[29] Based on interview to Ángel Gabilondo in "Hoy por hoy" radio emission in April 9th, 2009. www.elpais.com accessed May 2009.

[30] Covadonga O'Shea (2008), "Así es Amancio Ortega, el hombre que creó Zara" (This is Amancio Ortega, the man who created Zara), editorial La Esfera de los Libros and Enrique Saez Ponte (former General Director of Banco Pastor), interview by authors, March 2009

[31] S. Riveiro, "Un repaso a la historia constata el afán emprendedor de los gallegos", El Correo Gallego.es, January 26, 2007, http://www.elcorreogallego.es/index.php?idMenu=130&idNoticia=127920, accessed March 2009

[32] Covadonga O'Shea (2008), "Así es Amancio Ortega, el hombre que creó Zara", editorial La Esfera de los Libros

[33] David Peña, "Inditex – Initiation of Coverage", February 7, 2008, Landsbanki – Kepler analyst report, accessed through Capital IQ on March 2009

[34] Fernando Trebolle (former executive of Adolfo Dominguez S.A.), interview by authors, March 13, 2009

[35] "Finisterre (Fisterra)", turismoenpie.com, http://www.turismoenpie.com/finisterre-fisterra/, accessed March 2009

[36] Enrique Saez Ponte (former General Director of Banco Pastor), interview by authors, March 2009

[37] Export data from DataComex at the Ministry of Industry, Tourism and Commerce of Spain, http://datacomex.comercio.es/, accessed March 2009; employment and number of company figures from CIBI database, accessed March 2009

[38] DataComex, Ministry of Industry, Tourism and Commerce of Spain, http://datacomex.comercio.es/, accessed March 2009

[39] Marie Driscoll and Esther Kwon, "Industry Surveys Apparel and Footwear", Standard & Poor's analyst report, November 29, 2007

[40] CITYC Interest addresses – Schools, CITYC website, http://www.cityc.es/dir/index.asp?id=en, accessed March 2009

[41] J. Carneiro, "El textil gallego se alía con el del norte de Portugal para hacer frente a la crisis", March 22, 2009, http://www.laopinioncoruna.es/secciones/noticia.jsp?pRef=2009032200_10_270740__Economia-textil-gallego-alia-norte-Portugal-para-hacer-frente-crisism accessed March 2009

[42] El Correo Gallego http://www.elcorreogallego.es/economia/ecg-h/galicia-mejora-nadie-su-tasa-productividad/idEdicion-2009-03-09/idNoticia-403852/ accessed March 2009

[43] OECD website www.oecd.org/ accessed March 2009

[44] Interview with industry experts

[45] Insights from various interviews with industry leaders

[46] Interview with industry expert

[47] SABI Database, query for CNAE codes 18 and 19. Accessed by Institute of Competitiveness of The Basque Country

[48] Data for 2002

[49] Wikipedia http://es.wikipedia.org/wiki/Comunidad_Autónoma_de_Galicia accessed March 2009

[50] The Economist http://www.economist.com/Countries/Spain/profile.cfm?folder=Profile-FactSheet accessed March 2009

[51] La Vanguardia, 26th April 2008

[52] Clayton M. Christensen is the Robert and Jane Cizik Professor of Business Administration at the Harvard Business School

Bibliography:

- Porter, M. E. (1998). *On Competition*. Harvard Business School Press
- Carlos Martinez-Mongay and Luis Angel Maza Lasierr, Competitiveness and growth in EMU: The role of the external sector in the adjustment of the Spanish economy, DG EcFin Econ papers, European commission
- Spain: Macro Fiscal Assessment, An analysis of the January 2009 update of the stability Programme, European Commission Directorate General Economic and Financial Affairs, Brussels, 4 March 2009 Ecfin/50744/09-en
- W. Chan Kim and Renée Mauborgne (2005), *Blue Ocean Strategy*, Harvard Business School Press
- Covadonga O'Shea (2008), *Así es Amancio Ortega, el hombre que creó Zara*, Editorial La Esfera de los Libros
- Clayton M. Chistensen (2003), *The innovator's solution*, Harvard Business School Press

Interviews and conferences

- Enrique Saez Ponte (former General Director of Banco Pastor), interviewed by authors, March 2009
- Fernando Trebolle, Director of Centro Tecnológico Textil de Galicia (former Adolfo Dominguez Executive), interviewed by authors, March 2009
- Spain, US Business Sustainability Conference organized by Invest in Spain and the Spanish Ministry of Industry, Tourism and Commerce, attended by authors, May 6th 2009 (Boston)