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HISTORICAL ANALYSIS OF SPANISH COMPETITIVENESS IN THE EUROPEAN FRAMEWORK: 19TH AND 20TH CENTURIES

ANÁLISIS HISTÓRICO DE LA COMPETITIVIDAD ESPAÑOLA EN EL CONTEXTO EUROPEO: SIGLOS XIX Y XX

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ABSTRACT

This article analyzes the evolution of Spanish competitiveness and economic growth during the 19th and 20th century. After defining the concept of competitiveness in relation with other notions like productivity, economic growth, comparative advantage, or international competition, we apply this concept to the Spanish experience. The study includes the evolution of the Spanish Gross Domestic Product in terms of its convergence and divergence, the historical contribution of labor, capital, and total factor productivity on Spanish development, the institutional contributions to growth, and the evolution of competitiveness in Spanish regions, clusters and companies. Among other conclusions, the article emphasizes that, since 1959, the progressive reduction of protectionism and intense public regulations, introduced at the end of the 19th century, allowed an intense economic growth and convergence process. But the Spanish economy still maintains some institutional shortcomings that reduce its potential future growth and affect its competitiveness and entrepreneurship.

KEY WORDS: Competitiveness, economic growth, productivity, entrepreneurship, Spain

JEL: N10, N20, O11, O43, O47.

RESUMEN

En este artículo se analiza la evolución de la competitividad y el crecimiento económico en España durante los siglos XIX y XX. Una vez definido el concepto de competitividad en relación con otras variables como la productividad, el crecimiento económico, la ventaja comparativa o la competencia internacional, aplicamos este concepto a la experiencia española. El estudio incluye la evolución del Producto Interior Bruto español en función de su convergencia o divergencia, la contribución

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histórica del trabajo, el capital y la productividad total de los factores en el desarrollo español, las contribuciones del marco institucional, y la evolución de la competitividad en las regiones, clusters y empresas españolas. Entre otras conclusiones, el artículo destaca la progresiva reducción del proteccionismo y el intervencionismo económico desde 1959, políticas que habían sido introducidas a finales del siglo XIX, y cuya reforma y eliminación permitieron un intenso crecimiento económico y un proceso de convergencia. Pero la economía española todavía mantiene algunas deficiencias institucionales que reducen el potencial de crecimiento económico y afecta a la competitividad y el espíritu empresarial en España.

PALABRAS CLAVE: Competitividad, crecimiento económico, productividad, emprendedores, España.

INTRODUCTION: THE EVOLUTION OF COMPETITIVENESS CONCEPT

Competitiveness is a widely used concept associated with other notions like productivity, economic growth, comparative advantage, or international competition. Although competitiveness is a relatively new concept in the early economic literature, its use is closely related with traditional economic discussions about the role of productivity and international competition in the economic growth of nations. Adam Smith (1776) developed two concepts that have paved the way to a greater understanding of the issue of competition. The first is the concept of income, defined as the value of all goods and services produced during a year in one economy. All economists accept this magnitude as the main measure of the wealth of nations. The second concept established by Adam Smith is the analytical framework of the causes that explain the growth of income. Smith proposed a production function where the increase of factors of production (land, labor and capital) will lead to economic growth. The factors' increase could be either quantitative, by adding more land, workers or machines, though this quantitative addition has decreasing returns if some of the factors remain fixed, or qualitative, if each worker can produce more. Smith explained productivity growth through the division of labor; the specialization of workers and its productivity, produces a demand increase in the economy, which then encourages the division of labor, thus starting anew the virtuous circle process. The investment in new capital and the introduction of new technology will feed this process, assuming the existence of appropriate institutions protecting property rights and promoting free-trade inside and outside the country.

This analytical framework has been maintained by almost all the economists, though each has maintained their own interpretations and has not placed equal weight on the different elements involved. Thus, the analysis of other classical economists, like Thomas Robert Malthus (1803) or David Ricardo (1817), was not as positive as Smith's. Malthus considered that economic growth will increase wages and population growth, but the diminishing returns in agricultural production would limit this expansion with the increase of food prices. Ricardo developed Smith's and Malthus's arguments by considering that the increase of food prices would increase wage costs and reduce entrepreneur's benefits, stopping the capital investment process and economic growth. Ricardo's argument is based on the distribution of income, since the "unproductive" landlords will have benefits based on the food price

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risers, but the “productive” capitalist’s entrepreneurs will reduce their potential investment growth due to increasing labor costs. Besides these and other arguments, all of the above mentioned authors considered that the short-run periods of economic growth could not go on indefinitely; in the long-run the economy will tend to be stable without economic growth, otherwise known as a “stationary” or “steady” state, as coined by John Stuart Mill (1848).

The theoretical analysis of economic growth has maintained the last analytical framework, but has evolved because of two facts. The first is the introduction of income measurement, developed since the 1920’s with the national accounting systems. With this data, economists have been able to measure the evolution of nation’s economic growth, and the second element is that these empirical studies have shown some nations maintaining a sustainable economic growth during a long period of time¹, while others not been able to develop any economic growth. After a period of lower interest in long-run economic growth (during the last decades of the 19th century and the first half of the 20th century), the last two elements, together with the decolonization process which increased the importance of giving theoretical and practical solutions to economic growth problems that arose in newly independent nations, revitalized the economic growth literature after the Second World War. This literature firstly developed a mathematical framework to understand the economic growth process. After a failed attempt with the Harrod-Domar model², the established and widely accepted growth model is the “Solow model” (Solow 1956 and 1957; Swan, 1956). The conclusion of the Solow model is the opposite of the Harrod-Domar: investment in machinery is not the source of growth of per worker income in the long-run, but rather, the main source is technological change³. The nature of this conclusion derives from introducing to the model, besides the investment on new machines, the diminishing returns in the use of physical capital (with a Cobb-Douglas production function) and its depreciation. The simplest version of this model includes two factors of production, labor and capital, plus a third factor of technological change, also named “Total Factor Productivity” (TFT) as it measures the capacity of all factors to jointly increase the total productivity of the economy.

One of the advantages of this model is its capacity to measure the economic growth of nations and the contribution of all the sources of growth involved in the production function⁴. This measurement, which we will apply to the Spanish economy later, shows that the TFT, not the investment in capital per worker, is the key source of long-run economic growth. However, TFT is not directly measured, but is the residual after introducing data of the rest of the variables (growth rates of per capita income and capital per worker), thus TFT could be nominated as the “measurement of our

¹ For example, the United States has had an average annual economic growth rate of 3.75 percent since 1790 to 2007 (Officer and Williamson, 2009).

² In fact, this model was not intended as a growth model, but a debate on short-run business cycles in rich countries: the original articles (Harrod, 1939; Domar, 1946) were written in the aftermath of the Great Depression and took unemployment as given, so their main conclusion was that production is proportional to investment in physical capital, and labor does not play any role in production (this is based on the unrealistic assumption that the relative price of labor and capital is fixed and they are used in equal proportions).

³ Joseph Schumpeter (1942) could be considered a precedent in emphasizing the role of other factors than physical capital investment in long-run economic growth, factors like technology or entrepreneurship.

⁴ The contribution of capital and labor is weighted by their respective output–input elasticities.

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ignorance” of the model. Besides, TFT has different interpretations. Originally, Solow considered this residual as the external and exogenous technological progress. Since then many other explanations have come up, including cost reduction or efficiency gains (Harberger, 1998), externalities and increasing returns (Romer, 1986; Lucas, 1988), or policies favoring the adoption of new technologies (Parente and Prescott 1994; Prescott 1997). The potential of the Solow model is that it can include all these elements inside the model. Thus, some studies have introduced the incorporation of technology in the last capital invested, within a learning-by-doing process (Arrow, 1962; Gordon, 1990). Others have included human capital and technological generation in more complex models named “endogenous models” because the generation of new technology and ideas is a conscious process embedded in the production function, a process with more risk but higher returns due to the increasing returns of technology and ideas (Nelson and Phelps, 1966; Lucas, 1988; Romer, 1990).

Ample empirical literature has been developed around the growth models. Solow model predicts convergence because a greater investment of capital (or capital deepening) increases labor productivity, accordingly poorer countries with lower levels of capital per worker would have higher marginal productivity if capital were invested. An investment of capital can be either physical capital or human capital (Mankiw, Romer, and Weil, 1992), and its effectiveness is reinforced if openness facilitates the arrival of foreign savings into poorer countries (Barro, Mankiw, and Sala-i-Martin, 1995). The endogenous models, however, consider this convergence “conditional” because technology has two opposite effects in convergence. On the one hand, the technological differences between countries produce different “steady states”, so their economic growth, in the long-run, will tend towards different levels. On the other hand, poor countries can copy the technological advances and this technological catch-up reinforces convergence. Two more approaches appear to be related to empirical economic growth studies. The first approach uses the concept of “structural change” (Nurkse, 1953; Lewis, 1954) to study the increases in productivity based on wide factor movements in economic sectors. The movement of labor and capital from agricultural to industrial and services sectors will increase productivity and convergence, but the structural changes produced by new technologies, as it affects richer countries, will produce divergence at least in its first stages. The second approach analyzes the TFT differences and its contribution to economic growth. As convergence literature shows, divergence could appear when the institutional environment is not adequate for the development of free markets and for the investment in physical, human or technological capital. Private and public institutions have developed in recent years some methods to measure the positive or negative institutional contribution to growth, which in the first measurements were just the residual after introducing income, labor and capital data. This institutional framework includes not only internal but external factors, which focuses on the role of international trade and globalization allowing countries to take advantage of international factors (labor, capital, technology) and to increase the competitive environment inside their economies. Finally, we arrive at the concept of competitiveness.

But, what is competitiveness? And how is it related to economic growth? In spite of its wide use, this concept has not been defined rigorously in the early economic literature. Some authors use the term in a similar way as comparative advantage,

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while others view it as an economy-wide characteristic. The concept of competitiveness as applied to one firm is clear: it is the capacity of the company to compete with other firms in the marketplace. Competition could arise by reducing the prices of their final product or by increasing their quality, by reducing the production factor costs or the financing costs, or by introducing technological and management improvements. To sum up, one firm is more competitive if it can improve its behavior in comparison with the rest of the firms in the industry. Achieving greater competitiveness will provide the firm with a larger market share, increasing its benefits and generating added value for the company owners and all of society.

The simple extension of the micro concept of firm competitiveness to the macro level of competitiveness in the economy as a whole poses problems. These problems derive from the inaccuracy of studying one country as a homogeneous entity. Though one country has some common political and legal elements which affect all the agents that develop their economic activity inside its frontiers, every agent has different interests and incentives. Mistaken analyses of countries as a whole are usual in macroeconomics. For example, international trade authors tend to talk about trade between one country and another country, when the tradeoff is made by individual agents (firms or consumers), who are residents of different countries. The balance of payments is just the addition of all the individual tradeoffs made by residents of one country with the rest of the world. The same problem arises with the concepts of national savings or national investment, because one nation does not save or invest, but the individual agents do these economic actions based on individual and national incentives. We must be careful and balance the necessity of simplification of the economic science with the fallacy of composition which erroneously infers that something is true of the whole from the fact that it is true of some part of the whole. Paul Krugman (1994) has applied the last caveat to the concept of competitiveness. To consider a nation as a big corporation competing in the global marketplace is an obvious mistake. Countries, unlike corporations with unsustainable market position, do not go out of business. In fact, this vision of competitiveness is closely related with the protectionist view of international trade as a zero-sum game, where one country benefits at the cost of other nations. Within this vision, competitiveness is a world "win-lose" competition between the economies. Diametrically opposed to this idea, the classical theories consider that international trade benefits both parts (Ricardo, 1817), which not only applies at the micro level in the case of two agents which voluntarily tradeoff, but at the macro level where two whole countries trade and each can obtain cheaper goods and services from abroad, and can also allocate their domestic production factors to sectors where the countries have comparative advantages. The "comparative advantage" concept does not affect competition between countries, but competition between firms within a country to get the best (cheaper) factors for their production. Imports are then an indirect method of production or a kind of technology which allows a more efficient allocation of scarce resources, because it forces the firms to only focus on the use the resources in the sectors where the country has a comparative advantage.

A less radical vision of competitiveness would relate the favorable trade performance of one economy with its general economic growth process. Thus, trade performance could be measured in different ways: export and import volumes in terms of GDP, trade deficits, the level of exchange rate, or the terms of trade. However, the use of these measures presents some problems. The first measure, foreign trade volume is

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related to economic growth when foreign trade volume is a reflection of the openness or protectionism of one country. For example, we will see that the openness of the Spanish economy since 1959 was a key factor in its development and convergence process in the following decades. But when the economy is opened to the international markets, the degree of openness is based on other factors not directly related with economic performance, for example the size of the country and its degree of specialization (as well as that of their neighbors'). We should also take into account that economic borders are not as clearly delineated as political ones, for example, the foreign trade of Belgium is different in theory than the trade between two states in the United States or two regions of China. The second measure, trade deficit or surplus, cannot be a direct reflection of economic achievement. In the first instance, the deficit could be sustaining productive investments with future potential growth. In a second instance, the trade deficit is used to import final goods and services, though is not a productive investment and will increase national debts, meanwhile the population is enjoying higher levels of consumption and income. The last contradictions also affect the third measure, the level of exchange rate. This level reflects the long-run evolution of one country and the purchasing power of their citizens, though sometimes there are some intrinsic measurement problems when the exchange rate is fixed or is controlled by the government. Besides, if one country devaluates its currency to reduce its trade deficit, a positive effect (reducing trade deficit) coincides with a negative one (reducing the citizens' wealth by lowering their purchasing power). Finally, terms of trade can also pose problems if used as a proxy for the relative social welfare of a country, because it doesn't show the volume of the countries' exports, only relative changes between countries are apparent. To summarize, the connections between trade variables and economic performance are very complex, and a complete analysis must be carried out introducing other variables like the volume of trade, changes in productivity and resource allocation, or changes in capital flows.

Michael E. Porter (1990) has developed the study of trade performance through the concept of "competitive advantage", clearly opposed to the traditional "comparative advantage". Porter's study is inductive or empirical, as it detects the most competitive national sectors or firms, meaning those who are able to export, and then analyzes the domestic factors to explain their specific competitive success. These factors could be reduced to four broad attributes that make up the "diamond of national competitive advantage": factors of production, domestic demand, related and supported industries, and firm strategy, structure and rivalry. Porter introduces management analysis in his study, and some authors criticize the fallacy of composition that derives from considering national competitiveness just the simple addition of successful firms and sectors competitiveness. But one of the main contributions of Porter is to put competitiveness in relation to domestic economic attributes. Competitive success is a reflection of the good domestic behavior of one economy: "the only meaningful concept of competitiveness at the national level is national productivity" (Porter, 1990: 6).

This idea has become the guiding principle of many studies on national economic success. See, for example, the next definition made by the World Economic Forum in his last Report on Global Competitiveness: "We define competitiveness as the set of institutions, policies, and factors that determine the level of productivity of a country. The level of productivity, in turn, sets the sustainable level of prosperity that can be

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earned by an economy. In other words, more competitive economies tend to be able to produce higher levels of income for their citizens” (Schwab, 2009: 4). A similar definition is made by the European Competitiveness Report published annually by the European Commission: “Competitiveness refers to the overall economic performance of a nation measured in terms of its ability to provide its citizens with growing living standards on a sustainable basis and broad access to jobs for those willing to work. In short, competitiveness refers to the institutional and policy arrangements that create the conditions under which productivity can grow sustainably (productivity growth is the only source of sustained income growth, in turn the backbone of growing living standards)” (European Commission, 2010: 22). With these definitions we are again at the starting point in the analysis of the wealth of nations: the goal of increasing citizens’ income could be achieved with a combination of different factors, and competitiveness is just the allocation of these factors within a country. One country is more competitive if it has more factors that increase its ability to sustain its level of income and its potential to growth in the future. Which are these factors? Every study emphasizes one or another, though they all cover similar areas already analyzed: factors of production, technology, globalization, and institutional framework.

For example, the competitiveness report previously mentioned considers 12 components or “pillars of competitiveness”, divided in three phases of economic development based on countries’ GDP per capita and the share of exports comprising primary goods. Institutions, infrastructure, macroeconomic stability, and health and primary education, are the fourth first pillars, belonging to the first stage of countries, the “factor-driven” economies based on primarily unskilled labor, low wages and natural resources. Higher education and training, goods market efficiency, labor market efficiency, financial market sophistication, technological readiness, and market size, belong to the second stage of “efficiency-driven” economies, with higher wages, more efficient production processes and increase product quality. Finally, the last two pillars, business sophistication, and innovation, are important for most developed economies in the “innovation-driven” stage, where competition with new and unique products are the only way to sustain higher standard of living (Schwab, 2009: 4-8). One of the problems of all these factors is the different difficulty to measure them. Some variables, like GDP, productivity, or macroeconomic stability, are easier to measure than others. In fact, the advances in economic growth theories and the concept of competitiveness are closely related with the advances in the capacity to measure new growth elements like institutions or entrepreneurship.

Thus, the analysis of the Spanish economic growth and competitiveness will take into account all these elements. Next section will study the Spanish GDP evolution in terms of its convergence and divergence during the last two centuries. Section three will focus on the analysis of total factor productivity (TFP), by analyzing the historical contribution of labor, capital, and TFP in the Spanish development. In last years, private and public institutions have developed some methods to measure the positive or negative institutional contributions to growth, and we will review this approach for the Spanish case in section four. Section five will focus on the evolution of the Spanish regions, clusters and companies competitiveness. We are going to make a historical analysis of the Spanish economic growth and competitiveness because the analysis of competitiveness applied to one country includes its long-run economic

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growth and its potential to maintain this growth in the future, and because growth is an accumulative process where what happened in the past has an influence in what is happening now and what is going to happen in the future. So the article concludes with the main elements of the Spanish economic growth and competitiveness evolution, and their influence in the Spanish potential development.

1. A LONG-RUN ANALYSIS OF COMPETITIVENESS AND CONVERGENCE IN SPAIN

The modernization of the Spanish economy has been produced during the last two centuries, 19th and 20th centuries, and with more intensity during the second half of the 20th century. The study of the elements that reinforced or reduced economic growth during this Contemporary History period can explain the current situation of the Spanish economy with its potentialities and weakness. Although past situations not always can be repeated in the present, the knowledge of the elements that reduced or reinforced Spanish competitiveness in the past can be used to improve the Spanish economy in the future. We have chosen the Contemporary History period because is in this period when the Spanish economy have converged to the richest central Europe, within a process that started with the Industrial Revolution at the end of the 18th century and culminated with the entry of Spain in the European Union at the end of the 20th century.

Angus Maddison' recompilation of national macroeconomic data allows us to have the Spanish per capita Gross Domestic Product series since 1850 (Maddison, 2010). Though there are some individual data in 1820, 1700, 1600 and 1500, their quality is lower than the series starting in 1850. However, some historians, with the construction of new measures of agricultural and aggregate output, have made long-run conjectural and comparative estimates of the Spanish economy' evolution since it was born as a nation in 1492. Economic growth in the 16th century coincided with the imperial expansion period, but the subsequent decadence produced contraction and stagnation in the 17th and 18th centuries. In the long run, output per head did not improve until the second half of the 19th century. At the time of its imperial expansion Spain was a relatively affluent nation and, by 1590, was only behind the Low Countries and Italy in terms of per capita income. Spain's decline has its roots in the 17th century while its backwardness deepened in the first half of the 19th century (Álvarez-Nogal and Prados, 2008).

In the first decades of the 19th century the Spanish income reduced due to some negative experiences: the Napoleonic occupation of Spain and the liberalization war, the loss of the American colonies, the political instability of the Fernando VII kingdom, unable to overcome the political divide or to create stable institutions, and the Carlist Civil Wars which started with the death of Fernando VII in 1833 and his change in the order of dynastic succession. In spite of these negative facts, this period represents the change from the Ancient Regime through a modern economy and society. As a matter of fact, the three Carlist Wars (1833-40, 1847-49, and 1872-76) have been considered a fight between traditionalism, Catholicism, monarchism, and regionalism against liberalism and modernism. Some authors even consider the Spanish Civil War of the 20th century (1936-39) a continuation of the Carlist Wars, only overcame with the democracy at the end of the century. In the first half of the 19th century, overall after 1833, some liberal reforms were made: the ecclesiastical

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confiscations, the abolition of the Mesta (a powerful association of sheep holders born in the medieval era), the end of the guilds, and the elimination of tariffs and local restrictions on domestic trade. These reforms laid a firm political foundation for the economic integration of Spain, the free mobility of labor and capital, and were the base for economic growth in the second half of the century (Tedde de Lorca, 1994). Nevertheless, other authors consider that these institutional changes were not intense enough in some aspects like justice administration, the reform of the state, or the establishment of property rights. This lack of modernization of the institutional framework could explain the Spanish backwardness.

Table 1. Spanish per capita GDP annual growth rates (percentages)

1500-1600	0.26
1600-1700	0.00
1700-1820	0.20
1820-1850	0.23
1850-2007	1.86
1850-1929	1.19
1850-1960	0.96
1929-1939	-3.52
1939-1950	1.22
1951-1960	2.84
1960-2007	4.02
1960-1974	7.22
1975-1986	1.66
1987-1991	4.04
1992-1996	1.46
1997-2007	3.66

Source: Maddison 2010

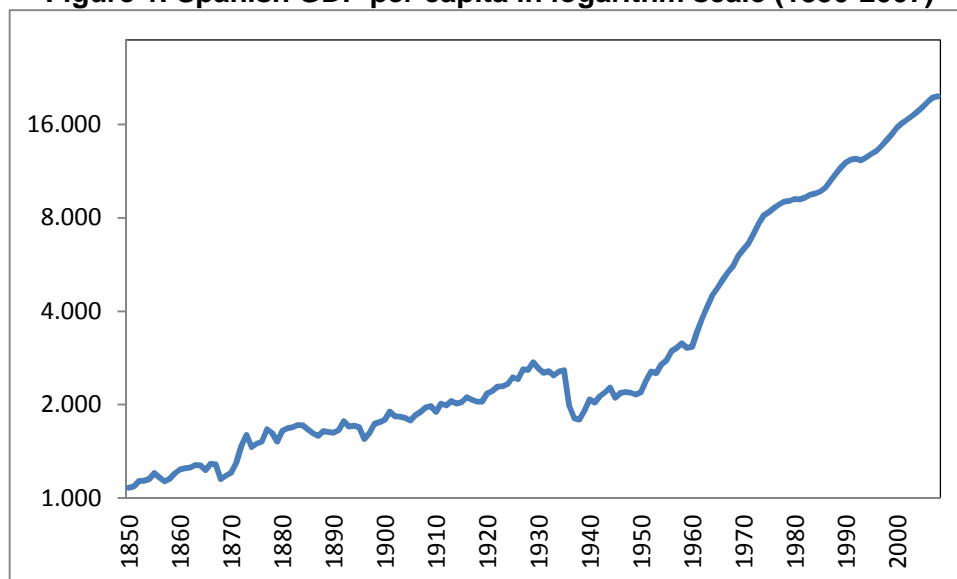
The period that started in 1850 clearly stands out compared to the previous centuries, in which the annual growth rates were around zero (in the 17th century) to 0.3 percent (table 1). Next figure uses the logarithm scale to distinguish growth rates, and shows three periods, 1850-1930, with a growth close to 1 percent, the crisis period of 1930-1960, and 1960 to 2007 with an extraordinary annual growth rate of 4 percent.

The data compiled by Angus Maddison allow us to make a comparative analysis of the Spanish economic growth. The spreading of the Industrial Revolution affected different countries at different moments. It firstly influenced the central European countries (France, Belgium, Switzerland), and later was diffused to other "late comers" like the United States, Germany, Russia, and Japan; but other peripheral countries, like Spain, Portugal, Italy, Ireland, and Greece, could not take full advantage of the First Industrial Revolution and only could converge to rich European countries after the Second Industrial Revolution in the 20th century. The first Spanish historians have compared the Spanish evolution in the 19th century with the United Kingdom, and their main conclusion is that the spreading of the First Industrial Revolution in Spain was a "failure" (Nadal, 1975). But this comparison is not

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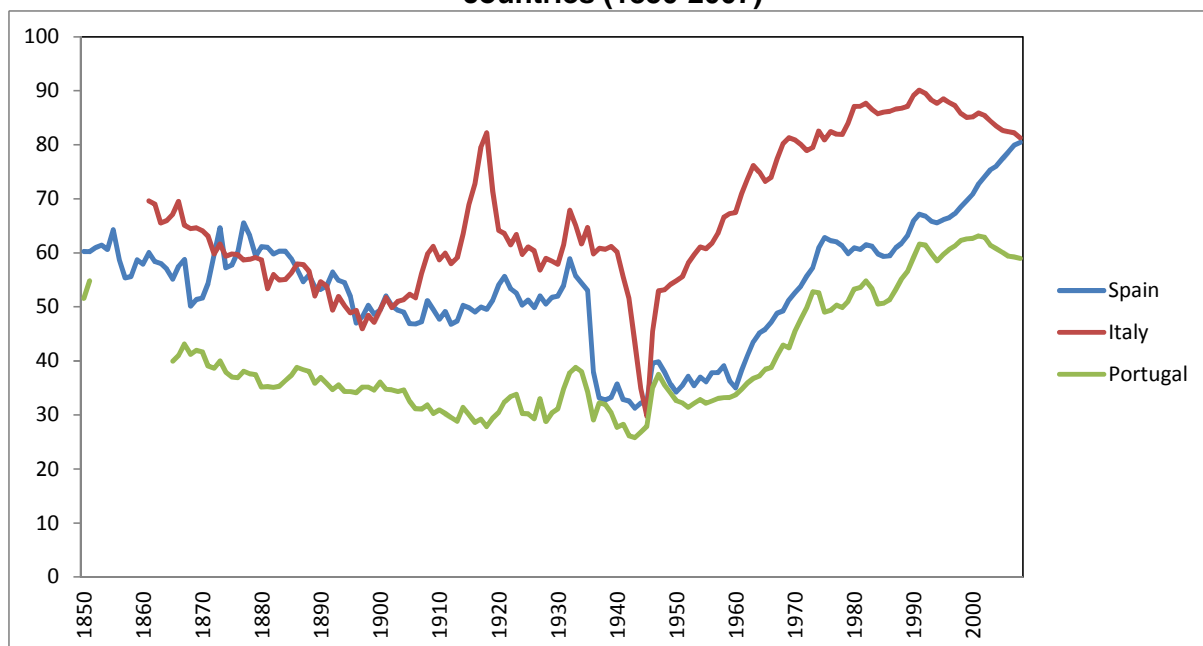
appropriate, being better to compare Spain with other nations with similar institutional characteristics. Figure 2 represents this comparison.

Figure 1. Spanish GDP per capita in logarithm scale (1850-2007)



Source: Maddison 2010

Figure 2. GDP per capita of Spain, Italy and Portugal, compared to the most advanced countries (1850-2007)



Notes: Most advanced countries = France + Germany + United Kingdom + United States = 100

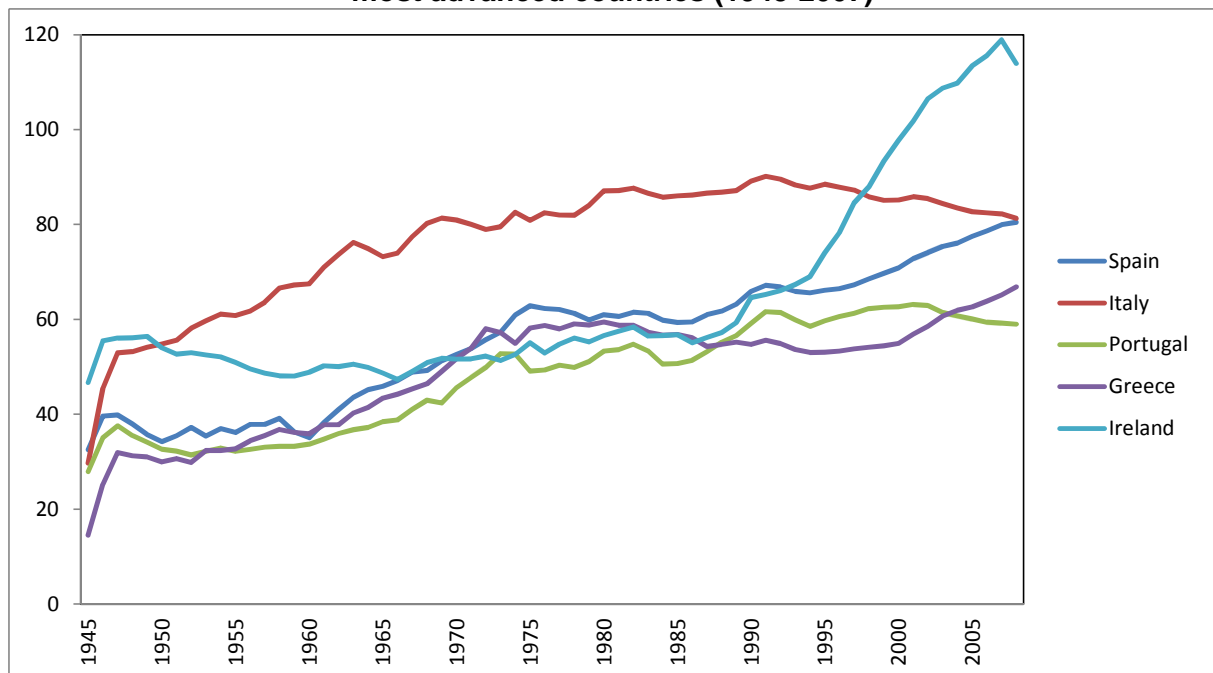
Source: Maddison 2010

The evolution of these peripheral countries (Spain, Italy and Portugal) fits with the three phases of the Spanish economy shown in figure 1. In the first period (19th century and the first third of the 20th century) the moderate economic growth of these countries (1 percent in Spain) allowed them to maintain the distance with the advanced countries or even to slightly diverge with them. In this period, Spanish and

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Italian income was 60 percent of most advanced countries, while Portugal was 40 percent. After the crisis in the 1930's and 1940's decades, these and other peripheral countries experienced an intense economic growth process, which allowed them to converge with the most advanced countries. Spain, which was close to Italy in the 19th century, moved away and increased its relative distance to advanced countries until being close to Portugal in the 1940's. But the subsequent intense convergence allowed Spain to catch-up the Italian level in 2007. Figure 3 shows the convergence process in the second half of the 20th century including another two countries, Greece and Ireland. The common convergence process of these backward European countries shows differences, with the spectacular behavior of Ireland or the relative slowdown of Italy since 1980.

Figure 3. GDP per capita of Spain, Italy, Portugal, Greece and Ireland, compared to the most advanced countries (1945-2007)



Notes: Most advanced countries = France + Germany + United Kingdom + United States = 100
Source: Maddison 2010

In the next paragraphs we will make a more detailed analysis of the short-run periods, to highlight the main economic, social, and political characteristics of the Spanish economic development. The first period is 1850-1891. After the political instability of the first half of the century, this phase was more stable, with only an instable period in 1868-1874 with the revolutionary years and the First Republic. Economic growth was intense in comparison with the previous decades, but similar to the rest of Europe, so there was not convergence either divergence in spite of our backwardness. The growth was more intense since 1880, and the main explanation is the foreign investment. This investment came mainly from French and British capitals, and was used in railway networks and coal mines. The inflow of capital allowed the rate of investment to rise, breaking the link between investment and domestic saving, which contribute to more rapid growth. Furthermore, the investments promoted the introduction of new technologies, both directly incorporated in the capital or indirectly with management improvements. Together with these positive elements derived from foreign investments, other institutional

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changes promoted economic growth in the second half of the 19th century. Thus, the national transportation and communications system strengthened as railway networks were completed and telegraph mileage increased exponentially (Sánchez-Albornoz, 1975; Gómez Mendoza, 1982). The development of Spain's telegraph network, together with some profound changes in the financial system, facilitated the integrating of the national capital market. Among these changes stand out two: a new legal framework allowing the establishment of private banks with the right of issuing banknotes in 1842, and the creation of a Central Bank in 1874, the "Banco de España", which became the sole issuing bank and established the first nationwide branch network allowing movements of capital across towns at constant and cheap rates (Castañeda and Tafunell, 1993). Finally, regional migrations rose appreciably during the second half of the century, mainly from the countryside to the cities, showing a trend similar to that of other countries in Southern Europe (Pérez Moreda, 1987; Silvestre, 2002).

In 1891, a protectionist tariff was introduced in Spain. Though this policy was made within the context of the turn-over of protectionism in which most countries participated since the 1870's and the First World War, in Spain it opened a long period of protectionism and public regulation that only finished at the end of the 20th century. Spanish protection was high in comparative terms, and biased to manufactures, a protectionist model which has influenced negatively the long trend manufacture competitiveness. Although the most common interpretation of the backwardness of the Spanish industrialization is based on the agricultural low productivity and the scarcity of the domestic demand for industrial products (Nadal, 1975), the most significant singularity of the Spanish industrial process was its low capacity to export manufactures to the international market and not the failure of domestic demand (Tena, 2010). Other explanations of the Spanish backwardness and weak industrialization, like differences in geographical, capital and human-capital factor endowment levels of departure (Tortella, 1994) are complement with the relevant changes in the industrial comparative advantage produced by the commercial policy in Spain. The comparison of the Italian and Spanish trade policies confirms that the consequence of protection on competitiveness was negative, more robust and consistent in Spain because it was the economy that experiences a higher manufacture tariff increase during this period. Italian economy grew faster than its Spanish counterpart at the turn of the century Giolittian period of expansion of the international economy, while Spanish economy performed better during the 1920's in a less expansive international context (see figure 2). The existence of significant different protection policies in Spain and Italy explains the different industrial structure and competitiveness performance of both economies (Tena, 2010).

The protection policy change in 1891 can be also analyzed in terms of Balance of Payments and investment. The economic expansion of the previous period (1850-1890) coincided with a significant current account deficit, whereas in 1891-1913, economic growth slowed down at the time of positive current account balances. This inverse correlation between current account surplus and economic growth suggests that the balance of payments reacted to changes in the equilibrium between saving and investment. The current account deficit before 1891 resulted from an inflow of capital that allowed the rate of investment to rise and, in turn, to contribute to more rapid growth. Only when isolation from the international economy increased, since

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1891, investment demand had to rely on domestic saving. In the context of globalization that characterized the classical gold standard era, there was no reason why an open economy should not enjoy sustained access to international capital markets and break the link between investment and domestic saving. At the turn of the century, domestic macroeconomic imperfections strengthened the current account reversals that had been provoked by sudden stops, undermining the confidence of foreign investors in the Spanish economy and helping the flight of foreign capital. Furthermore, the migration push of the 1891 protectionist tariff was largely offset by the microeconomic consequences of the currency crash preventing individuals from migrating for one and a half decades (Prados, 2010).

Last paragraphs emphasize the idea that potential growth of the Spanish economy was missed in the first half of the 20th century. This does not mean that Spain did not grow and converge in this period. The independence of the last Spanish colonies in 1898 (Cuba, Puerto Rico and Philippines) allowed the return of national capital invested in the colonies. The protectionism stimulated some industrial sectors, though at the spent of others, and some firms took advantage of the Second Industrial Revolution and the Spanish neutrality in the First World War to develop some investments, for example with the electrification process in the 1920's (which continued later in the 1950's). But the Spanish economy could have grown more, because it did not take full advantage of its potential. The main causes of this situation were the political policies of protectionism and regulation supporting private interests. In fact, the loss of the last colonies in 1898 had an important influence in this situation because it produced a combination of fiscal disorder and monetary expansion to finance the colonial war. The effect on the Spanish macroeconomic instability, increasing inflation and public deficit, produced an exchange rate instability and isolation from foreign flows inwards in the Spanish economy. The colonial market independence caused adverse effects because of the institutional changes brought about in Spain, mainly by reinforcing the already present nationalist inward looking strategic in manufacture industry (Fraile and Escribano, 1998). The protection policies were more related with the political economy of pressure groups than with the identification of potential export activities by governments, encouraging more rent seeking than a reduction cost process as an easy way to increase profits. Thus, the Spanish industrialization in the most part of the 20th century was based on an economic policy based on protectionism and support of some pressure groups, which reduced the potential growth of the nation (Fraile, 1991).

The Great Depression had a relatively mild impact in the Spanish economy, but the 1930's, with the Second Republic (1931-1936), was a period of political and economic instability. Expectations after the collapse of the monarchy were not fulfilled, as proposals for land reform, industrial relations legislation and welfare improvements were not completed or enforced, leading to social unrest, extremely political violence, and a military coup d'état. The subsequent Civil War (1936-39) could be seen as a distributional conflict resulting from the social and political tensions of the rapid growth period of the 1920's (Prados and Sanz, 1996). The impact of the Civil War affected the physical capital, though it was damaged less than other European countries after the Second World War, and the human capital, more affected due to postwar exile and internal repression. But the main damage was made in institutions. During almost four decades Spain had an authoritarian regime based upon a limited pluralism of political groups around the dictator, General

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Francisco Franco. The economic policies of the Franco regime affected the economic performance of Spain, though these policies evolved during all this period. In the first years, the uncertainty about the viability of the regime led Franco to give priority to immediate political stability over any other competing goal. The ideology of most of the groups supporting the Franco government and its rhetoric was also anti-market and pro-protectionism and state interventionism (Fraile, 1998).

The autarkic model of development introduced by the Franco dictatorship was based in the next elements. Firstly, a protectionism policy which aimed at import substitution, using two basic tools: quantitative restrictions and exchange controls. The second major feature of Spanish autarky was a systematic policy of government intervention and regulation of the economy, where the state controlled every step in economic activity through a licensing system for starting and enlarging industries. The authorities also regulated prices for commodities considered vital for industrialization, and controlled the evolution of nominal wages in the labor market. Another strategic instrument for government intervention was the "Instituto Nacional de Industria", which organized and directed public investment in the first two decades of the dictatorship. Finally, Franco's government maintained a pre-Keynesian fiscal policy of balance budget and the control of public expenditure. This set of policies led to a highly overvalued currency, a current account deficit, low reserves of hard currency, inflation derived from a constant disequilibrium between supply and demand caused by the price regulation, and a small and inefficient industrial sector (Prados and Sanz, 1996). This strong constraint provided, in turn, an especially advantageous position to those already powerful small groups and coalitions which, in exchange for support to the dictatorship, would derive rents from the public sector and even control the state's economic decisions (Fraile, 1999). Though these policies had been present in the Spanish economy since the end of the 19th century, in the autarky period its application was extremely intense and, more important, in the first decades of the century Spain followed the protectionism and interventionism of the rest of countries (with a little more intensity), while in the autarky years Spain deviated from the opening trend of European countries to open and deregulate their economies. Figures 2 and 3 show that while other periphery countries started their convergence after the Second World War, mainly Italy which had the same economic characteristics of Spain, the dictatorships of Spain and Portugal could not take advantage of convergence until 1960.

In the 1950's the Spanish income grew faster together with a significant transformation in productive structure. Some of the more extreme autarky policies were relaxed, but not suppressed, while the regime became more stable and the international isolation began to breakdown due to the Cold War and its progressive integration in the international political framework, like the military agreements with the United States, the agreements with the Vatican, and the entry in the UN (Prados and Sanz, 1996). In the late 1950s, clear signs of economic over-heating manifested in growing inflation and increasing external deficit. Foreign exchange reserves, in particular, were exhausted by mid-1959. In such circumstances, a complete economic policy reorientation represented by the "Stabilization and Liberalization Plan" in 1959 was forced in order to prevent the collapse of the economy. Spain opened up to major international organizations and committed to gradual liberalization. The 1959 Stabilization Plan marked the beginning of a new era in the Spanish economy since the country entered rapidly into a process of economic

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liberalization and international market integration. By implementing the new policy, Franco's regime showed its commitment to orthodox macroeconomic policies and offered a precedent of responsible behavior to domestic and foreign investors (Prados, Roses, and Sanz, 2010).

The oil shocks of 1973 and 1979 coincided with the end of Franco's regime and the transition to democracy. Structural inefficiencies were inherited from the Franco era, and the post-1959 liberalization had been progressively curtailed by the pressure of interest groups, resulting in a mixture of market and interventionism economy, whose negative effects would emerge with the supply shocks of the 1970s with disinvestment, inflation, and job destruction. Only after the establishment of democracy in 1977 adjustment measures were introduced with the "Moncloa Agreements", a set of structural reforms and economic policy measures supported by the consensus of the main political parties. Among its main features are the fiscal reform, in which progressive wealth and income taxes were included, an active monetary policy aimed at reducing inflation expectations followed, a new exchange rate for the peseta in an attempt to improve the external disequilibrium, a trade liberalization, though it was not fully developed until the entry in the European Union in 1986, and finally an income policy attempted to moderate increases in nominal wages. All these measures could control, in the short-run, the macroeconomic imbalances of inflation and external deficit, and opened a long-run period of economic adjustments and reforms to remove the anti-market policies from the Franco era (Prados and Sanz, 1996).

The crisis lasted until 1986, coinciding with the entry in the European Union and with an expansionary phase of the international economy. The socialist governments (1981-1996) emphasized the control of inflation with high interest rates, increase of government debt, currency devaluation, and wage restraint. The intense economic growth of 4 percent hid other macroeconomic problems, mainly the difficulty to create new jobs. The labor market legislation was a legacy of the dictatorship, and the democratic governments, up to now, have not been able to derogate this rigid system. They only have introduced flexible contracts for new workers, which produced a duality in the Spanish labor markets, with privileged workers with stable contracts coexisting with precarious workers (mainly young people, women and immigrants) with flexible contracts. On the other hand, high real interest rates discouraged entrepreneurs' investment. The entry in the EU increased foreign investment and modernization of the Spanish firms with the foreign competition. From 1987 to 1991 the government also gave a boost to public investment in infrastructures.

A new crisis affected Spain in 1992. The political policies of the 1980's appreciated the peseta (around 15 percent) and produced a trade deficit. The international markets were afraid that Spain could not maintain the exchange of the peseta fixed in the European Monetary System signed in the Maastricht Treaty, and speculated against this and other European currencies (United Kingdom, Italy). Spain devaluated the peseta 40 percent. The economic crisis increased unemployment rate up to 20 percent and showed the collapse of the economic policies of the 1980's. A new government in 1996 changed the economic policy and introduced orthodox fiscal policies (public deficit and public debt controls), low interest rates, control of inflation by means of structural reforms in production and factor markets, and the introduction

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of higher competition. Spain could get into the Euro in 1999 achieving all the criteria of the “Stability and Growth Pact”, and opened a new expansion period of ten years (1997-2007). The Spanish economy could avoid the crisis of 2001 and had very high growth rates in this period (with an average of 3.7 percent). The unemployment rate was reduced to 7.8 percent in 2007 together with the entry of 5 million immigrants, which stimulated the Spanish economy, while the Spanish firms started to invest in foreign markets. Shortcomings of this period are the inflation difference with the EU (close to 15 percent accumulated since the last devaluation of the peseta in 1995), which has increased the trade deficit, and the unbalanced development of the construction and banking sectors, stimulated by lower interest rates and a real estate price bubble that abruptly ended the expansion period with the world financial crisis of 2007. This crisis has emerged some Spanish economic problems that apparently were resolved, like the unemployment (again in rate levels greater than 20 percent nowadays), the public deficit and debt (produced by the lack of controls in the expenditure of central and regional governments), and the critical situation of the Spanish banks.

Once we have studied the periods of the Spanish economic evolution, in the rest of the article we will focus on specific analysis of Spanish competitiveness, starting with the contribution of labor, capital, and total factor productivity, then focusing on the Spanish institutional framework, and finally studying the evolution of Spanish competitiveness in its regions, clusters and companies.

2. THE EVOLUTION OF FACTORS OF PRODUCTION AND PRODUCTIVITY IN SPAIN

The first approach to the evolution of Spanish competitiveness is the analysis of the factors of production and its contribution to income growth. The per capita Gross Domestic Product since 1850 has been completed with the measurement of physical and human capital for the period 1850-2000 by two economic historians, Leandro Prados de la Escosura and Joan Rosés (2009, 2010a, and 2010b).

Starting with physical capital, its stock grew, on average, 3.5 percent per year, while per capita GDP only grew 1.8 percent. Different phases can be distinguished in the evolution of the capital growth. A first intense expansion between 1850's and 1880's was based on institutional reforms, the opening up to foreign capital and the international trade. As explained before, inflows of foreign capital made it possible to break the close connection between investment and savings and contributed to economic growth. The foreign investment was concentrated in railroads and mines, increasing the capital stock. The institutional stability of the period also contributed to the favorable environment for investment and growth. This first period of expansion was followed by a slowdown until World War I, when macroeconomic instability and protectionism policies led to a reduction of foreign investment. Physical capital grew briskly during the 1920's, based mainly in electrification. Some historians have assumed that state intervention through external protection and regulation, together with investments in public infrastructure made a decisive contribution to capital accumulation and to growth (Velarde, 1968). But other authors assume that government intervention led to resource misallocation because it did not take into account its opportunity cost (Comín, 1987), the increasing power of oligopolies reduced incentives for technological change (Fraile, 1991), and the expansion of

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public spending (through the increase in money supply and government debt) fuelled inflation and increased currency volatility (Comín and Martín, 1984, Palafox, 1991). The capital expansion was cut short in the early 1930's, representing a fracture in the intense capital stock expansion of the previous decade. This slowdown remained sluggish until 1950, due to capital destruction in the Spanish Civil War and the slow recovery in Spain compared with other western European economies affected by the Second World War.

The most intense expansion of capital happened during the Golden Age, 1959-1974. In the 1950's, the volatility of import capacity rendered investment risky and tended to penalize capital accumulation, while inflows of foreign capital and new technology were restricted. The change introduced by the Stabilization Plan in 1959 removed the obstacles to increase the stock of capital. The adoption of mass production techniques from abroad and the diffusion of road transport appear crucial for this accelerated capital accumulation. In the last quarter of the 20th century, the capital growth rate reduced but was higher than in the pre-1950 period. The first years (1975-1986) were marked by the transition to democracy and the reorganization of Spanish economy as capital equipment, largely obsolete and energy-intensive, needed to be replaced. Since 1986 European funds largely contributed to the construction of new infrastructures and the renewal of public transport equipment.

The long-run contribution of physical capital to Spanish economic growth has been based in two factors. The first one is the deep change in the composition of capital stock produced during all this period. The change consisted on the steady decline in the weight of residential capital and the increasing contribution of infrastructure and equipment, which increased the service provided by capital stock to production and its quality. The second factor is the capital intensity, which relates the amount of capital to other factors of production, especially labor. The use of capital makes labor more effective, pushing up its productivity. The process of capital deepening took place over the last two centuries, with more intensity during the second half of the 20th century. But the capital-output ratio has decreased during the periods where growth of GDP was fastest (1920's and overall 1950-1974), showing a significant contribution of total factor productivity to Spanish economic growth over these years. The comparison with other developed countries shows that capital deepening did not increase particularly fast in Spain, especially in the 1950's in spite of starting from a lower level of capital, due to problems related with low human capital endowment and resource misallocation in an over-regulated autarchy economy. Inversely, after the liberalization of 1959, capital productivity grew in Spain while declined in Western Europe and Japan. Once the Golden Age was over, accelerated capital deepening was met again by declining capital efficiency in Spain (Prados and Rosés, 2010a).

Human capital accumulation can also contribute to economic growth, though its measure is more complicated than physical capital. The traditional measure includes education, where Spain has had backwardness and lower growth rates since 1950. Human capital accumulation rates even decreased from 1921 to 1952, with very low rates in high-school education. Since the 1960s, however, education accelerated significantly (Núñez, 1992). But education is not the only way to measure human capital contribution to economic growth, as it does not consider the different ways in which people enhance their capabilities. The level of education is now very high in Spain, and the level of university education is even one of the highest in the world,

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but most of the studies agreed that the quality of education in Spain is very low and represents an obstacle in the modernization of the Spanish economy (for example the PISA reports). In fact, with per capita income growth, population invests more on education, but not all education is employed in the production-side of the economy, because part of it becomes a consumption service. The analysis of a broad human capital including its quantity and its quality, and the comparison of its contribution to economic growth with physical capital and total factor productivity, reflects that human capital contributed less than these other factors. But, although human capital contributed little to the increase in labor productivity growth, its accumulation had facilitated technological innovation. In particular, the increase in human capital during the Golden Age correlates well with the spectacular rise in TFP growth rates, which was facilitated by the massive adoption of foreign technologies (Prados and Rosés, 2010b).

Once we have studied the individual contribution of both factors of production, capital and labor, to the Spanish long-run economic growth, the next step is to do a joint analysis of all the elements: capital and labor accumulation, and efficiency gains or total factor productivity (TFP). In the last two centuries, TFP was equally responsible for GDP growth than broad physical capital and, to less extent, human capital. While in the period 1850-1950 the moderate growth was dominated by factor accumulation, the fast growth in the second half of the 20th century was led by total factor productivity. However, TFP played an important role in phases of faster GDP growth prior to 1950, mainly in 1850-1883 and the 1920's. Furthermore, the importance of TFP as a source of growth tends to be underestimated as it does not include the additional capital accumulation that results from a productivity increase. The introduction of the railroads and the modern exploitation of Spanish mining ore deposits during the second half of the 19th century, and the electrification in the 1920's, have produced efficiency gains and higher capital intensity resulting from the new capital goods. Total factor productivity led GDP growth during the Golden Age, but also did it during the crisis period of 1974-1986, when efficiency gains prevented a GDP contraction, as the increase in broad capital fell short to compensate the dramatic decline in employment. This productivity increase was associated to industrial re-structuring and shifts of resources away from agriculture and traditional industrial sectors. Since Spain's entry into the European Union (1986) employment creation and the recovery of physical capital accumulation offset the slowdown in total factor productivity, following the same evolution than the rest of Europe. This productivity slowdown has been compensated by a strong increase in hours worked.

Since the mid-1970s, Spain (and Europe) seems to have been unable to combine employment and productivity growth. In the long-run, factor accumulation, especially capital, and TFP growth seem to have been complementary for GDP and labor productivity growth. Spanish experience suggests a two-stage process in which improving efficiency appears as a complex learning process that takes place once growth has been initiated on the basis of allocating additional capital and labor to production. Factor accumulation prevailed over efficiency gains in the early stages of Spanish development, but it played a role during the transitional phase to long-run growth, and once economic growth is under way, TFP tends to perform a more significant part, showing that the ability to absorb and to adapt productively foreign ideas and technology depend on a country's development level (Prados and Rosés, 2009).

To sum up, the convergence of the Spanish economy in the second half of the 20th century was based on institutional and political changes that can be reflected in four dates: 1959 with the “Stabilization Plan” and its change in the protectionist and interventionist policies applied since the beginning of the century, 1977 with the political transition and “Moncloa Agreements” which continued the reforms of the “Stabilization Plan”, 1986 with the entry in the European Union, and 1999 with the entry in the Monetary Union and the Euro, both last dates representing our definitive integration in the global markets. Economic crisis have also a role in this evolution. The Spanish institutional shortcomings are one of the main causes that explains that economic crisis tend to be more intense in Spain. For example, the 1970’s crisis reflected the structural inefficiencies inherited from the Franco era with a mixture of market and interventionism economy, while the 1992 crisis reflected the macroeconomic problems and the wrong economic policies of the 1980’s. But the economic crises have been also a challenge to correct and reform the Spanish institutional problems. Thus, the Stabilization Plan in 1959 was implemented after an intense crisis, Spain adopted the Moncloa Agreements and entry in the European Union after the 1970’s crisis, while the 1992 crisis preceded the entry in the Monetary Union after achieving the macroeconomic Maastricht criteria. The current economic crisis is showing some Spanish institutional shortcomings that must be reformed. This is the goal of the next section

3. THE INSTITUTIONAL EVOLUTION OF THE SPANISH ECONOMY

The analysis of traditional growth factors (labor, capital, and technology) needs to be completed with the study of the institutional framework where these factors interact. As it was explained in the last two sections, the introduction of market institutions and political stability in the 19th century promoted economic growth in the second half of the century, though with a relative backwardness. The protectionism and intense public regulations implemented at the end of the 19th century and extremely intensified in the two first decades of the Franco dictatorship, reduced the Spanish growth. Since 1959, the progressive reduction of those bad policies, the introduction of a stable democracy, and the integration in the European Union and in the global markets, have allowed an intense economic growth and convergence process.

Structural changes that the Spanish economy has had during its growth process are also related with the institutional framework. Thus, there have been four main structural changes: openness, change in productive structure, increase of public sector, and equality of income distribution. We have analyzed deeply the openness of the Spanish economy as one key factor that allowed the introduction of more competition in the domestic markets, the assimilation of new technology, and the increase of Spanish competitiveness. The second structural change includes the industrialization process in the 1950’s and 1960’s, which lowered the weight of the agricultural sector in terms of employment and product. This evolution increased productivity due to the capitalization of production. Since the crisis of the 1970’s, the industrial sector has lost importance in favor of the service sector, which has developed tourist and construction sectors since the 1960’s, and recently other high technological sectors like telecommunications or financial services. The arrival of immigrants in the 1990’s has developed other sectors like construction or modern agricultural production. The third structural change is the role of public sector. Franco

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regime promoted a high intense regulation and intervention of public sector but, at the same time, government budget was very low compared to other developed countries. The tax level was very low and the public expenditures were also lower. With the arrival of democracy, Spanish citizens could demand higher public goods related to their income level. Some of these expenditures have stimulated private sector productivity, increasing capital accumulation, economic infrastructures (transports, communications, energy, research and development) and social infrastructures (education and health). But the public action has also affected the fourth structural change, income distribution, mainly through pensions and unemployment benefits. These last government policies, though they have partially reduced economic growth, are part of the citizens' public consumption demand.

In the rest of the section we will focus on the current situation of the Spanish economy and its institutional framework. As a mature economy, Spain has lower economic growth rates and this growth depends more on technological progress (or TFP), due to diminishing returns on capital accumulation. Technological progress has also reduced its growth rates, because it is getting more and more difficult to generate new ideas. But in Spain this evolution is worst than in the rest of the advanced countries: in the period 1990-2004, labor productivity growth 0.6% per year in Spain while in the European Union (UE15) was 1.4%, and TFP during the same period did not growth in Spain while in UE15 was 0.8% per year (Inklaar and Timmer, 2008). Explanations of Spanish productivity divergence are often given in terms of Spain's delay in adopting new information and communication technologies. But new techniques availability has been similar for all western European countries and the question is why they are adopted in Spain in a lesser extent than in the rest of Europe. Though differences in human capital are relevant, the presence of different set of incentives could be a major cause, incentives that could be affecting human capital formation as well. Bad institutions are a fundamental cause for poor economic performance in developing countries, but institutional quality may also be quite relevant for productivity, and productivity convergence, in developed economies through the type of incentives institutions promote (Sebastián and Serrano, 2009).

In last years, some international institutes have developed different methods to measure countries' institutional quality. We can highlight three of them which produce annual institutional index: the World Economic Forum, the World Bank, and the Heritage Foundation. We have already discussed in the first section the "Global Competitiveness Report" of the World Economic Forum, which combines economic data with institutional measurement, including the Executive Opinion Survey, which measures several aspects of the institutional framework as perceived by companies' executives (Schwab, 2009). The World Bank has developed two measures. The first is the "Worldwide Governance Indicators", which includes six dimension on governance based on the views of enterprise, citizen and expert survey respondents: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption (Kaufmann, Kraay, and Mastruzzi, 2007). The second is the yearly publication "Doing Business" which provides a combination of objective data and experts' opinions for ten different aspects constraining business activity: starting a business, dealing with construction permits, employing and hiring workers, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts, and closing a business (World Bank, 2011). The third institute is the Heritage Foundation with the

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Wall Street Journal and their “Index of Economic Freedom”, measuring ten institutional components: business freedom, trade freedom, fiscal freedom, government spending, monetary freedom, investment freedom, financial freedom, property rights, freedom from corruption, and labor freedom (Miller and Holmes, 2011).

All these studies use an index method, ranking each country in different sets of institutional indicators. These rankings can be used to compare Spain with the rest of the world, especially with developed countries. Sebastián, Serrano, Roca, and Osés (2008) have made this exercise, including another sources like the OECD indicators for regulation inhibiting competition (Nicoletti and Scarpetta, 2003 and 2005), a curious study on diplomatic parking tickets in New York City, whose results may be viewed as a proxy of the state of norms of behavior in a broad set of countries (Fisman and Miguel, 2006), the World Values Survey⁵, the European Values Study⁶, and a survey made by these authors to Spanish entrepreneurs about their perceptions and valuations of the Spanish institutions⁷. Their general conclusion is that Spain is ranked in a low position and quite far from the most advanced countries.

A detailed analysis of these studies provides the strength and weakness of the Spanish institutional framework. Thus, “Doing Business” index shows a worst situation of Spain, compared to OECD countries, in five categories. The first one is starting a business, which is very costly and it needs longer periods. The second one, employing and hiring workers, is related with the bad function of the Spanish labor market, reflected in our higher unemployment rate compared to the average Europe⁸; the specific causes are rigidity in employing and hiring workers, and higher costs. The next category is getting credit, with a bad situation in credit rights and information, use of public register offices, their low cover, and poor legislation in data protection. The fourth is the protection of investors, where the low level of firm transparency stands out. The last category is closing a business, with very high costs. But Spain is well situated in other categories, like registering property or enforcing contracts, while in the rest (dealing with construction permits, paying taxes, and trading across borders) the Spanish situation is in the average. The general perceptions of Spanish businessmen in the “Doing Business” survey confirms that lack of transparency in government, poor judicial system working, labor market’s regulations, and shortcomings in education and science, are important barriers for business and entrepreneurs.

The Executive Opinion Survey made by the World Economic Forum has the same results, or even worse, about the comparison of Spanish institutional situation with the rest of developed countries. The Global Competitiveness Report shows that the current economic crisis has worsened Spanish competitiveness: in 2010 Spain lost nine positions in the world competitive ranking (from 33 to 42), and its situation is worse than Malaysia (26), Estonia (33), Oman (34), Poland (39), Cyprus (40) and Puerto Rico (41), and only is a little better than other peripheral European countries

⁵ <http://www.worldvaluessurvey.org/>

⁶ <http://www.europeanvaluesstudy.eu/>

⁷ <http://www.calidadinstitucional.org/>

⁸ The Spanish unemployment rate has been double of Europe since 1975: around 10-12 percent in growing periods (while in Europe was 5-6 percent), and around 20 percent in crisis periods like nowadays (while in Europe is 10 percent).

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like Slovenia (45), Portugal (46), Lithuania (47), Italy (48), Malta (50), and far from Greece (83). The causes of this bad position are the financial problems and, over all, the rigidity of the Spanish labor market (position 115 in a total of 139 countries). This rigidity produces an extreme high unemployment level and prevents to take advantages of the potential good positions in technology adaptation (30), infrastructures (14) and education level (31).

A particular survey made to entrepreneurs of three Spanish regions (Madrid, Cataluña, and Andalucía) confirms the last results (Sebastián, Serrano, Roca, and Osés, 2008). These authors also find a relationship between institutional shortcomings and the size of the informal economy, as the difficulties in starting a business, getting permits, having a rigid labor market, or enforcing contracts, will promote the increase in the informal economy. The fact that some countries, including Spain, had an informal economy higher than their correspondent level of taxes, would indicate the existence of institutional problems, together with a lower level of legal certainty.

The connection between the institutional framework and the entrepreneurs results can be completed with a specific study about entrepreneurship in the world, the Global Entrepreneurship Monitor (GEM), a research program that assess since 1999 the national level of entrepreneurial activity (Kelley, Bosma, and Amorós, 2011). The annual surveys show the level of entrepreneurships and the perception of entrepreneurial activity in each country. This level is not directly related with income level, because in poor countries, with less public employments and big firms, entrepreneurial opportunities are higher and more used than in richer countries. The economic crisis and the higher level of unemployment can also increase the opportunities to create an enterprise. But, in spite of these facts, the Spanish situation in the GEM studies reflects a worst entrepreneurial situation than the average of the innovation-driven economies (GEM uses the three countries division of the Global Competitiveness Report). The perceived entrepreneurial opportunities are lower than the average, in spite of the higher unemployment rate, though its level is similar to southern countries: Nordic countries (Sweden, Finland, Iceland and Denmark) have the highest opportunity perception, while economies in Southern Europe (Greece, Spain, Portugal and Italy) tend toward the low end. But the reverse is generally true for perceived entrepreneur capabilities, the Nordic countries, with the exception of Iceland, have below average belief about their own capabilities, while the Southern European countries, with the exception of Italy, are above average on this attitude measure. The third variable measured is the fear of failure or the perceived risks of starting a business. The Spanish data reflects a strong aversion to risk, which could be possible to reduce with policy changes, like removing the large firm employment advantage with respect to health care and pension benefits, improving the skills of creditors and investors in assessing higher risk ventures, or reducing negative consequences associated with employment protection or bankruptcy laws. The relatively high employment protection rate in Spain (in terms of procedures and costs required by law to hire or dismiss workers) is the main factor behind the fear of failure. The fourth variable is the perception about entrepreneurship, in terms of being a good career choice, the amount of status society confers on entrepreneurs, or the media attention. Except for the first one (being an entrepreneur is not a bad choice), the perception of the entrepreneurs by the society is not very positive. The Spanish entrepreneurs associations has pointed

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out the bad image that media and general public have about entrepreneurs, especially when they go bankrupt. To sum up, backwardness in the entrepreneurial attitude in Spain is based, not in a genetic or cultural risk aversion, but in problems produced by institutional environment against entrepreneurial development. The most positive institutional frameworks in Spain, according to GEM surveys, are commercial infrastructure, dynamism of the internal market, and physical infrastructure, while the most negative conditions are finance, regulations in the national policy, and primary and secondary education. These results are similar to other international studies already analyzed. The final part of the GEM analysis measures the effective entrepreneur activities started in the economy. Bad conditions produce bad results, and the new entrepreneur projects in Spain are very low in comparative terms. There has been an increase due to economic crisis and high unemployment rate, but in 2010 most of the increase was in new companies with no employees, meaning that these new firms have been created as a temporal and self-employment solution for unemployment.

Since the return to democracy in 1977, Spain has had a process of political decentralization, in which central government has transferred to regional governments most public expenditures (including education and health), some public revenues, and a lot of public regulations. Is in these regulations where the regional institutions can introduce favorable or harmful institutions. The decentralization process could be positive or negative. Its positive effects are related with the regional governments' closeness to their citizens, which allows the introduction of regulations well adapted to their situation, and, more important, the institutional competition between regions. This competition allows consumers and firms to look for the best institutional alternatives, and produce incentives to the regional governments to copy the most successful regulations to attract consumers, firms and entrepreneurs by supplying the best institutional alternatives. But there are also negative consequences of the decentralization process, mainly the break of the Spanish market unity. This is an opposite process of the Spanish integration in the European Union and its common market with its free movement of goods, services and factors of production. The existence of different regional regulations increases the firms' transaction costs (the cost of information and of law performance), introduce barriers to entry which reduces competition, reduces the economies of scale (for example with the regulations of labeling and product specifications), and makes more difficult the free movement of labor (like the regulations of professional services) and capital (because of desegregate and unclear regulations). Cabrillo (2009 and 2011) has studied the institutional framework of the Spanish regions, using the same methodology as the Index of Economic Freedom. The institutional comparison between the Spanish regions finds a correlation between economic freedom and economic growth: richer regions like Madrid, Baleares, Valencia, Navarra, or País Vasco, have higher freedom that poorer regions like Extremadura, Andalucía, or Galicia. But the direction of the causality is not clear, and some rich regions like Cataluña have a low economic freedom level, which can affect its potential growth.

4. THE EVOLUTION OF COMPETITIVENESS IN THE SPANISH REGIONS, CLUSTERS, AND COMPANIES

As pointed out in the first section, the application of the concept of competitiveness is more appropriate for regions, districts or companies than for the whole economy.

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Besides, growth theory assumes that one national integrated market, with perfect mobility of factors of production and a common institutional framework, will produce a double process, firstly, a convergence in per capita income between regions or provinces, and secondly, a divergence in production with the concentration of the production process in some regions and clusters (Barro and Sala-i-Martin, 1992; Krugman, 1991). In this last section we will study these two elements, firstly the performance and convergence of the Spanish regions, and secondly the existence of clusters and companies with higher potential to compete abroad.

In the 18th century, due to high transportation and transaction costs, there was little interregional trade and regional specialization was scarce. In the course of the 19th century, Spanish regions went from a set of relatively independent regional economies to a more integrated national economy. This evolution, explained in section 2, changed the concentration of the Spanish manufacturing during the 19th century. In its first half, transportation and transaction costs decreased, trade among regions increased, and regional goods markets became steadily more integrated. At this point, manufacturing location varied. These changes in the location of manufacturing production arose both from comparative advantage and from additional external economies. Increasing returns were highly relevant in the new modern manufacturing industries, which produced heterogeneous goods, but negligible in traditional industries. Some regions with a large comparative advantage in manufacturing because they were well endowed in artisans and capital, such as Cataluña, also benefited from gains from external economies. Other northern regions, like Asturias and País Vasco, took advantage of the coal, iron and steel production. The production structures of agrarian (poor) regions, mainly Andalucía, Extremadura and Castilla, did not converge with those of industrialized regions for two reasons. First, increasing-returns industries did not move into poor regions. Second, agrarian labor did not migrate massively to the new rich regions up to the first third of the 20th century (Roses, 2003).

In the 20th century, the process of market integration continued but not with the same intensity. The main element in this integration process was the migration exodus from the countryside. But concentration of industries and income divergence between regions continued during the first half of the century. The interpretation of this fact is that, in the long-run, the integration of one national market will produce convergence between its regions, but in the short-run divergence could increase in the first steps of development with an inverse U-shape evolution similar to that of personal income distribution. One of the factors that retarded convergence of Spanish regions was protectionism since the end of the 19th century to the last decades of the 20th century. As discussed above, protection policies are more related with the political economy of pressure groups than with the identification of potential export activities by governments. This implies the renounce of competitiveness and, as a consequence, reduces the possibilities of developing an export sector on the lines of comparative advantage. Besides, theoretical and empirical literature show that in the initial stages of development, and so much in economies with a small size of their domestic market like Spain, protection determines direction in which resources are allocated, especially in manufactures. After the delimitation of industrial concentration in the 19th century, the protectionism in most of the 20th century maintained this concentration and stopped the convergence of income between regions and citizens. Thus, the industrial sector in Northern Spain (Asturias, Cantabria, País Vasco), the

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industrial and textile sector in Cataluña and part of the Mediterranean area, and the cereal sector in Castilla, maintained their status through protectionism. Only the economic changes in the second half of the century modified this situation.

The main change was the economic openness that started in 1959. This openness was a global process that included not only the reduction of protectionism but also the introduction of foreign investment and domestic competition. Other structural and political changes were the development of the tourist sector, the liberation and free movement of domestic capital, after the strong regulation in the first years of the Franco regime, and of labor, as the countryside-to-city migration took up again in the 1950's after the process stop in the 1930's and 1940's. As a consequence, a process of regional convergence in productivity and productive structure started and continues up to now. The available data, since 1955 to nowadays, shows a long-run general tendency for regional per capita income and productivity differentials to decrease over time. But the total income did not converge, showing that convergence was mainly based in the population migration from poor regions to rich ones. Aggregate convergence was also based on the gradual homogenization of regional productive structures. Regional converge has been fastest in periods of economic growth and lower in crisis, and 1955-1979 was the period of higher convergence, while there has been a slowdown since 1979. The explanation of this evolution is the reduction of large migratory flows which contributed substantially to regional convergence of the 1960's and early 1970's. Since 1980, however, the contribution of employment to income convergence becomes negative, with poor regions displaying below average performance in both participation and employment rates. The role of the public sector in this process of convergence in factor intensities has been increasingly important. The gradual equalization of schooling level across regions has contributed positively to convergence, as well as the infrastructure investment effort. But the main policy since the Spanish accession to the EU in 1986 has been the regional policy with different funds to help poor regions in employment and infrastructures. In the last two decades, most of the Spanish regions have converged to the EU-27 average per capita income, and only three Southern regions are below the 80 percent of the average Spanish per capita income: Andalucía, Extremadura, and Castilla-La Mancha. The entry of 5 million immigrants in the period 1995-2007 has reinforced the Spanish economic growth and the regional convergence process (Cuadrado-Roura, García, and Raymond, 1999; Fuente, 2002; Alcaide, 2003).

Together with this regional convergence, the Spanish economic development has produced the emergence of clusters and companies with different success in competitiveness. The concept of industrial district was firstly introduced by Alfred Marshall (1919 and 1920), as a geographic concentration of interconnected businesses, suppliers, and associated institutions in a particular field. The concept was revitalized in the 1960's by the Italian economist Giacomo Becattini, who developed a theory of local development where the economic advantage of industrial districts analyzed by Marshall (externalities of specialized labor markets, subsidiaries industries, and technological spillovers) is combined with the sociological characteristics of the local community. Becattini applied this theory to the practical case of industrial concentration of small and medium companies in Northern Italy (Becattini, Bellandi, Ottati and Sforzi, 2003). Later, in the 1990's the theory of industrial clusters was generalized, assuming clusters with different characteristics, not only with small and medium firms, but with leader big firms or with different

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complementary sectors (Porter, 1990 and 1998; Krugman, 1991; Becattini, 2003). The optimal conditions of one cluster could stimulate competitiveness in that sector. Thus, the analysis of the Spanish clusters and its historical evolution could be a good measure of Spanish competitiveness (Catalán, Miranda, and Ramón-Muñoz, 2011). This book presents several comparative analyses of Spanish clusters whose conclusions are very relevant to reinforce the interpretation of the evolution of Spanish economic growth and competitiveness made in this article.

There is a first group of clusters that developed their activity in the 19th century and the first decades of the 20th century, taking advantages of the First Industrial Revolution. Most of the clusters come from Cataluña, one of the economic and industrial leader region of Spain in that period: the production of cigarette paper compares two clusters from Cataluña and Valencia; the exportation of olive oil in Catalan provinces; competition between Catalan and Madrilenian publishing sectors; the Cava (sparkling wine) sector in Cataluña; and the cork industry established in Portugal after competing against a Catalan sector⁹. This sample of clusters shows the importance of the foreign sector to develop local leading activities: the Latin American market was the key export area in the cigarette paper, olive oil, and publishing sector, while the Cava cluster is an example of a successful international competition during all the 20th century against the French Champaign and the Italian Spumante. The openness of the Spanish economy in the second half of the 19th century influenced the internationalization of some Spanish firms and sectors. Even the protectionism established at the end of the century could promote some local industries by protecting them from the abroad competition, as the “infant industry” argument support, and that was what happened with the Cava sector. However, the general negative influence of protectionism in the Spanish economic growth, explained before, overcomes the possible benefits in the development of some specific sectors. In addition, the intensification of protectionism during the first autarkic years of the Franco regime reduced the international competition of some clusters. That was the case of the cork industry in Cataluña, which reduced its international presence because provisions, inputs, qualities and resource allocations became impoverished with the autarky policies, and the Portuguese cork cluster in Feira took advantage of this situation. The role of the political policies in the cluster development became more important during the 20th century. Thus, in the last example, the Salazar regime in Portugal promoted the cork industry with its regulation of industrial investment and the reduction of salaries in the area of Feira. Competition between Barcelona and Madrid clusters in the publishing sector was also affected by some government regulations, like the free-postage privilege introduced in 1922, and some public institution to help the sector in their export markets.

The second group of clusters were developed in the second part of the Franco regime, in a period of intense economic growth after de Stabilization Plan of 1959 that liberalized the protectionist and intense regulation policies of the previous decades. These clusters developed the technological advantages of the Second Industrial Revolution, and include political investments in the chemical sector in Puertollano and the car sector in two companies, Fasa-Renault in Valladolid and

⁹ Of course, this sample of clusters is not completely representative because the weight of Catalan companies is too high (two of the three editors of the book are Catalans), though Cataluña was the most important industrial and economic Spanish region in that period.

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Seat in Barcelona, the development of two powerful sectors in Valencia, ceramics and shoe industry, the shoe industry in Islas Baleares, and the cross-stich industry in Cataluña. The influence of the government policies in the origin and evolution of all these clusters shows the important role of the state in the economy in these years. Thus, the comparison between two Franco government investment commitments, chemical sector in Puertollano and car sector in Valladolid, give opposite conclusions about the role of the government in promoting investments. On the one hand, the public company developed in Puertollano, Encaso, was one of the worst failures of Franco's policies, a company that wasted a lot of resources without obtaining any competitive advantage. On the other hand, Fasa-Renault was a big success that continues nowadays as a strategic cluster in Valladolid and as one of the factories with higher productive in the Renault group. Some policies benefited this cluster like the restriction to car imports with only two groups exempted, Renault and Seat-Fiat, and the compulsory use of national components, which benefited the formation of the cluster and the increase of subsidiaries industries around Fasa-Renault in Valladolid area. The same happened with Seat, a Spanish company which monopolized the car industry until the opening of Fasa-Renault in 1965. At the end of the Franco regime, the industrial crisis in the 1970's and the opening and deregulation of the economy affected these car industries. The highest threat came from the opening of a General Motors factory in Zaragoza with one model, the "Ford Fiesta", which competed against the most popular Seat's small car of the 1970's, the "Seat 127". But Seat reacted and created in the 1980's the most popular, sold and profitable car of this company ever, the "Seat Ibiza". In 1986 the company was bought by Volkswagen, which increased the technology and quality of the cars produced by Seat, and its capacity to export. Together with this evolution, the company has received public subsidies in the 1992 and 2007 crisis.

Less government intervention was used in the clusters of Valencia (ceramics and shoe industry), Islas Baleares (shoe industry), and Cataluña (cross-stich industry). Although these clusters benefited from protectionism during the Franco regime, free-trade policy during democracy and the entry in the European Union faced these sectors to the international competition. All of them are examples of successful adaptation to this new situation, explained by their flexible organization of small firms coordinated in the industrial district. In the last years, some leader firms have emerged within these clusters, introducing more advanced technology and high added value by producing more quality goods for higher income demand. However, competition of East countries in recent years, due to tariff reduction in textile and shoe products promoted by the World Trade Organization, has affected some of these Spanish companies competitiveness.

The third group of modern clusters taking advantage of the Third Industrial Revolution or Information and Communication Technologies (ICT), has its two main examples in the Mondragon Group in País Vasco and Inditex in Galicia. The Mondragon Group is based in electronic technology, human capital (most of their workers are graduated, under the influence of the University of Deusto), and public policies promoting investments in ICT's to reconvert the classical industries affected by the 1970's crisis (iron and steel industry). The group started an export orientation in the 1990's, though Spain continues to be its main market. The second cluster is Inditex, one of the most successful companies in Spain. Starting in a traditional textile sector, in a poor region (Galicia) of a peripheral country like Spain, and without being

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a first-mover, the entrepreneur of Inditex, Amancio Ortega, has created the number one textile company in the world. The expansion of the company, first to Spain in the 1980's, and then to the rest of the world in the 1990's, has been widely studied from a management point of view. Its success lays on the use of ICT's to introduce flexibility in the knowledge of consumer demand and the adaptation of supply to that demand.

The revision of the clusters studied in the book of Catalán, Miranda, and Ramón-Muñoz (2011) can be used to draw some conclusions about Spanish competitiveness and its evolution. The belated openness of the Spanish economy explains that most of the clusters had been based on the production of final consumption goods, so their competitive advantage was related to marketing, distribution, and product differentiation. The most successful clusters were led by a big company, though some industrial districts with no leader but more flexibility have been able to overcome the economic crisis periods. Anyway, the existence of a big company does not mean a lack of flexibility, as it is shown with the example of Inditex and its use of ICT's. The last observation is related with the role of the public sector in the support of clusters. The policies based on the development of infrastructures, education, technology and institutional framework, clearly contributes to increase Spanish competitiveness. But the results are not so good when the government tries to influence the development of the company beyond the last general framework support. In other words, when the government tries to be an entrepreneur instead of establishing the institutional framework that facilitates the development of real entrepreneurs, the results are far from optimal. This question puts together some variables analyzed in this article around Spanish competitiveness, specifically institutions, entrepreneurs, government, and their role in the economic growth of nations.

Indeed, in the previous section we have studied the importance of institutions in the evolution of the Spanish economic growth and competitiveness. In the last years, though Spain has converged with the richest countries, it has some institutional problems that reduce its potential future growth. And the entrepreneurship factor is affected by this poor institutional environment. Spain has had always entrepreneurs, but the problem is their quality, which is closely related with government regulations. Protectionism and economic regulation introduced in Spain during the 20th century, intensified in the first decades of the Franco regime, promoted an entrepreneur whose activities were harmful for society. Entrepreneurs did not opened their activities to abroad, because it was very difficult (they needed permits to export and to have currency) and because they had a small but secure domestic market controlled by anticompetitive regulations. They were not worried to increase the quality of their products or to introduce technological or management improvements, because competition was reduced in domestic markets. Corruption was high, not because entrepreneurs were corrupts themselves, but because the institutional framework did incentive corruption. Most of the times, the only option for entrepreneurs was to use corruption to avoid regulations and to get the elements they need to run their companies: inputs, raw materials, permits to operate, currency. Besides, public firms of the "Instituto Nacional de Industria" competed against private companies (San Román, 1999). Openness and liberalization of the Spanish economy since 1959 has improved and changed entrepreneurship in Spain. Competition increased and new foreign companies came to Spain. Spanish entrepreneurs started

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to worry about increasing the quality of their products, reducing their prices, and increasing their competitiveness. The most successful entrepreneurs are now the ones that produce better goods and services for the society, not the ones that are closer to the government. Social perception about entrepreneurs has changed, and now is less critical with entrepreneurs than five decades ago.

But the institutional framework is far from perfect, and the Spanish entrepreneur structure reflects those imperfections. As seen in the last section, entrepreneurs' values are lower in comparative terms. And the evolution of clusters in Spain has showed the importance of government in firm development. Most of the bigger Spanish companies are in sectors close to government, central or local, like regulated sectors, companies whose main costumer is government or governmental agencies, and businessmen skillful in dealing with government's officials and taking advantage of their knowledge in government regulations and relationships. Thus, the bigger Spanish companies, which dominates the stock exchange market and the internationalization of Spanish firms process that started in the 1990's, were these kind of companies moving in the neighborhood of government: banks (BBVA, Santander), communications (Telefonica), transport (Iberia, Renfe), energy (Gas Natural, Iberdrola, Repsol,), or construction and infrastructures (ACS, Dragados, FCC, Ferrovial). Few companies, far from government influence, has stand out, with a development based on the figure of a Schumpeterian entrepreneur: Inditex (with Amancio Ortega) is the exception, and we could include also Sol Meliá with Gabriel Escarrer Juliá (hotels), Barceló Hotels & Resorts with Simón Barceló (hotels and travel agency), El Corte Inglés with Ramón Areces (wholesale distribution), and Mercadona with Joan Roig (food distribution), though the last two companies are more concentrated in the local Spanish market. In the last years, some young Spanish entrepreneurs have stand up in the web industry. To sum up, the modernization of the Spanish economy and the institutional advance has improved the Spanish entrepreneurship, though entrepreneurs have never been close to become a model of social winner. Shortcoming and lack of transparency in different levels of government, bad regulations and low competition in some markets contribute to maintain non-competitive entrepreneurs, a situation that is reinforced because these entrepreneurs can contribute themselves to block efficient reforms.

5. CONCLUSIONS

The evolution of economic growth theories and competitiveness concept is related with the capacity to measure different elements or factors affecting economic growth, like total factor productivity, institutions or entrepreneurship. In this article we have studied the Spanish economic evolution introducing all these different elements. Angus Maddison' recompilation of national macroeconomic data and recent studies of the Spanish historians Leandro Prados de la Escosura and Joan Roses, allow us to analyze the Spanish per capita Gross Domestic Product evolution in the 19th and 20th centuries, as well as the contribution to income growth of physical capital accumulation, labor and human capital increase, and efficiency gains or total factor productivity. This analysis shows a relationship between income growth and institutional changes, economic policies, access to international markets, and technological change. Thus, the introduction of market institutions and political stability in the 19th century promoted economic growth in the second half of the century, though with a relative backwardness. But protectionism and intense public

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regulations, which started at the end of the 19th century and were extremely intensified in the two first decades of the Franco dictatorship, reduced the Spanish economic growth. Since 1959, the progressive reduction of those bad policies, the introduction of a stable democracy, and the integration in the European Union and in the global markets, have promoted an intense economic growth and convergence process.

The comparison of the Spanish institutional situation nowadays with the rest of developed countries shows, using annual index of the World Economic Forum, the World Bank, the Heritage Foundation, and the Global Entrepreneurship Monitor, that Spain is ranked in a low position and quite far from the most advanced countries. Lack of transparency in government, poor working of judicial system, labor market's regulations, and shortcomings in education and science, are important barriers for business and entrepreneurs. These problems prevent to take advantages of the potential Spanish good positions in technology adaptation, infrastructures and education level. The political decentralization process which started with the return to democracy in 1977 has been harmful because it is breaking the Spanish market unity. Finally, the role of public sector in the support of clusters and entrepreneurs is positive when its goals are the general development of infrastructures, education, technology and institutional framework. But when the government tries to influence the development of the company beyond the last general framework support, the results are far from optimal.

Entrepreneurship factor is affected by institutional environment. Openness and liberalization of the Spanish economy since 1959 has improved and changed the Spanish entrepreneurs. But the institutional framework is far from perfect, and the Spanish entrepreneur structure reflects those imperfections. Most of the bigger Spanish companies are in sectors close to the government, and few companies far from the government influence have stand out with a development based on the figure of a Schumpeterian entrepreneur. Economic crises have also detected the institutional shortcomings of the Spanish economy. The improvement of the institutional problems studied in this article, mainly the labor market rigidities, the judicial system, the education system, and the market fragmentation due to political decentralization, are the challenges of the Spanish economy to emerge from the economic crisis and to increase the future competitiveness and economic growth of Spain.

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