



Faculty of Economics and Business Sciences

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External Analysis of the Spanish Telecommunication Industry

Iban Casado Izcue

Supervisor: Alejandro Bello Pintado

Pamplona

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ABSTRACT

The aim of the project is to determine the attractiveness of the Spanish telecommunication industry. This sector shows a great dynamism with continuous mergers and acquisitions, market regulations in response to company's market power and, in addition, it is present in the daily life of millions of people. The PESTLE, Porter's Five Forces and the Strategic Groups analyses are the tools that helped to define this industry's attractiveness. The Pestle analysis showed some positive and very negative factors from the general environment that affect the sector. Furthermore Porter's Five Forces analysis demonstrated how powerful the rivalry is in this industry as well as the Strategic Groups showed how important technology is for a successful business strategy. The conclusions drawn from these analyses determine that the Spanish telecommunication industry it is not attractive at the moment and that there are dangerous threats that should be avoided and profitable opportunities that must be taken.

KEYWORDS

- Telecommunication industry
- Information and Communication Technology industry
- Telecommunication operators
- Strategic analysis
- Smartphone applications

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1. INTRODUCTION

The aim of the project is to determine the attractiveness of the Spanish telecommunication industry. To achieve this aim, I will perform the structural analysis of industrial economics, using PESTLE and Porter five forces as theoretical frameworks. Given the wide area in the Information and Communication Technology (ICT) sector and its large range of activities and subsectors, I decided to focus on the telecommunication industry. It shows a great dynamism with continuous mergers and acquisitions, market regulations in response to company's market power and, in addition, it is present in the daily life of millions of people. The level of attractiveness will show the sector's strongest and weakest points, how convenient it would be to break into this sector and the actual and future situation of the industry and the companies that are part of it.

2. TELECOMMUNICATION INDUSTRY'S ANALYSIS

2.1 Economic Context

In 2008 the Spanish economy was weakened until it was immersed in an economic recession that determined the course of the economy to date. This recession derived in a financial crisis and fiscal adjustments that brought a contraction of expenses and rise of unemployment in the country.

2.2 Industry's Definition

Before analysing the telecommunication subsector from the Information and Communication(s) Technology industry there is a concept that must be explained: What is a sector or an industry?

A sector could be defined as a group of companies that supply goods or services to the same market (Grant, 2010). This definition would fit the ICT sector as it is composed by manufacture and service companies that offer different goods and services in a same market. These companies' main activity is the development, production, sale or intensive use of information and communication technology. With the use of this kind of technology the companies of the sector collect, transmit or show data and information electronically. As mentioned before, the industry's structure is formed by manufacturer and services companies. On the one hand the manufacturer enterprises are dedicated, to the assembly of electronic devices, circuits and computer components, and on the other hand to the

design and production of telecommunication equipment, telephones and multimedia devices. During last years these companies had to make great changes in their business strategies and focus on the development, design and generation of telecommunication equipment like Digital Terrestrial Television (DTT) or consumer electronics (Smart Phones, laptops, etc.). The structure follows with the services enterprises that are divided in three different categories: Commerce, information technology activities and telecommunications. The ICT commerce is formed by companies that commercialize with informatics applications, print and copy equipment, consumer electronics and electronic telecommunication equipment. This group of companies decided to face the crisis with diversification and adapting their business model to the internet. This has been a fast and smart way of reacting to the crisis in a very competitive environment. The information technology activities are constituted by all the businesses that create videogames, informatics software, applications, updates and improvements for software. Moreover, includes enterprises dedicated to technologic consulting, informatics resource management, hosting or software maintenance. And the last group of services enterprises are the telecommunications. This category is divided in two other groups: Telecommunication operators and the rest of telecommunications. The first sort of firms exploits networks or provides electronic communication services to others. The rest of the firms provide specialized communication services and application. The companies of this last group are composed by installation firms, network capacity resellers, integrated telecommunication advisers and public network service suppliers. As it is shown, the ICT sector is too wide and complex to be entirely analysed, that is why this analysis will be focused on the Spanish telecommunication sector. The industry will be enclosed with the Abell Analysis to define limits and make possible a precise and deep analysis. According to the Abell Analysis, a business model can only be defined if three dimensions are taken into account: Customer Groups, Customer Functions and Used Technologies (Navas & Guerras, 2012). The Customer Groups for the telecommunication sector are all the customers that need to communicate, the Customer Functions are the communication needs that must be satisfied (Call, text, email, etc.) and the Used Technologies are the ways those needs are satisfied, in this case different networks. With those limits set it is easier to define the sector: The telecommunication industry includes all the companies that offer communication services using the last generation technology by telecommunication operators and other telecommunication activities.

In the table 1 it will be shown the main magnitudes of the telecommunication sector that will be developed below. These numbers will show a brief image of the telecommunication sector's actual situation.

Table 1: Main data of the Spanish Telecommunication Industry.

(Spain. Ministry of industry, energy and tourism. 2013. *El sector de las Telecomunicaciones, las Tecnologías de la información y los Contenidos en España 2012*)

Magnitude	Datum	Evolution rate
Companies in the telecommunication industry in 2011	2.349	-5.1%
Annual revenue of the telecommunication industry in 2012 (millions of euros)	33.881	-8.8%
Workers in the telecommunication industry in 2012	61.476	-9.3%
Investment in the telecommunication industry in 2012 (millions of euros)	4.017	-29.7%
Trade balance of the ICT industry in 2012	-5.814 (negative balance)	66.19%
Gross added value of the ICT sector in 2012 (millions of euros)	44.405	-6.68%

In 2011 there were 17.119 companies working on the ICT sector in Spain. From those companies 4.5%, 768 firms, were dedicated to manufacturer activities related with information and communication technologies. The rest of the 16.351 enterprises belonged to companies dedicated to services activities. 67% of that amount of companies was focused on information technology activities, 15.66% on sale activities and 14.34% on telecommunication activities. The 14.34% consists of 2.349 companies dedicated to the telecommunication sector that are divided in 1.254 telecommunication operator firms, 17% more than in 2010, and 1.095 companies dedicated to other telecommunication activities, 22% less than in 2010. To create a geographic picture of the sector it has to be said that 33% of the companies are located in Madrid and 15% in Cataluña. So, it can be said that the Spanish ICT sector and its subsectors are geographically concentrated in two main areas. (Spain. Ministry of industry, energy and tourism. 2013. *El sector de las Telecomunicaciones, las Tecnologías de la información y los contenidos en España 2012*).

Between 2008 and 2011 the rate of growth in the ICT sector decreased by -5.7%, therefore the telecommunication industry is part of this negative growth rate as well (Figure 1). The incomings of the telecommunication industry in 2012 were 33.881 millions of euros, 8.8% less than in 2011. This number is the lowest since the beginning of the descent in 2008. The incomings on the telecommunication operator companies have been of 31.467

millions of euros and in other telecommunication activities of 2.4 millions of euros, 7% and 27.4% less than in 2011.

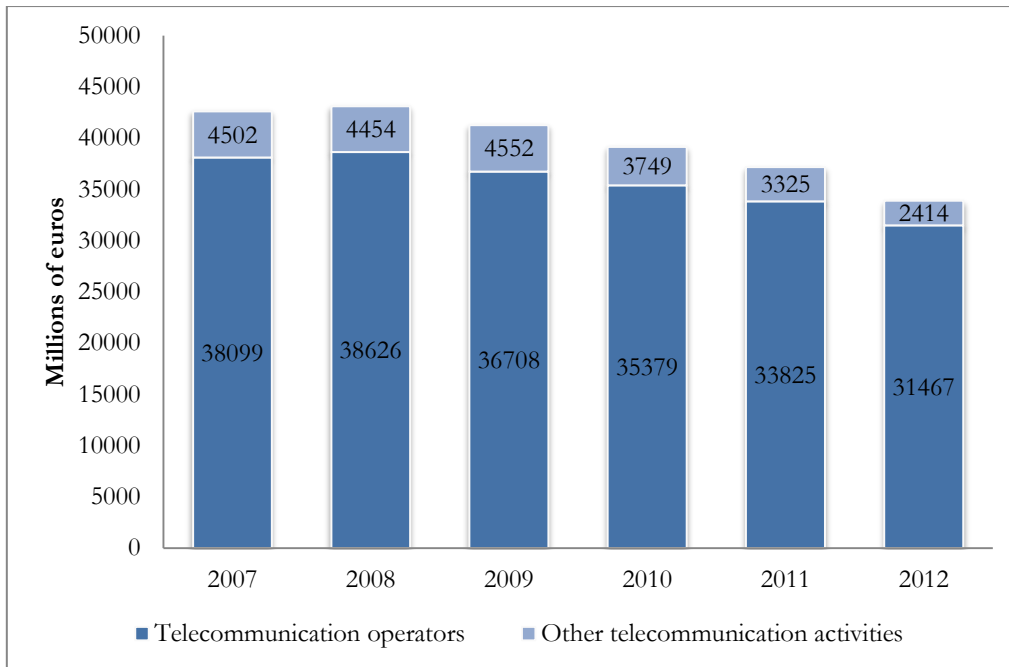


Figure 1: Annual turnover of the Telecommunication industry.

(Spain. Ministry of industry, energy and tourism. 2013. El sector de las Telecomunicaciones, las Tecnologías de la información y los contenidos en España 2012)

Even if the descent in the other telecommunication companies is higher than in the telecommunication operators, the impact of the descent in the telecommunication operators firms is much bigger. It should be noted that the great changes on the telecommunication operator market had a remarkable influence in the revenues of the same. The main change was the drop in the use of landlines and mobile phone lines the last year. In other words, the consumption of minutes in phone calls was reduced. The loss was more significant in the mobile phone segment with an 8.8% less than in 2011. This drop can be explained with the positive growth of the retailers that sell or rent terminals and mobile broadband, 1.6% and 29% of growth the last year. The use of internet in mobile phones has caused the incomings coming from voice traffic and text-messaging to fall. This descent has not only been in the number of companies or the incomings but in the employment and investment of the industry as well. From 2006 to 2012 more than 14.000 jobs have been lost in the telecommunication sector, more than 13.000 from telecommunication operators companies. In 2012 there were 61.476 workers on the industry, 9.3% less than in 2011. The job loss has been greater in the telecommunication

operator companies, with 11.4% less jobs, whereas the other telecommunication activities firms only had a descent of 0.2%. The investment had a negative evolution the last years in the telecommunication industry as well. But it has to be mentioned that in the rest of the ICT sector the investment rate has been positive. The innovation is directly related to the ICT industry, Research and Development (R+D) is needed to compete in it. Being a basis for the sector, the innovation creates a need of investment and that is why this is the only rate that had a positive datum through the last years. From 2008 to 2012 the average rate of variation in investment was of 0.7%. As this fact shows, the crisis did not really affect the investment on the industry, except for the telecommunication sector. As shown in Figure 2, there has been a drop of the investment in the industry since 2007 except for the year 2011. From 2011 to 2012 there has been a big drop in the telecommunication operators companies of 29.7%, 1.647 millions of euros less. (Spain. Ministry of industry, energy and tourism. 2013. *El sector de las Telecomunicaciones, las Tecnologías de la información y los contenidos en España 2012*). For a company that competes in a sector directly related with the R+D the lack of investment can be disastrous. The company would end with out-dated products or services in a market where the innovation is the main characteristic for the customers. Thus, the drop on 2012 establishes a worrying situation on the Spanish telecommunication industry.

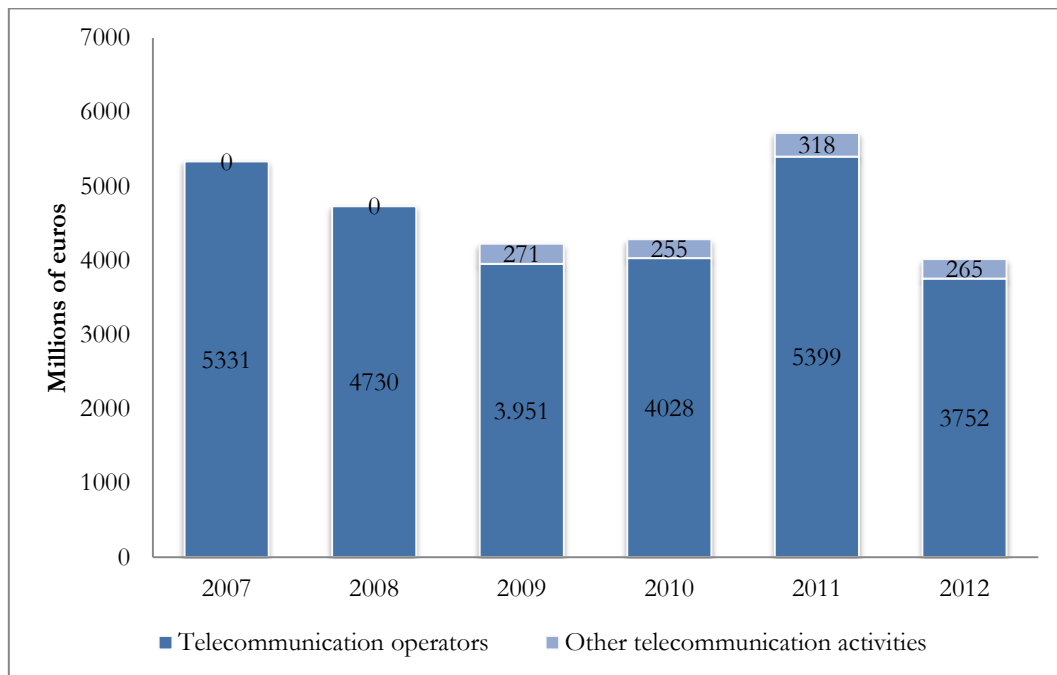


Figure 2: Investment evolution on the Telecommunication industry
 (Spain. Ministry of industry, energy and tourism. 2013. *El sector de las Telecomunicaciones, las Tecnologías de la información y los contenidos en España 2012*)

The trade balance and the gross added value of the ICT sector suffer of negative rates too. On 2012 the exportations had an incoming of 10.013 millions of euros (72.1% services and 27.9% goods) while the importations were 15.827 millions of euros (73.2% goods and 26.8% services). This information shows that Spanish ICT industry exports more ICT services and imports more ICT goods which is reflected in the negative trade balance of - 5.814 millions of euros. As pointed out above the gross added value, 44.405 million on 2012, had a negative rate. To be exact the rate dropped 6.68% from 2011 to 2012. (Spain. Ministry of industry, energy and tourism. 2013. *El sector de las Telecomunicaciones, las Tecnologías de la información y los contenidos en España 2012*).

So, this industry's definition demonstrates that the Spanish telecommunication sector is in a delicate situation and it is part of a bigger industry that has been suffering a negative growth since 2008. The telecommunication sector has been influenced by the economic crisis since the very beginning and one of the factors that shows the crisis' impact in the sector is the lack of investment during the last years. Investment is one of the basic factors to compete in the ICT industry, and the telecommunication sector's annual investment has been descending since 2008. With the next deep analysis of the industry it will be more precise to determine the status, thereby the attractiveness of the industry.

2.3 Industry's Analysis

For the Spanish telecommunication sector's analysis the environment will be studied for a clear determination of the industry's attractiveness. The environment is formed by all those factors that affect the companies but are out of their control. These factors cannot be manipulated by the companies but they have a significant influence on the business strategy, decisions and results. All these factors that form the environment can be classified in two different groups: General and Specific environment.

2.3.1 General Environment Study: PESTLE Analysis

The general environment involves all the factors that come from the socioeconomic system that surrounds a business and cannot be avoided. It will be analysed by the PESTLE tool which will define an environment's limits and show which factors have more influence on the companies that are competing in the sector. The first step for a PESTLE analysis is to define the geographic limits, in this case the Spanish telecommunication market, and then examine six different dimensions (Navas & Guerras, 2012):

- *Political dimension:* The degree in which the government intervenes in the economy. It refers to the political stability and policies such as tax policy or labour law. The Spanish government, in an attempt to face the crisis, took many restrictive fiscal policies that affect directly the ICT sector, therefore the telecommunication industry. Among them the tax rise could be one of the most harmful for the sector. A tax rise means that the consumers will have less purchasing power and taking into account that the telecommunication services are not basic need products, the companies from the sector could suffer a severe reduction of sales.

But not all policies affect the industry in a negative way. In 2013 the government created a policy to encourage ICT companies to improve and reach the European level of this sector. The government offers to the actual and new companies in the sector subsidies and special funding programs. (Spain, Ministry of industry, energy and tourism. 2013, *Acción Estratégica de Economía y Sociedad Digital*). It is a good help, but knowing how high the needed investments in this sector are this help is not enough.

- *Economic dimension:* It is related to economy's nature and stability and it is showed by the economic indicators. The economic crisis set off many unfavourable situations in the Spanish market. Among those situations the high unemployment is one of the worst. The unemployment rate reached 25.6% on February 2014 and while the unemployment rate is growing the unemployment helps are cutting down, creating a really hard situation for millions of families. At the same time the salaries were reduced and thereby the savings and purchase power have decreased in a significant way. All this generated a contraction in the consume that affected the incomings of the businesses and worsened the Spanish economic situation. It has been shown in the industry's definition that the consumption of voice transmission and text messages suffered a drop on their consumption. This drop is directly related to the diminution of the consumer's purchase power. (Spain. Ministry of industry, energy and tourism. 2013. *El sector de las Telecomunicaciones, las Tecnologías de la información y los contenidos en España 2012*).

➤ *Social dimension:* Cultural aspects that have a strong influence on the general environment. It involves trends, population growth rate or age distribution among others. This dimension has had a big impact for the last years on the telecommunication sector because of the rise of the internet as a communication tool. The use of the internet in smartphones had different and harmful consequences for the companies that compete in the telecommunication industry, especially for the telecommunication operators. The use of smartphones for communication has increased during the last year and as a consequence the landlines suffered a drop in their use. The Spanish population substituted the landlines for mobile phone lines, even some people decided to renounce the house landline and only use the mobile phone.

Another bad consequence for the telecommunication operators is the substitution of voice transmission and text messages for instant messaging or free voice communication applications by internet. This new trend caused an important drop of the telecommunication operator's incomings and supposes a reconsideration of business strategy for the companies of the industry. For companies this trend is not only a threat, but an opportunity for selling new services and many companies have already started to use it as such. (Deloitte, *Nuevos retos y estrategias*, Newsletter 2013)

➤ *Technological dimension:* All the factors that are related to the scientific and technological framework. Technology is the basis of this sector, so a little change in this dimension has a direct impact on the industry. The innovation and know-how are the two factors that always are in development in this industry, and the companies cannot allow themselves to be phased out in the telecommunication sector.

➤ *Legal dimension:* Administrative, legal and regulating factors. The most notorious factors in this dimension are the last labour law and the new General Law of Telecommunications. The last labour law reduces the rights of the employees in the Spanish market generating tension between the workers and the management. On the other hand, the new General Law of Telecommunications, that was approved the 29th of April of 2014, will focus on a social and territorial cohesion making the State and the rest of Public Administrations collaborate to

help the telecommunication operators spreading their networks and investing on the industry in an easier way (Spain, Ley 9/2014, de 9 de mayo, de Telecomunicaciones).

- *Environment dimension:* Factors related to ecology or environment aspects. This dimension has become of great importance for the last years, sometimes being decisive for the buyers. This had made the companies develop social awareness and take some ecologic measures like using renewable energies or waste processing.

With the six dimensions analysed a general environment matrix can be drawn. In this matrix it will be shown the scale of influence of these factors on the telecommunication industry. This way it will be easier for the companies in the industry to react to these factors that cannot be avoided. They could take advantage of the positive factors and react quickly to those that could damage the company.

As the Table 2 shows, the telecommunication industry is very sensitive to the general environment's factor. There are few factor's that do not affect the industry in a positive or negative way. This was something predictable knowing that, as mentioned in the industry's definition, the telecommunication industry has had a negative evolution since the economic crisis started in 2008.

Table 2: PESTLE analysis graph

	FACTORS	VERY NEGATIVE	NEGATIVE	INDIFFERENT	POSITIVE	VERY POSITIVE
POLITICAL	TAX RISE		X			
	SUBSIDIES					X
	FUNDING HELP				X	
ECONOMIC	ECONOMIC CRISIS	X				
	UNEMPLOYMENT		X			
	LOW SAVINGS		X			
	CONSUME CONTRACTION	X				
SOCIAL	LESS USE OF LANDLINES		X			
	INSTANT MESSAGING	X				
	VOICE TRANSMISSION SUBSTITUTION	X				
	BUSINESS OPPORTUNITY				X	
TEC N.	INNOVATION				X	
	KNOW HOW					X
LEGAL	LABOUR LAW		X			
	NEW GENERAL TELECOM. LAW				X	
ECOL.	SOCIAL AWARENESS			X		

2.3.2 Specific Environment Study: Porter's Five Forces

The specific environment refers to the factors that are directly related with the business activity and affect only to the companies that compete in a certain sector. These effects of the specific environment can create, depending on the companies' reaction, a threat or an opportunity. Porter's five forces analysis will study this type of environment. This tool, created by Michael E. Porter, defines the grade of attractiveness of an industry studying

five forces: Threat of new entrants, Threat of substitute products or services, Bargaining power of customers, Bargaining power of suppliers and Intensity of competitive rivalry. These forces determine the profitability of a sector, as well as the dynamics, opportunities and threats. As explained before, this tool will study the specific environment, so the forces to analyse are close to the activities inside the industry:

- *Intensity of competitive rivalry:* This force focuses on the situation of the actual rivalry between the companies in a sector in one precise moment in time. A look to the situation between the competitors will give a quick overview of the full competitive situation and the profitability levels in the sector (Porter, 1982). The first thing to do for analysing this force is to find out the industry’s concentration level. For doing so the Herfindahl index (HHI) will be used. A rate for measuring the market concentration in an industry by using the turnover of the top ten telecommunication companies (Table 3). The index will be placed between 1, monopoly, and 0, perfect competition.

Table 3: Turnover of the top 10 Telecommunication companies (Millions of euros) (SABI)

COMPANY	TURNOVER (Millions of euros)
TELEFONICA DE ESPAÑA SA	8.866.296
TELEFONICA MOVILES ESPAÑA SA	6.465.630
TELEFONICA, SA	5.937.000
VODAFONE ESPAÑA SA	4.810.730
ORANGE ESPAGNE SA.	4.106.928
CABLEUROPA SOCIEDAD ANONIMA	1.551.381
XFERA MOVILES SA	1.017.948
JAZZ TELECOM SA	910.566
THE PHONE HOUSE SPAIN SL	491.414
TELEFONICA SOLUCIONES DE INFORMATICA Y COMUNICACIONES DE ESPAÑA SA	461.725
TOTAL	34.619.618

The HHI for this sector is 0.17 representing a moderate concentration for the telecommunication industry. This concentration originates in missing a leader with a greater market share in the sector, but as shown in table 3 having a big difference of turnovers between the first five companies and the last one. The absence of an absolute leader creates competition in the industry, but still there is a noticeable gap between top and bottom. Another factor to understand the intensity of the actual competition is the growth rate of the sector. As analysed in the industry's definition, the growth rate of the telecommunication industry is negative. For the last years the rate has continued descending, which has increased the rivalry on the sector. The non-differentiated products increased the competition as well. The telecommunication operator companies offer different product packs to attract clients, but at the end the products are all the same consisting of landline, mobile phone line, TV, internet and so on. This is the reason companies depend on publicity and price strategy. (Redtel, *Las Telecomunicaciones en la Economía y Sociedad Española*, 2011). Without differentiated products, moderate concentration and a negative growth rate the intensity of the competitive rivalry is high-moderate.

- *Threat of new entrants:* It is the entrance of new rivals to the sector. These newcomers will try to get as much market share as they can, so they are a threat for the actual competitors (Porter, 1982). The Spanish government started to liberate the telecommunication industry in 1987 and in 2003 the full liberation was finally achieved. Since then the entrance barriers were reduced but nowadays some of them still remain making it difficult for new rivals to break into the sector. There are four main entrance barriers that affect the entrance of new rivals: Investment, Fix Costs, Know-How and Brand Differentiation. A Telecommunication company needs high investment in high technology devices, equipment and network coverage. This investment need is not only for the first time a company breaks into the industry but for maintaining every year the equipment and networks as well, in other words for fix costs. This means that the capital investment is high and constant on the industry and that new entrants must have enough resources for facing such a high need of capital. (Á.Escribano1 & A.G. Zaballo, *Evolución de la estructura de mercado de las telecomunicaciones en España*, Diciembre 2001). Another barrier to face for the new rivals is the Know-How of the telecommunication industry. The industry is based on technology and innovation, factors that evolve

and need to be embraced and understood. Companies that work in the industry already have that useful Know-How that helps them to work efficiently. However it took time until they collected all that knowledge and it will take time to the new competitors to do the same. The last barrier to defeat is the brand differentiation in the industry. There are some companies that focus on brand differentiation instead of product differentiation. Companies like Ono, Telefonica or Jazztel made a high investment in publicity and used it to differentiate their brands among the rest. New entrants will face big companies with strong brand differentiation and renown that developed loyal customers thanks to the investment in publicity. The result of those barriers is the generation of scale economies. With all the expensive equipment, high technology and networks the telecommunication companies are able to increase the offer and production without increasing their costs. The internet service is the best example, they can use the same infrastructures to produce and provide more internet service. (A.Galetovic & R.Sanhueza, *La economía básica de la redes fijas de telecomunicaciones*, Noviembre 2006). Taking all those barriers into account and the fact that the companies can react to the entrance with price reductions because of their big budgets, the level of threat of new entrants is low. Not even the new General Telecommunication Law is enough to defeat such high entrance barriers.

- *Threat of substitute products or services:* The existence of different products that satisfy the same needs as the ones offered in the sector. These products affect the consumer's price sensibility and demand. (Porter, 1982). Years ago it seemed that the mobile phone line would substitute the landline. Nowadays it is not seen in such way anymore, since companies offer both services, even as a service pack offer. (C. Feijóo González & J.L. Gómez Barroso & D. Rojo Alonso, *competencia en el sector de las telecomunicaciones: evolución de la regulación europea y análisis crítico del marco actual*, 2006). The rest of the telecommunication services (internet, TV, etc.) do not have substitute products either. Nevertheless the internet could provoke serious damages as a substitute product for the rest of the services with the smartphones applications. Applications like Whatsapp or Viber offer free instant messaging and free voice transmission and its use is being spread very fast. Yet these applications are part of one of the telecommunication services (Internet) that all companies

offer, so its substitute product level is hard to define. Hence it can be said that the level of threat of substitute products or services is low or non-existent.

- *Bargaining power of customers:* The capacity of the consumers to influence the transaction they make with the companies of an industry. (Porter, 1982). In the telecommunication industry there is not one differentiated product and the companies offer very similar services and prices to the customers (Redtel, *Las Telecomunicaciones en la Economía y Sociedad Española, 2011*). Taking that into account it can be concluded that the bargaining power of the customers is high. They can find the same or even better offers in other companies and they would go to them easily. That is why the customers can demand some conditions and the companies will take them under consideration, because they could leave the firm for another that offers the same or very similar services at any moment.

- *Bargaining power of suppliers:* In this case the suppliers are the ones that have the power over the negotiation with the companies from an industry. (Porter, 1982). In the telecommunication industry the suppliers are mainly all those companies that provide infrastructures to make possible all the activities from the telecommunication companies. These companies are not big in number and the products they sell are necessary for the telecommunication companies to provide services to the customers. The companies need all the networks, parabolic antennas and other infrastructures that these companies provide. (A.L Lopez, *Competencia y Regulación en los Mercados Españoles de Telecomunicaciones*, IESE Business School & Universidad de Navarra, 2009). Because those infrastructures are necessary for the telecommunication companies the bargaining power of the suppliers in the telecommunication industry is very high.

2.3.3 Strategic Groups

With this tool it will be possible to disaggregate the sector by the strategies followed by the companies on the studied industry. A strategic group is an assemble of companies that follow the same or very similar strategy based in two of these possible dimensions: Product line, geographic limits, distribution channels, quality, price policy, costs, technology, customer service, etc. (Navas & Guerras, 2012). For analysing the strategic groups from the telecommunication sector the dimensions that will be used are the Investment and

technology. Based on these two dimensions three strategic groups were found on the telecommunication sector that gather up different companies following a similar strategy (Figure 3):

- *Wholesaler of telecommunication operator services:* This Strategic Group is formed by wholesaler telecommunication operator companies that offer connection services to retailers so they can provide services to the customers. These companies use a strategy based on the use of the latest technology and high investments in it. They provide services to retailers with millions of customers and the equipment they use must have enough capacity to deal with such intensive consume. These companies are big in size with big budgets but there are only a few in the Spanish market. Telefonica, for example, is one of the companies in this Strategic Group. (Deloitte, *Nuevos retos y estrategias*, Newsletter 2013).

- *Retailer of telecommunication operator services:* In this group there are telecommunication operator companies that offer a service of telecommunication (landline, mobile phone line, internet, etc.) to the customers. The strategy of this Strategic Group is a high investment and use of high technology to provide services to the final consumer. This group gathers up companies like ONO or Jazztel. (Deloitte, *Nuevos retos y estrategias*, Newsletter 2013).

- *Companies dedicated to other services:* This Strategic Group is formed by all those small or medium companies in the telecommunication industry that follow a business strategy based in medium-low technology and low investment. Those companies are mainly firms dedicated to installation, network capacity resell, integrated telecommunication advice and public network service supply. (Deloitte, *Nuevos retos y estrategias*, Newsletter 2013).

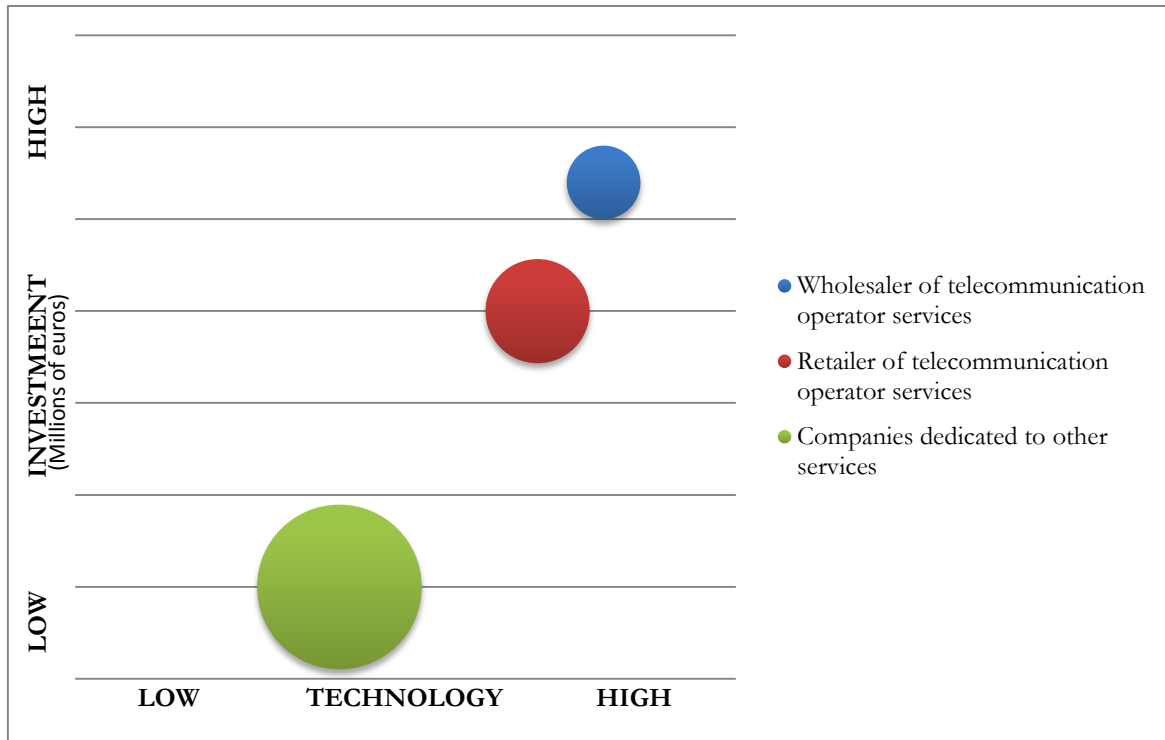


Figure 3: Strategic Groups of the Telecommunication Industry

Each circle represents a type of company that follow a determined business strategy. The size of the circle shows the number of companies gathered up in it and their locations depend on the use of the dimensions. (Deloitte, Nuevos retos y estrategias, Newsletter 2013).

With this analysis it has been shown that when it comes to investment and technology the companies on the sector follow three different strategies, two of them focusing on high investment and high technology use. As shown in Figure 3, those companies are few in number but big in size, they have big budgets and offer a wide line of services. On the other hand, the companies dedicated to other telecommunication activities use much less investment and do not need to use high technology as the other two Strategic Groups. As mentioned above, those companies are of small and medium size and some of them work in local or regional areas, but the graph shows that there is a large number of them in the industry.

3. INDUSTRY'S ATTRACTIVENESS

As it is explained in the industry's definition the Spanish telecommunication industry is in a very delicate situation. Since 2008 the sector had negative growth rates that affected the number of working companies, the employment and the turnover. All of these three factors have suffered a negative evolution since 2007, when the economic crisis started. So it can be assumed that the telecommunication industry was and is highly affected by the

economic crisis and its consequences. But the economic crisis is not the only factor from the general environment that has a negative effect on the sector; the social factors have a big impact on it as well. The success of the mobile phone lines and smartphones has created a trend that is spreading all over the world. This trend results in the decrease of landlines, text messaging and voice transmission that affected the incomings of the sector in a significant way. Landlines are not useful since the mobile phone has covered the same functions and text messaging and voice transmission are being replaced by free smartphone applications. This caused a big loss for the telecommunication operators in the last years and it seems that the trend will continue growing. But not all the general environment factors are negative for the Spanish telecommunication industry. For example the subsidies and funding helps' main objective for telecommunication companies is the development and support of the working companies in the sector and newcomers. Furthermore the New Telecommunication Law will work on a social and territorial cohesion making the State and the rest of Public Administrations collaborate. That way it will be easier for the telecommunication companies to operate in the Spanish market.

But as the analysis continued with the specific environment study, more negative results were found. The industry's competition analysis showed a high-moderate intensity of competition rivalry and moderate concentration. The high-moderate intensity of competition rivalry is mainly caused by the lack of differentiated products. All companies offer the same kind of products (landline, mobile phone line, TV, internet, etc.) separately or as pack, but at the end all offer the same services. This makes the companies compete hardly to attract customers with price wars and high investment on publicity. The moderate concentration, on the contrary, is given because there are five companies that lead the sector with higher market shares and incomes. These big companies of big size and high budgets can easily influence the Spanish telecommunication sector. For example, they are powerful enough to raise the entrance barriers to protect the profitability of the industry. There are already high entrance barriers in the sector like investment, know-how, fix costs and brand differentiation that make it difficult for new companies to break into the sector. The investment is really high because of the required infrastructures to provide the service and the fix costs that the maintenance of those infrastructures generate. This investment and infrastructures create exit barriers for the companies in the sector too, the investment cannot be taken back and the infrastructures can only be used for telecommunication purposes. Know-How and Brand Differentiation are two entrance barriers that give a competitive advantage to the companies and can only be developed working in the sector

during a long period. All of them make it very difficult for new entrants to break into the sector or succeed in it. But even if with these entrance barriers some company tries to enter the sector, the big companies can easily make those barriers even harder to overcome. Given the negative growth rate the existing telecommunication companies will do whatever it takes to protect their profitability. For example they can use part of their big budget to increase their Brand differentiation with publicity, develop their R+D or improve their equipment making the investment barrier higher for the new companies. And because of the need of know-how and the time it takes to generate it, the companies on the sector will have enough time to react while a newcomer is developing it. Therefore, it is clear that the main barrier to overcome for new companies is the reaction of the actual rivals on the industry. If there was a high profitability, combined to the high barriers and the protection of the actual companies it would make the sector more attractive. The industry would have a profitability that not many companies would have access to. But this is not the case taking into account the negative growth rate. Thence, the reaction of the companies, their power to raise the entrance barriers and the existing entrance barriers make the Spanish telecommunication industry less attractive.

But the top five companies on the sector do not possess all power. Because of the need of the infrastructures that the suppliers provide and the lack of product differentiation, the existing companies are in a disadvantage with the suppliers and customers. Both have a high bargain power and that makes the companies powerless to demand conditions to suppliers or raise prices to customers. This situation gives the new companies a chance to break into the industry, because the conditions of the suppliers and customers will be the same for all the telecommunication companies in the market. Thence the customer's and supplier's bargain power make the industry more and less attractive at the same time. More attractive because of the equal conditions for new companies and less attractive because of the big bargaining power that the customers and suppliers possess. Customers have a decisive role in the telecommunication industry because of the appearance of smartphones applications that could be defined as possible substitute products. The use of these applications could have a negative impact on the incomes of the companies, offering instant messaging and voice transmission for free. This possible substitute product makes the industry less attractive but at the same time it could create a new business opportunity that still has not been totally exploited. These smartphone applications could attract new companies with a different business strategy and services. The last fact to be considered before determining the Spanish telecommunication industry's attractiveness is the existence

of three main strategies based on investment and technology for competing in the sector. These three strategies discovered on the Strategic Group Analysis show that high investment and technology are basic to succeed in the industry. Therefore, new companies could use this information to follow a strategy already settled or create a new one out of the box.

Taking all those factors into account it can be determined that the telecommunication Industry is not attractive at the moment. Even if there are many factors that can be positive and negative as the same time, the negative ones have a bigger influence. The impact of the actual competition in the attractiveness, for example, is very negative. There are big companies that can influence the entrance barriers, decrease the prices without worrying about the losses or make their brand differentiation stronger investing on publicity. The negative growth and the low bargain power make the Spanish telecommunication industry very unattractive as well. So, taking all the results from the strategic analysis into account it can be affirmed that the Spanish telecommunication Industry is not attractive.

4. CONCLUSIONS

After determining the telecommunication industry's attractiveness there are some other conclusions about the sector that have been reached after the whole strategic analysis. These conclusions will be explained in the Table 4 as opportunities and threats of the Spanish telecommunication industry.

Table 4: Opportunities and threats of the Spanish Telecommunication industry

OPPORTUNITIES	THREATS
New business opportunities based on the smartphone applications.	Increase of the use of smartphone's applications for free texting and voice transmission. It could have a negative effect on the telecommunication operators reducing the consumption of voice transmission minutes and text messaging.
New services based on internet offered by the telecommunication operators.	Complete substitution of landlines by mobile lines. This would suppose one service less to be offered and significant losses for the telecommunication operators.
Business expansion thanks to the government's helps like funding or subsidies and the new General Telecommunication law.	The negative influence from the Spanish economic situation.
Development of new technology for a better internet supply. A faster internet or a better transmission technology could differentiate a company to the customer's eyes.	Intensification of the rivalry because of the negative growth rate. With a decreasing growth rate the rivalry for getting a bigger market share will increase.

As the table 4 shows, there are many factors that can be opportunities and threats at the same time. Most of them related to the technology and its development, showing how important the technology is in this industry. The nature of the factor, opportunity or threat, depends on the companies' reaction to those factors. A reaction on time I the Spanish telecommunication industry can create an advantage turning a threat into a profitable opportunity.

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