Economics Working Paper 93

National Enterprise. Spanish Big Manufacturing Firms (1917–1990), between State and Market*

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September 1994

Keywords: Big Business, Entrepreneurship, Industrial Leadership, Organizational Capabilities, Private vs. Public, Spain (XXth. century), Three–Pronged Investment.

Journal of Economic Literature classification: L10, M13, N64.

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* This essay has been prepared for the 1994 Congress of the International Economic History Association, session A–2 "Global Enterprise and the Wealth of Nations in the Past Century", organized by Alfred D. Chandler jr., Franco Amatori and Patrick Fridenson. The first and preliminary version was discussed at the pre–conference (European University Institute, Florence). The current version has been presented at seminars held at Universidad Carlos III (Madrid), Universitat Autònoma de Barcelona, and at the Eleventh International Economic History Congress (Milan). We are very grateful for all the comments and criticisms received.

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Abstract

The paper provides a first Chandlerian approach (following Scale and Scope. The Dynamics of Industrial Capitalism) to the evolution of Spanish big firms during the twentieth century. The key question is why Spain has failed to build large global firms.

We first survey the various factors underlying the performance of Spanish big business (mainly the barriers to entrepreneurship: cultural attitudes, human resources, capital markets, market size and the role of government). Secondly we present the main features of the historical development of big business in Spain, to focus afterwards, and for the remaining of the paper, on the manufacturing sector, where the international comparisons are easier. Attention is paid to the building and maintenance of industrial leadership through a few case studies. A reassessment is provided on the Chandlerian three-pronged investment in production, management and distribution for the world of the leading industrial firms. Finally, we conclude that Spanish industry unmade its organizational capabilities because of the destructive tension between market forces and State intervention.

Market forces built large firms during the first decades of the twentieth century. The huge state intervention following the Spanish Civil War meant a radical disruption. A wave of nationalizations and of creation of the so–called "national enterprises" put an end to the old pattern and opened a new era. Nevertheless, the new national giants were much smaller, by international standards, and less competitive than the previous large, (foreign) private–owned, firms. But, even discounting the negative role of public intervention, it may well happen that Spain's comparative advantage was not very conducive to the building of large firms.

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INTRODUCTION

Spain has been absent in all the essays on the rise of big business. Two explanations are possible: a) Spain does not have nor did it have big firms; b) Spain does not have a well developed business history. Both are partly true. As for the first, we will present later the argument that Spain had some real big firms earlier this century. As for the second, business history is, indeed, an under-developed discipline in Spain. Nevertheless, there are business histories. Generally speaking, the Spanish practitioners of business history tend to classify themselves as economic historians researching on a business history topic because of the interest of this or that particular firm for the understanding of a sectorial or macroeconomic feature[1]. This approach is beginning to change, and our own contribution can be understood within this new emerging trend[2]. The sectors that have been studied the most are the railways in the nineteenth century and early twentieth, the mining -mainly when related to foreign investment-, and the banking -but not the big private banks of the twentieth century. The nineteenth century, up to 1914, has been definetely much more researched than the twentieth. The vast majority of the big firms that we will concentrate on do not have any scholarly written monography about their corporate history[3].

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[1] They tend to publish in the Revista de Historia Económica (RHE) and in the newly created Revista de Historia Industrial.

[2] See Sebastián Coll (1991) and Teresa Castellano (1991). Luciano Segreto (1992) has edited a special issue of Annali di Storia dell'Impresa with papers written by Nuria Puig and Eugenio Torres, Gabriel Tortella and Sebastián Coll, Albert Carreras, Pablo Martín Aceña and Francisco Comín, Antonio Bernal, Pedro Tedde, and Carles Sudrià. His introduction (Segreto 1992), Puig & Torres (1992) and Tortella & Coll (1992) provide useful bibliographical and historiographical surveys. Eugenio Torres (1993) has just published a long (209 pp.) bibliographical search on Spanish business history. The 5th Congress of the Spanish Economic History Association (San Sebastián, September 1993) has devoted a very long session (28 papers) to "empresas y empresarios" (firms and businessmen). The organizers were Francisco Comín and Pedro Tedde.

[3] We mean monographs like Pedro Tedde (1978a) for the railway companies; Banco de España (1970) for the Bank of Spain and Charles E. Harvey (1981) for Rio Tinto. For articles and celebrative literature, see Eugenio Torres (1993).

There are some major books related to the assessment of big business in Spain. Ramón Tamames ("the fight against the monopolies in Spain") and Juan Muñoz ("the power of banking in Spain") wrote two important essays in the sixties describing the world of big business[4]. They concentrated on the network of personal interests that constituted the foundation for a ruling class. Gabriel Tortella's book on the origins of capitalism in Spain and Santiago Roldán and José Luis García Delgado on the development of Spanish capitalism through the First World War addressed the topic from a different point of view[5]. They attempted, very successfully indeed, to argue that there were some critical periods when the basis of big business were established: 1854-1866 for Tortella and 1914-1920 for Roldán and García Delgado.

After them -who published in 1973- the debate departed toward more macroeconomic evaluations of national development. Jordi Nadal writing -in 1975- on the failure on the industrial revolution or Leandro Prados -in 1988- assessing the degree of relative backwardness represent two excellent instances of the new era[6]. The "wealth of the nation" became, historiographically speaking, the major problem. Its owners -the big businesses- were increasingly forgotten.

The paper will be organized as follows. The first part considers the various factors underlying the performance of Spanish big firms. The second is devoted to the presentation of the results of our enquiry on the historical development of big business (broadly speaking) in Spain. The third concentrates on the manufacturing side, where the international comparisons are easier. The fourth focuses on the building and maintenance of industrial leadership through the case studies of a few sectors and firms. The fifth introduces a Chandlerian approach into the previous evidence using the three-pronged investment in production, management and distribution as key concepts. The last and concluding part presents the unmaking of organizational capabilities in Spain as a tension between market and State. Market forces built a few large firms during the first decades of the twentieth century. The huge state

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[4] Ramón Tamames (1961), Juan Muñoz (1969).

[5] Gabriel Tortella (1973). Santiago Roldán y José Luis García Delgado, in collaboration with Juan Muñoz (1973a & 1973b).

[6] Jordi Nadal (1975). Leandro Prados (1988).

intervention following the Spanish Civil War meant a radical disruption. A wave of nationalizations and of creation of the so-called "national enterprises" put an end to the old pattern and opened a new era. Nevertheless, the new national giants were much smaller, by international standards, and less competitive than the previous large, private-owned, firms. But, even discounting the negative role of public intervention, it may well happen that Spain's comparative advantage was not very conducive to the building of large firms.

1. FACTORS UNDERLYING THE PERFORMANCE OF SPANISH BIG FIRMS

This section will address the set of environmental restrictions that may affect the working of big firms. Culture, education and training, capital markets, market size and public policy are five well recognized series of factors underlying the performance of big firms.

1.1. **Cultural attitudes**[7].

It is impossible to write about cultural attitudes without referring to the Inquisition and to the Catholic heritage[8]. But, it is worth reminding that by the beginning of the XXth century the Inquisition was completely forgotten. The XIXth century in Spain was a very liberal period. The legal and material foundations of Catholic Church power were systematically destroyed since the late XVIIIth century and through the XIXth century. The Max Weber thesis on the protestantism and the rise of capitalism has been strongly criticized even for Spain: its validity is very difficult to sustain for XIXth century extremely liberal and pro-business Spain. It is important to remind the reader of the fact that the 1812 Spanish liberal Constitution was radical in preventing the State from directly intervening in the economic life as a business agency. Indeed, Spain remained an extreme liberal country within the European

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[7] The historiography on this section is so vast as to make useless to point at any particular book. Our summary is based on widespread common knowledge. Good introductory references are Miguel Artola, ed. (1973-75) and Manuel Tuñón de Lara, ed. (1980).

[8] See G.Tortella (1993) for a pessimistic assessment.

context for the whole XIXth century and well into the XXth (until 1923). Public firms were limited to the managing of post and telegraph services and to a few armament firms[9].

The "Ancien Régime" was, nevertheless, slow in disappearing. Arno Mayer thesis is particularly valid for Spain[10]. The emerging "bourgeoisie" attempted to become noble much more than the reverse. The peculiar deal between aristocracy and bourgeoisie that was at the origin of the new Liberal state explains this feature. The aristocrats retained and increased their ownership rights over the land and accepted sharing the power with the new emerging middle classes. The peasants paid the bill throughout the country and the century.

The slow modernization of Spain since the second third of the XIXth century wasn't without positive effects[11]. The periods when the government was in the hands of progressive liberals (1835-37, 1840-43, 1854-56, 1868-1874) laid the basis for high growth rates and for the dramatic enhancing of business opportunities. The 1874-1898 period (the "Restauración") is currently much better assessed than before, and mainly thanks to the research of economic historians. After a long and risky era of internal warfare, Spain eventually became a quiet and safe country, very attractive for foreign and native investment.

The shock of 1898 -the loss of the last colonies as the outcome of the Cuban War- has been perceived as the triggerer of major changes in cultural attitudes. There was a real national and psychological crisis following the 1898 defeat -parallelisms can be drawn with the challenging effect of other nineteenth century defeats (Russia, Japan, Austria). The "regeneracionismo" movement reached the government in 1899 and developed a series of reforms. A more positive business attitude from the side of the government was clearly appearent. There was a wave of new investments, the development of mixed banking and of stock exchanges, creation of new technical schools, more public subsidies for primary education, public works programs and so on. It was the high age of capital investment, at large. The available indicators of

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[9] F.Comín & P.Martín Aceña, eds. (1991).

[10] Arno Mayer (1984), Guillermo Gortázar (1986).

[11] Nicolás Sánchez-Albornoz, ed. (1987).

gross fixed capital formation point at a dramatic increase in the investment/output ratios[12].

There was a strong nationalistic component in the cultural change subsequent to 1898. Some of its consequences will be addressed in the paragraphs related to market protection and to public policy.

The modernization trends continued all through the first third of the XXth century. Even the king had a major change in business attitudes, leading the high nobility to industrial and service business[13]. The First World War was a major chance of progress in all the fields of social life - business, industrial relations, politics, welfare and culture-. Primo de Rivera dictatorship proceed with the economic modernization, while the Second Republic focused on the political and social side.

The exaggeration of the nationalistic attitudes and the fear of communism lead to a dramatic move after the Civil War: an autarchic policy. This was to change very much the cultural climate of the forties and fifties. After decades of extroversion, Spain became an inward looking country, increasingly distant from the rest of the Western world.

A new, modern, business attitude only came back around 1960 and was widely diffused during the booming years of 1960-1975. The industrial crisis of 1975-1985, and the political transition of 1975-1982 interrupted the diffusion of modern business attitudes. The new, though short-lived, boom of the late eighties resumed and enhanced the values of free market and free enterprise as engines of growth. The integration into the EEC has also been decisive.

1.2. **Human resources.**

Toward the beginning of the 20th century Spain was a relatively

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[12] A.Carreras (1991).

[13] Guillermo Gortázar (1986).

backward country in terms of literacy levels[14]. As Clara-Eugenia Núñez states, the problem of low literacy levels was combined with two other: strong sex gap and too high investment on higher education in poor regions[15]. The first third of the 20th century was a period of generalized improvements in overcoming these gaps and obstacles. The outcome was to be enjoyed one generation later. The post-civil war depression meant a very unfortunate underutilization of those investments. Only in the nineteen sixties Spain completed the generalization of primary education.

As for the technical and business education, it is worth reminding that the first managers are to be found among the engineers. Spain had a long tradition of engineering schools linked to the State and, more specifically, to the military. This was the case of the two major and oldest ones: the mine engineers and the "civil" engineers. They were established during the enlightened period, in the last third of the XVIIIth century. Also quite a few technical schools were then created. The political turmoil of the first third of the nineteenth century implied closings when Absolutists were in government and reopenings when Liberals won. The situation became stable only after 1835. By mid-nineteenth century the creation of new technical schools by the "Juntas de Comercio" (Boards of Trade) was another significant improvement[16].

During the 1850's two new industrial engineering schools were created, but by 1867 only the Barcelona one continued. So, during the second half of the nineteenth century, only three major engineering schools were active: mine engineering and "civil" engineering, in Madrid, and industrial engineering in Barcelona. A good deal of the new business that was developed in Spain (railways and mines) was managed by foreign engineers. Only by 1899 two new industrial engineering schools were opened: first Bilbao and soon afterwards, Madrid[15].

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[14] G.Tortella (1992 b).

[15] Clara-Eugenia Núñez (1991).

[16] Alonso (1944), Breve historia... (1950).

[15] Ramón Garrabou (1982).

During the First World War there was the first wave of creation of privately owned -(against all the preceding ones, that were public)- highly specialized schools: the "Universidad Comercial de Deusto" (Bilbao, 1916), and the "Instituto Químico de Sarriá" (Barcelona, 1917). Both were owned and managed by the Jesuits. Deusto was the first true management school in Spain[16].

Nothing new came about until 1944 with the creation of the first Faculty of Economics (and Political Sciences) in Madrid. In 1954 another was created in Barcelona and suddenly, since 1955, came a wave of public and privately owned management schools creation in Madrid and Barcelona[17]: 1955, EOI (Madrid, Dpt. of Industry); 1956, ESTE (San Sebastián, Jesuits); 1957, ICADE (Nadrid, Jesuits); 1958, ESADE (Barcelona, Jesuits), IESE (Barcelona, Opus Dei), and EAE (Barcelona, Dpt. of Education and Dpt. of Industry).

During the 1980's the situation has become quite sophisticated with many economics and business management departments and faculties, usually public and a few private, many engineering schools, many post-graduate business management programs and institutions, and a steady flow of young people studying in foreign countries -mainly the US, but also the UK-[18].

1.3. **Capital markets.**

As a low income country, Spain has suffered a chronic shortage of capital. Rates of savings were typically low all through the nineteenth century, and the State succeeded in attracting most of the internal savings[19]. Until the 1880's the foreign capital was critical in providing funds to new business opportunities. Native capital did also exist, mainly in Andalucia, Catalonia and the Basque Country. Since the late

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[16] W.Frederick & Ch.Haberstroh (1969). N.Puig & S.López (1992).

[17] W.Frederick & Ch.Haberstroh (1969). Andrés Suárez (1984).

[18] L. Diez de Castro & C. García-Gutierrez (1989).

[19] G.Tortella (1973). J. Nadal (1975).

1880's the cost of capital began to decline[20]. From 1900 onwards, a new wave of capital formation was financed by native Spanish capital, opening the way to a more "nationalistic" period. New mixed banks -the older were founded around 1856 although many destroyed in 1866- appeared. The stock exchange also modified its behaviour and became much more opened toward industrial shares[21]. Many foreign banks opened branches in Spain around the years of the First World War. The more nationalistic policy of the 1920's put an end to this new trend. It was the native Spanish capitalism that triumphed during the first third of the century. This was private capitalism, linked with the State but not mixed with it[22]. After the Civil war, and for twenty years, the State became mostly responsible for new financing. The foreign capital was strongly limited and in many cases nationalizations were done[23]. The role of Spanish banks increased dramatically. The "status quo" in banking business (the creation of new banks was prohibited since 1936 to 1963) and the lack of foreign competition allowed for high banking profits and for a more central -also because more stable- place in Spanish economic life[24].

Since 1960 a new era of foreign capital investment has been developing[25]. The role of banks has diminished through increased internal competition (mainly since 1974) and external competition (since 1978). A devastating banking crisis, from 1975 to 1985 -very much related to the industrial crisis- halved the number of banks and induced a much more competitive development among the survivors[26]. Interestingly enough, the concentration in the banking industry increased

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[20] X.Tafunell (1989).

[21] X.Tafunell (1989).

[22] José Luis García Delgado (1987).

[23] Jordi Catalán (1989a).

[24] Juan Muñoz (1969).

[25] Santiago Roldán, Juan Muñoz y Angel Serrano (1978).

[26] Alvaro Cuervo (1987).

dramatically only through the banking crisis -not before[27].

1.4. Market size.

The size of the market has been one of the most permanent factors influencing the poor performance of Spanish big firms. Spain had some 17 million inhabitants by 1880 -less than half of United Kingdom, France or Austria-Hungary, and a third of the United States- with quite a limited purchasing power -about the per capita Italian level of that time. The overall yearly rate of growth of the internal market (real GDP per capita) was particularly slow during the period of the Second industrial revolution (c.1880-c.1950) -a one per cent[28]. During this same period the main external outlets for Spanish firms were the markets for agricultural, mining and semi-manufactured goods. Only from 1960 onwards Spain developed a strong export trend for manufacturing products[29].

Not only the internal market was small, but increasingly protected. A set of tariffs -1891, 1906 and 1922- increased significantly the protection for Spanish goods. Spain became a high-tariff country[30]. The closing of the country made an enormous jump ahead in 1939, after the Civil War. The autarchic policy of the new régime simply closed the country. The tariff became a Chinese wall to which were added many non-tariff protective mechanisms. The story came to an end in 1960. A new tariff law reordered the prohibitionist Spanish trade into a "normal", protected one. Nevertheless the sectors with big firms tended to be those most protected. This long-term protectionist tradition has very much reduced the growth potential of Spanish firms, mainly in those sectors export-

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[27] Revell (1987)

[28] Leandro Prados (1993).

[29] Antonio Tena (1989).

[30] Pedro Fraile (1991). Jordi Palafox (1991).

oriented[31]. The EEC membership (1986) modified the previous trends. The economic policy of the Socialist Cabinet has very much favoured an open, non-nationalistic approach to business development and to foreign trade[32].

1.5. Role of government.

The State intervention has some tradition in twentieth century Spain. Because of nationalistic beliefs, the State became increasingly involved in economic life during the first three decades of the twentieth century[33]. Firstly, through laws protecting native producers (both protective tariffs and the promotion of native producers were developed as a "free gift" to native producers -no counterpart was requested)[34]. Secondly, since 1923, through the reorganization of some markets - the telephone service and petroleum refining and distribution were organized as privately managed monopolies with public supervision (mainly for fiscal reasons)[35]. Thirdly, after 1939, actively developing public companies in the industry and the tertiary and nationalizing "strategic" sectors[36].

Once an all-interventionist system was deployed -quite similar to socialist planning but with limited private ownership- it happened to perform very poorly. The liberalization of 1959 put an end to the experiment. Nevertheless, the "laissez-faire" attitudes were short-lived. In 1964 a new planning policy was implemented following the French example. For a few named "strategic" sectors it defined and developed barriers to entry, organized privileged credit channels and promoted mergers. These sectors were those were we find our big manufacturing firms in 1960

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[31] J.B.Donges (1976).

[32] José Luis García Delgado, ed, (1993).

[33] José Luis García Delgado (1987).

[34] In contrast with the Korean case. See Alice Amsden chapter in this volume.

[35] Francisco Comín & Pablo Martín Aceña, eds. (1991).

[36] Pablo Martín Aceña y Francisco Comín, eds. (1990).

and 1974. The INI conglomerate abstained to promote new firms and limited itself to help firms in trouble. This approach was enhanced during the industrial crisis of 1975-1985. Only in the last decade the industrial policy has pushed towards the refloating and reprivatization of firms[37].

2. THE HISTORICAL DEVELOPMENT OF SPANISH BIG BUSINESS

Given the state of business history in Spain we have acutely felt the need for a preliminary approach to big business in general before addressing the development of manufacturing firms[38].

2.1. **Big business and the wealth of the nation.**

Altogether, the first 200 firms have evolved in the following way:

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[37] Pablo Martín Aceña & F.Comín, eds. (1990). Ramón Tamames (1990).

[38] We have constituted a data base with the 200 top firms measured by their assets. The paper we submitted to the pre-conference (Carreras & Tafunell, 1992) contained a detailed appendix with the methods and sources used to establish these lists of 200 top firms, and the lists themselves. Limitations of space have obliged to exclude the bulk of this information from this new version. An improved series of tables with the data for 1917 to 1974 can be found in A. Carreras & X. Tafunell (1993).

TABLE 1.
TOTAL ASSETS OF THE TOP 200 SPANISH FIRMS, 1917-1974 (IN MILLION PTAS.).

		1917	12.426	current ptas.	12.426
1917 ptas					
	1930	27.175	" "	27.068	" "
	1948	70.079	" "	15.173	" "
	1960	383.146	" "	36.311	" "
	1974	4.080.615	" "	143.264	" "
	1990	28.469.824	" "	151.126	" "

Note: Current prices have been transformed in real terms through a GDP deflator.
Source: Carreras & Tafunell (1993) and Anuario El País (1992); for the GDP deflator, Julio Alcaide (1976), C. Molinas, M. Sebastián & A. Zabalza, eds, (1991), and Anuario El País (1992).

The big business increased quite strongly between 1917 and 1930 but collapsed in the following period. The depression of the thirties, the Civil War, and the autarchic partly period destroyed the assets of the big firms. Big business grew again in the fifties but the 1960 level is really not much higher than in 1930. The only real change came in 1974.

What do these figures mean compared with the national balance sheet? It is hard to say because of lack of adequate figures. If we accept the existing data and make careful extrapolations we reach the following results:

TABLE 2.
PROPORTION OF THE TOTAL ASSETS OF THE TOP 200 SPANISH FIRMS TO THE SPANISH WEALTH.

1917	c.10%
1930	c.10%
1948	c. 7%
1960	c.10%
1974	c.16%
1990	...

Notes & Sources: Table 1 and:
1917: interpolation of 1914 and 1924 (Vandellós), and 1930: interpolation of 1924 and 1935 (Vandellós & De Miguel). Both from Albert Carreras (1989) in A.Carreras, ed., (1989), C.13.27.
1948 and 1960: Comisaría del III Plan de Desarrollo (1972).
1974: Adolfo Corrales & David Taguas (1991), in C.Molinas, M.Sebastián and A.Zabalza, eds.,(1991).

The ratios are not impressive. They reveal the backwardness of the Spanish economy during a good portion of the twentieth century. This low ratio implies that a high proportion of the wealth consisted in land and in houses.

The quota is quite stable with two main departures. The first, 1948, corresponds to a very depressed period, the long and slow recovery after the 1936-39 Civil War. The second, 1974, at the end of a very expansive era inaugurated in 1960[39].

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[39] An alternative macro measure of the changing importance of the top 200 firms may be given comparing their total assets with the GDP, in current terms:
1917 67%
1930 83%
1948 53%
1960 63%
1974 113%.
Source: Assets in current ptas., see table 1. GDP in current ptas.: 1917-1960, Leandro Prados (1993); GDP 1974, Julio Alcaide (1976).

2.2. Sectoral change in big business

What is the sectoral content of Spanish Big Business?

TABLE 3.
SECTORAL COMPOSITION OF THE FIRST 200 FIRMS, 1917-1990.
ASSETS (IN %)

Sector	1917	1930	1948	1960	1974	1990
Mining	11,9	7,3	2,4	2,4	2,2	0,8
Manufacturing	14,3	20,1	23,6	44,7	27,1	26,7
Utilities	12,5	27,0	23,4	25,5	29,8	38,6
Const.& public works	0,2	0,6	3,4	1,5	2,7	7,2
Transports	49,3	31,8	34,9	18,7	9,1	4,8
Finance	10,7	11,8	11,3	6,2	28,0	18,5
Others	1,0	1,3	1,0	1,0	1,0	3,3
Total	99,9	99,9	100,0	100,0	99,9	100,0

Notes: Utilities includes electricity, gas, water and telephone.
Construction includes the societies devoted to housing development.
Source: 1917-74: Carreras & Tafunell (1993). 1990: Anuario El País (1992) and El País (1990), following the same criteria presented in Carreras & Tafunell (1993).

There is a dramatic change through the period under review. In 1917 railway companies were completely dominant with almost half of the assets of the 200 main firms. The transports in question were mainly railways, but also shipping companies. Four other sectors were in an almost equal footing -manufacturing, mining, utilities and finance- and had the same aggregate weight than the transport firms.

In 1930 the hegemony of railways and shipping companies is still there, but in clear decline. Other sectors seem quite more dynamic. The utilities are in clear and quick progress. Manufacturing gain a few percent points, finance is in slight progress while mining declines more quickly than transports.

1948 shows basically the same situation. The weight of the transport sector increases slightly, in spite of the nationalization of the main railway companies. Below transport two sectors emerge to a strong position: the manufacturing and the utilities. Finance makes no progress, mining almost vanishes out, and construction (indeed, housing development) expands.

The 1960 benchmark shows a radically different situation. Manufacturing commands: it has almost half of the assets. We seem to be confronted to a period of high industrialization. The utilities remain at a very high level and there is the decline of railway transport and a reduction of the weight of finance -mainly banking.

In 1974 the situation is again strongly modified. Utilities attain a first position. Finance is at an almost equal level. Its increase is more than fourfold compared with 1960 -a jump that was well observed in contemporary literature. Manufacturing firms explain more than a quarter of the total assets -but are very far from their 1960 success. Intriguingly enough, the fall of manufacturing happens when all the indicators point to a complete success of Spanish industrialization, much more than in the previous period. A careful look at the top firms would be clarifying.

The 1990 pattern is again very different to the previous benchmark. The financial sector goes down as far as its initial level. Utility companies attain an outstanding leading position. Construction and "others" (retail, communications, and so on) grow, too. Manufacturing moves back a few percent points, but not so much if we think of the lasting and devastating crisis of the 1970's and the early 1980's.

Compared with 1917 the proportions have been completely upset. Instead of railways, shipping and mines, we have banks, utilities and manufacturing.

2.3. **The top firms.**

In order to reach a closer look at the Spanish big business it may prove useful to focus the attention on the top firms. We have selected the 20 first -i.e., the first decile-. Their importance compared with the 200 group changes as follows:

TABLE 4.
PROPORTION OF THE 20 TOP FIRMS ON THE TOP 200, 1917-1974

1917	61%
1930	60%
1948	57%
1960	56%
1974	52%
1990	...

Sources: Table 1 and Carreras & Tafunell (1993).

These values suggest a slight but continuous declining concentration trend -a non self-evident conclusion, although quite a reasonable one.

The complete list of the top 20 is presented in the next page table.

TABLE 5.
THE 20 TOP FIRMS, 1917-1990.

	1917	1930	1948	1960	1974	1990
1	Norte	M-Z-A	RENFE	RENFE	CTNE	CTNE
2	M-Z-A	Norte	CTNE	ENSIDESA	B.Central	Hidrola
3	B.España	CHADE	CHADE	CTNE	Iberduero	Iberduero
4	Rio Tinto	B.Traction	Riegos	CalvoSotelo	Hidrola	RENFE
5	Andaluces	B.España	Iberduero	Hidrola	RENFE	UEFenosa
6	SGAzucarera	Riegos	CAMPSA	Iberduero	ENSIDESA	ENDESA
7	Catalana	Asturiana	B.Hispano	CAMPSA	Banesto	FECSA
8	M-C-P	Peñarroya	SECN	ENBazán	B.Bilbao	Sevillana
9	Riegos	CTNE	Banesto	Altos Hornos	FECSA	BBV
10	Zafra-Huelva	Tánger-Fez	B.Bilbao	ENDESA	UE	BSantander
11	EEC	Andaluces	B.Vizcaya	Sevillana	B.Hispano	B.Central
12	Peñarroya	SECN	UEM	ENHER	FENOSA	REPSOL
13	M-Z-O-V	Catalana	Sevillana	CEPSA	EMPETROL	CAMPSA
14	Tharsis	Rio Tinto	B.España	FECSA	Sevillana	Corte Inglés
15	Barcelonesa	CATabacos	Altos Hornos	FENOSA	BSantander	Iberia
16	DuroFelguera	Trasatlánt	ENBazán	Saltos Sil	B.Vizcaya	ENSIDESA
17	CATabacos	CAMPSA	UEExplosivos	Banesto	Iberia	Banesto
18	SECN	Oeste	CalvoSotelo	UEM	ENDESA	Grupo Torras
19	Transmedit.	SGAzucarera	Tabacalera	UEExplosivos	UERioTinto	CEPSA
20	B.Hispano	B.Bilbao	Hidrola	SECEN	Astilleros	B.Hispano

Notes:
Mining companies: Rio Tinto (The Rio Tinto, Co. Ltd.), Tharsis (The Tharsis Sulphur and Copper, Co. Ltd.), Asturiana (Real Compañía Asturiana de Minas).
Manufacturing: SGAzucarera (Sociedad General Azucarera de España), Peñarroya (Sociedad Minera y Metalúrgica de Peñarroya), DuroFelguera (Sociedad Metalúrgica Duro-Felguera), CATabacos (Compañía Arrentaria de Tabacos), SECN (Sociedad Española de Construcción Naval), Altos Hornos (Altos Hornos de Vizcaya), ENBazán (Empresa Nacional Bazán de construcciones navales militares), UEExplosivos (Unión Española de Explosivos), Calvo Sotelo (Empresa Nacional 'Calvo Sotelo' de combustibles líquidos y lubricantes), Tabacalera, ENSIDESA (Empresa Nacional Siderúrgica), CEPSA (Compañía Española de Petróleos), EMPETROL (Empresa Nacional de Petróleos), UERioTinto (Unión de Explosivos Rio Tinto), Astilleros (Astilleros Españoles), REPSOL, Grupo Torras.
Utilities: Catalana (Catalana de Gas y Electricidad), Riegos (Riegos y Fuerzas del Ebro), EEC (Energía Eléctrica de Cataluña), Barcelonesa (Barcelonesa de Electricidad), B.Traction (Barcelona Traction, Light and Power, Co. Ltd.), CTNE (Compañía Telefónica Nacional de España), Chade (Compañía Hispano Americana de Electricidad), Iberduero (Hidroeléctrica Ibérica 'Iberduero'), UEM (Unión Eléctrica Madrileña), Sevillana (Compañía Sevillana de Electricidad), Hidrola (Hidroeléctrica Española), ENDESA (Empresa Nacional de Electricidad), ENHER (Empresa Nacional Hidroeléctrica del Ribagorzana), FECSA (Fuerzas Eléctricas de Cataluña), UE (Unión Eléctrica), FENOSA (Fuerzas Eléctricas del Noroeste), Saltos Sil (Saltos del Sil), UEFenosa (Unión Eléctrica Fenosa).
Transport: Norte (Caminos de Hierro del Norte de España), M-Z-A (Compañía de los Ferrocarriles de Madrid a Zaragoza y Alicante), Andaluces (Compañía de los Ferrocarriles Andaluces), M-C-P (Sociedad de los Ferrocarriles de Madrid a Cáceres y Portugal), Zafra-Huelva (Ferrocarril de Zafra a Huelva), M-Z-O-V (Compañía de los Ferrocarriles de Medina del Campo a Zamora, Orense y Vigo), Transmedit. (Compañía Transmediterránea), Tánger-Fez (Compañía Franco-Española del Ferrocarril de Tánger a Fez), Trasatlánt (Compañía Trasatlántica), Oeste (Compañía Nacional de los Ferrocarriles del Oeste de España), RENFE (Red Nacional de Ferrocarriles Españoles), Iberia (Iberia, Líneas Aéreas de España).
Finance: B.España (Banco de España), B.Hispano (Banco Hispano Americano), B.Bilbao (Banco de Bilbao), Banesto (Banco Español de Crédito), B.Vizcaya (Banco de Vizcaya), B.Central (Banco Central), BSantander (Banco de Santander), BBV (Banco Bilbao Vizcaya).
Miscellaneous: CAMPSA (Compañía Arrendataria del Monopolio de Petróleos), Corte Inglés (El Corte Inglés), Grupo Torras.

Source: Carreras & Tafunell (1993).

There is a lot to say after observing this table. Let's sketch a few

comments. First of all the changing sectoral structure described above, perceived now through the top 20.

The first two benchmarks are dominated by the two main railway societies -Norte and M-Z-A-, accompanied by a few other giants like Andaluces, Tánger-Fez or M-C-P and M-Z-O-V, later absorbed by Oeste. After 1941 they will disappear absorbed by RENFE.

The mining companies appear among the top 20 in 1917 (Rio Tinto, Tharsis and the mining parts of Peñarroya and Duro-Felguera). Rio Tinto and Peñarroya survive in 1930 to vanish out in 1948 from the top positions.

There were 4 utilities in 1917 among the first 20. The main one, in the 7th place, was a gas company that was entering into the electricity business. All the four were developing their activities around the Barcelona area. The situation changed in 1930. The 3rd, the 5th and the 6th societies were utilities, accompanied by the 11th and the 13th. In 1948 the first 4 after RENFE were utilities, and a total of 7 entered the list. The very top were less utility intensive in 1960 but the overall performance was still better than in 1948: 10 companies among the first 20. In 1974 there were still 8 and in 1990, 6 but in the first 8 positions.

The emergence of the manufacturing sector is more difficult to document mainly because of the lower size of the mean firm. Five in 1917, the same number in 1930 but in a lower position, 6 in 1948, 7 in 1960 with a better ranking and only 4 in 1974 and 3 in 1990. The best moment was achieved in 1960 with the second biggest corporate firm (ENSIDESA) belonging to the manufacturing sector.

The finance firms were banks. Before the Civil War the main private bank was the Banco de España, much larger than any of the others. After 1939 its size diminished to the advantage of the other banks. So the two banks present in 1917 and 1930 became five in 1948, six in 1974 and five in 1990. The benchmark of 1960 represents a low estimate for the bank assets and they may be underestimated to the advantage of manufacturing and utility firms. The banks reached their highest importance in 1974 with the second record and five other firms among the first 20.

2.4. Discontinuity among top firms.

All in all here we have a first map of Spanish capitalism. The sectoral content changes and so does the name of the firms. But we get the impression that the turnover is perhaps too high. Do the old 1917 big firms survive in 1990? Not at all! Among the 1917 top 20 there is only one -Banco Hispano, the 20th- who survives in 1990 in the top situation (but it was absent in 1930 and 1960!). If we accept that there is a continuity between Riegos and FECSA we can add a second candidate.

A summary may be provided through a table of survivals.

TABLE 6.
SURVIVORS FROM ONE YEAR TO THE OTHER AMONG THE TOP 20, 1917-1990

1917-1930...11				
1930-1948....9	1917-1948....5			
1948-1960...13	1930-1960....5	1917-1960....2		
1960-1974...12	1948-1974...10	1930-1974....2	1917-1974....2	
1974-1990...16	1960-1990...12	1948-1990...10	1930-1990....2	1917-1990....1

Source: Table 5.

The major discontinuities were perceivable since 1948. At that particular moment, only 5 out of the top 20 could be traced back to the same group in 1917, while 10 out of the top 20 in 1948 survived until 1990.

What did it change among the top Spanish firms? We may classify changes in two groups: those flowing from normal market evolution and those stemming from state intervention. At the very beginning, in 1917 -just as through the XIXth century-, Spanish capitalism was a private business. The State was completely absent.

From 1917 to 1930 the normal operation of the market explains the novelties -including two foreign ventures as "Franco-Española de Ferrocarriles de Tánger a Fez" (Morocco) and the "Compañía Hispano-Americana de Electricidad, CHADE" (Argentina). There are a few and

quite significant exceptions, mainly the enforcement of two monopolistic firms through the state intervention: CTNE and CAMPSA. In both there was a mixture of private and public. The private and foreign was hegemonic in the telephone company, while it was the public to command in CAMPSA because its fiscal significance (the capital was mainly private and native).

The monopolistic state-tutored arrangement was dramatically increased in 1948 through RENFE. A real nationalization was made that gave the whole monopoly of railway operation -except for narrow gauge railways- to the state agency. The national-public content was increased in CTNE, nationalized in 1944. RENFE and CTNE were the two top firms. They were accompanied by CAMPSA, who was 6th. The State, through the INI (Instituto Nacional de Industria) decided to intervene actively in the economic life creating new firms. Two of them were quite considerable by 1948: E.N.Bazán (shipbuilding) and E.N.Calvo Sotelo (petroleum distillation and refining), 16th and 18th, respectively.

In 1960 the four top Spanish firms were public: RENFE, ENSIDESA (steel works), CTNE and E.N.Calvo Sotelo. The 7th and the 8th were public, too. And the 10th, 12th and 14th. Nine out of fifteen! They were unmistakably public: the letters "E.N." stay for "Empresa Nacional", i.e., "National Enterprise". Where they seemed to be absent it is always possible to find them: RENFE stands for Red Nacional de Ferrocarriles Españoles, and Telefónica stand for Compañía Telefónica Nacional de España. Out of the nine public firms, the majority were created from scratch by the state (ENSIDESA, Calvo Sotelo, ENBazán, ENDESA, ENHER). A strong minority (RENFE, CTNE, CAMPSA, ENASA) were created through the (paid) nationalization of previous firms. The state activism constitutes the main event of these years.

Interestingly enough, the top public firms in 1960 featured very low profits -if any[40]. Our following benchmark (1974) shows a slowly

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[40] We have measured the profitability as: profits/net assets (source: Anuario Financiero y de Sociedades Anónimas de España -AFSAE). We divide the 1960 20 top firms according to their character -private or public. The mean profitability for the (eleven) private firms is 5,1%. The remaining firms are to be divided in two groups: a) the monopolies (telephone -public- and petroleum -private-), with a profitability of 5,0%; and b) the public firms non legally monopolistic (six), with a mean profitability of 1,9%. This last group has two electric companies with "high" profits (3,6%) and four manufacturing with low profits (1,0%). We do no have data for RENFE who used to be run with huge

declining role for the state firms. There are still six among the first twenty (CTNE, RENFE, ENSIDESA, EMPETROL -the merger of the old ENCASO with two other publicly owned refining companies-, Iberia and ENDESA), and they still occupy very high positions: 1st, 5th, 6th, 13th, 17th and 18th. The public sector also had a large portion of Astilleros (merger of SECN, ENBazán and Euskalduna). By 1990, the situation is very similar to 1974: six public firms (CTNE, RENFE, ENDESA, REPSOL, Iberia and ENSIDESA).

The rise of the public enterprise -but a very particular kind of it, usually named "national enterprise"- constitutes the main discontinuity in one century of Spanish big business[41].

Spanish "national enterprises" were created to address national problems and not to expand through the world. They fixed a political ceiling to their sectoral and territorial expansion. They were just the contrary of a "global enterprise". Indeed, they were created with autarchic goals and without parliamentary consent[42]. They were quite different from the other Western European public firms. Some of their features were "Western" while others were "Eastern". It is this amazing mixture that makes the Spanish experience so interesting, and close to some Eastern Europe, Latin America and Third World cases.

3. THE HISTORICAL DEVELOPMENT OF SPANISH BIG MANUFACTURING FIRMS.

Our data base on Spanish big firms yields a limited amount of manufacturing firms, properly speaking. We have built a data set of the 50 top manufacturers for each benchmark year[43], ranked by their assets. The international and historical comparisons of Spanish leading

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losses.

[41] Now we have an important research on the INI (Instituto Nacional de Industria) that has recently been published: Pablo Martín Aceña & Francisco Comín (1991).

[42] Ibid.

[43] For 1917 to 1974 see Carreras & Tafunell (1993). The data for 1990 comes from Anuario El País (1992).

firms are only possible within this framework.

3.1. The top manufacturing firms.

A first glance at the top 10 may be useful:

TABLE 7.
TOP 10 MANUFACTURING FIRMS, 1917-1990.

	1917	1930	1948	1960	1974	1990
1	SGAzucarera	Peñarroya	SECN	ENSIDESA	ENSIDESA	REPSOL
2	Duro-Felguera	SECN	Altos Hornos	Calvo Sotelo	EMPETROL	ENSIDESA
3	CATabacos	CATabacos	ENBazán	ENBazán	UERioTinto	Grupo Torras
4	SECN	SGAzucarera	UEExplosivos	Altos Hornos	Astilleros	CEPSA
5	Papelera	CGCorcho	Calvo Sotelo	CEPSA	CEPSA	SEAT
6	Fabra&Coats	Altos Hornos	Tabacalera	UEExplosivos	SEAT	FASA-Renault
7	Altos Hornos	SiderúrgMed.	Cros	SECN	Altos Hornos	General Motors
8	Filipinas	UEExplosivos	ENASA	REPESA	Ford España	Altos Hornos
9	A.Nervión	Cros	SGAzucarera	Peñarroya	ENBazán	CASA
10	SECM	Duro-Felguera	Maquinista	Tabacalera	Tabacalera	IBM España

Notes:
Tobacco, food and kindred products: SGAzucarera (Sociedad General Azucarera de España) CATabacos (Compañía Arrendataria de Tabacos), Filipinas (Compañía General de Tabacos de Filipinas, Tabacalera (Tabacalera Española).
Textile mill products: Fabra&Coats (Compañía de Hilaturas Fabra y Coats).
Paper products: Papelera (La Papelera Española).
Cork products: CGCorcho (Compañía General del Corcho).
Primary metal products: Altos Hornos (Altos Hornos de Vizcaya), Duro-Felguera (Sociedad Metalúrgica Duro-Felguera), Peñarroya (Sociedad Minero Metalúrgica Peñarroya), SiderúrgMed. (Compañía Siderúrgica del Mediterráneo), ENSIDESA (Empresa Nacional Siderúrgica).
Fabricated metal products: SECM (Sociedad Española de Construcciones Metálicas).
Transportation equipment: SECN (Sociedad Española de Construcción Naval), A.Nervión (Astilleros del Nervión), ENBazán (Empresa Nacional Bazán de Construcciones Navales Militares), ENASA (Empresa Nacional de Autocamiones), Maquinista (La Maquinista Terrestre y Marítima), Astilleros (Astilleros Españoles), SEAT (Sociedad Española de Automóviles de Turismo), Ford-España (Ford España), FASA-Renault (Fabricación de Automóviles Renault de España), GMotorsE (General Motors España), CASA (Construcciones Aeronáuticas).
Petroleum products: CEPSA (Compañía Española de Petróleos), Calvo Sotelo (Empresa Nacional Calvo Sotelo), REPESA (Refinería de Petróleos de Escombreras), EMPETROL (Empresa Nacional de Petroleo), REPSOL.
Chemical products: UEExplosivos (Unión Española de Explosivos), Cros, UERioTinto (Unión de Explosivos Rio Tinto).
Miscellaneous: Grupo Torras (Grupo Torras).
Source: A. Carreras & X. Tafunell (1993) and Anuario El País (1992).

Table 7 provides the list of the 10 top manufacturing firms between

1917 and 1990[44]. A quick glance at the table is enough to realize that some sectors are well represented while others are absent -or almost if we consider their weight in the industrial value added. In fact, out of the 33 firms that have been in the top 10 positions during any of those years, 11 belong to the transportation equipment sector, 6 to the primary and fabricated metal industries (a branch closely related to the transportation equipment sector), 5 to the oil refining and petrochemistry, 4 to the food and tobacco, 2 to the chemicals, and 4 to other manufacturing (paper, textiles cork and electronics) -but only for one benchmark each[45]. If we pay attention to the continuity, the best performances are the steel firms, the transportation equipment firms and the food processing ones, followed by the chemicals. Oil industry has developed much later but also much faster, reaching the top ten in the last benchmarks. The same should be said of the car making industry. Just the reverse is true for the consumption goods producing industries. They were present -though not outstanding- during the first third of the century, but vanished out later on. Intermediate and capital goods producing industries dominate our rankings -but not all their subsectors. There are very significant exceptions as the machinery building and the electrical and electronical equipment (but for IBM España). These weaknesses reveal the main features of Spanish big manufacturing firms sectoral composition -quite different from that of economically more advanced countries (see infra).

The foundation of big manufacturing firms hasn't been time neutral. Let's focus our attention on the incorporation dates for the top 10 in any of the 1917-1990 benchmarks (see table 8).

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[44] We consider manufacturing firms only those that, as their main activity, produce manufactured goods. The firms that are also involved in mining or distributing activities have been included only when most (i.e., more than 50 per cent) of the value of their assets is employed in manufacturing activities. Because of this criteria being used we have excluded very big firms with an important manufacturing component such as Rio Tinto, Tharsis Sulphur and Copper, Royale Compagnie Asturienne des Mines, or CAMPSA.

[45] The remaining firm (Grupo Torras, an industrial conglomerate) is too diversified to be classified under a sectoral heading. Nevertheless, it is to be said that it includes the largest chemical firm (i.e., ERCROS).

TABLE 8.
TOP 10 MANUFACTURING FIRMS, CLASSIFIED BY INCORPORATION DATE

1855	Maquinista
1881	Peñarroya
1881	Filipinas
1887	CATabacos
1888	A. Nervión
1896	UEExplosivos
1900	Duro-Felguera
1901	Papelera
1902	Altos Hornos
1903	Fabra & Coats
1903	SGAzucarera
1904	Cros
1908	SECN
1917	SiderúrgMed.
1923	CASA
1929	CGCorcho
1929	CEPSA
1941	IBM-España
1942	Calvo Sotelo
1945	Tabacalera
1946	ENASA
1947	ENBazán
1949	REPESA
1950	ENSIDESA
1950	SEAT
1951	FASA-Renault
1969	Astilleros
1970	UERioTinto
1974	EMPETROL
1974	Ford España
1979	General Motors
1984	Grupo Torras
1987	REPSOL

Source: the same than for table 3.

The big manufacturing firm was born in Spain in the 1880's. Afterwards we have to wait until the early years of the century to find new incorporations: from 1900 to 1904 six more came to life. During the remaining years of the first decade there was only one addition, just as for the whole of the second decade. By the end of the third (1929) two more came into being, but none during the fourth. After this long drought, the first years of the Franco régime were very productive: nine new (big but for IBM-España) incorporations from 1941 to 1951. But the next one had to wait for eighteen years! From then (1969) to 1990 seven more were created, distributed unevenly but without any clear timing.

Is there any rationale behind this peculiar temporal pattern? Of course, there is. The first great wave (1896-1904) was a merger wave. Five out of the seven big incorporations were mergers that attempted to form gigantic firms with monopolistic power within their sectors. It is clearly the case of Papelera, SG.Azucarera, Altos Hornos and, of course,

UE.Explosivos -a legal monopoly (like the CA.Tabacos)[46]. The same merger origin can be traced for the SECN (incorporated in 1909) and for the CG.Corcho (1929), but not for the other big firms founded during the four first decades of the twentieth century[47]. While the first wave of manufacturing giant firms was led by market developments, the second was almost entirely managed by state intervention. But for IBM-España and Fasa-Renault, all the new big manufacturing firms were publicly owned. The State had full responsibility in the new incorporations and in the radical change with the previous trend in big firms creation.
The incorporations of the last two decades are mainly the combined outcome of both forces: market development and state intervention. The latter would be responsible for the founding of EMPETROL and REPSOL; while the former would be accountable for the U.E.Rio Tinto merger. Astilleros was a combination of both. The real innovation was the appearance of quite a number of multinational branches: Ford España and General Motors España have renewed the top positions of Spanish big manufacturing firms[48].

3.2. **Sectoral specialization in comparative perspective.**

As for the patterns of sectoral specialization, a first look at the US, UK and German experience for 1917, 1930, 1948 and 1974 will be useful. In order to ease the comparison we will select the first 50 manufacturing firms for each of these countries -as for Spain (see table 9).

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[46] G. Tortella (1987).

[47] CASA, Duro-Felguera and Cros can't be related to this strategy because of their very limited market power when they were incorporated. Fabra & Coats, a firm linked to the first world textile producer (J&P Coats) but operating in a very fragmented and competitive market, fails to enter into the merger, monopoly-oriented, pattern. The emergence of Siderúrgica del Mediterráneo was, much on the contrary, a challenge to the hegemonic position of Altos Hornos de Vizcaya (see Manuel Girona (1989). CEPSA was created not to become a monopolist (there was a legal monopolist at that time -CAMPSA) but to take advantage of the limited space of free action allowed by CAMPSA (see later).

[48] The Grupo Torras is a very peculiar case: a holding of Spanish (mainly manufacturing) firms controlled by an investment trust (KIO -Kuwait Investment Office) owned by the Kuwaiti government.

There is nothing for us to discover about the three Chandlerian cases. It is interesting to underline that the choice of the top 50 does not modify the overall assessment of sectoral distribution in none of these countries. What is new is the Spanish case. What do we find? Firstly, a quite normal global picture. Perhaps the normality is worrying as it reveals a too low specialization pattern. But this pattern does exist.

Spain manufacturing shows one sector of continuing though slightly declining strength -basic metal industries- and another of increasing weight -transport equipment. The former was the larger in 1917 and 1930, the latter in 1948 and 1974. Chemical industries were more fluctuating but used to reach the two-digit level. Food products were the major declining field while petroleum the main growing one. If we add food, tobacco and textiles -mainly final demand oriented- we can wonder about the reasons of their abrupt decline, from 40 to 8 per cent.

Comparing with the three other major economies some points appear quite clear: an initial strength (1917) in two areas, food and tobacco and metal, transport and chemistry. By the end of the period the car-oil-metal system is dominating. Through the century Spain is much more concentrated than the others in transport equipment[49] -while remaining much weaker in machinery (electrical and non). Generally speaking, it is more the UK pattern than the American or the German.

The cost advantages derived of market considerations -proximity of raw materials, transport and energy costs, labour, capital, entrepreneurs- were at work up to the Civil War. They tended to be forgotten during the Autarcy (1939-1960), when the state intervention assigned the resources in a quite arbitrary way. Consequently, the market pattern of specialization became weaker and weaker. The figures mobilized in table 9 suggest, mainly for 1917 and 1930, a particular pattern, with food and tobacco industries, textiles, cork, some chemicals, basic metals and

[49] This seems an intriguing feature. Some explanations can be developed. In first place we may remind the very high social saving estimate reached by Antonio Gómez Mendoza (1982). As the business was relatively better than in other countries, it is not surprising to find a higher proportion of big business devoted to the building of railway equipment -once the frontiers have been closed to the imports. Secondly, the relative size of the Spanish fleet has also been reassessed. Jesús Valdaliso (1991) has convincingly argued about the Spanish relative specialization on shipbuilding as the outcome of a high intensity of maritime transportation in the Spanish economy. Indeed, shipbuilding is one of the Spanish leading sectors throughout the twentieth century until its recent crisis.

transport equipment at the core and of the system. Our hypothesis is that the industrializing policy of the Francoist regime, with its strong autarquic content pushed in non-competitive directions -with notorious failures- and countered those firms and sectors with natural growing potential. The harvest was many, small, and non-competitive manufacturing firms.

TABLE 9

SECTORAL PATTERN OF SPECIALIZATION AMONG THE TOP 50 MANUFACTURING FIRMS. USA, UK, GERMANY AND SPAIN, 1917-1974. (% OF ASSETS)

C	USA				UK				GERMANY				SPAIN			
	1917	1930	1948	1974	1919	1930	1948	1974	1913	1929	1953	1974	1917	1930	1948	1974
20	9.8	5.0	5.9	0.0	10.0	19.4	17.4	19.9	0.9	2.9	1.8	--	24.1	12.1	11.0	2.0
21	2.5	1.9	4.3	2.6	4.1	11.7	12.8	9.0	0.0	0.0	0.0	--	8.8	9.9	8.6	3.0
22	1.1	0.0	0.0	0.0	18.7	9.1	5.7	2.7	2.1	4.6	2.7	--	7.0	2.8	1.0	3.1
23	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	--	0.0	0.0	0.0	0.0
24	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.6	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.0	0.0	0.0	0.0
26	0.0	3.5	0.8	1.8	0.0	0.7	1.1	4.4	1.8	1.0	0.9	--	4.1	1.6	2.2	1.7
27	0.0	0.0	0.0	0.0	2.6	4.3	2.0	0.0	0.0	0.0	0.0	--	0.8	1.0	0.0	0.0
28	4.7	7.0	6.8	7.7	16.4	19.6	20.5	9.9	13.3	27.6	19.4	--	10.1	7.8	19.0	13.6
29	15.2	35.2	36.7	42.9	19.8	17.1	18.5	20.4	0.9	4.3	9.1	--	0.0	1.9	6.8	16.8
30	3.7	1.9	2.9	2.3	1.6	2.3	2.4	3.7	1.0	0.9	1.2	--	0.0	0.0	0.0	1.8
31	1.3	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	--	0.0	0.0	0.0	0.0
32	0.0	0.0	0.0	0.0	1.6	2.2	2.3	0.5	0.0	0.0	0.0	--	2.2	2.0	0.9	3.8
33	43.5	24.4	20.3	6.4	10.5	2.9	5.9	10.1	46.4	37.4	44.7	--	26.4	33.5	16.1	23.2
34	1.2	1.8	0.0	0.8	1.5	1.7	2.5	1.9	1.0	0.0	0.0	--	2.5	0.6	0.0	0.7
35	4.2	2.4	1.8	7.5	1.2	1.5	1.4	1.9	6.1	2.2	3.0	--	0.0	0.0	0.0	1.2
36	4.8	4.8	7.0	9.3	0.7	2.0	2.4	7.7	19.9	12.8	8.8	--	0.6	2.7	5.5	0.9
37	6.3	12.0	12.3	14.9	11.3	4.0	3.7	7.9	6.6	6.3	8.3	--	12.8	17.1	28.2	28.1
38	0.0	0.0	1.1	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.0	0.0	0.0	0.0
39	0.0	0.0	0.0	0.0	0.0	0.7	0.8	0.0	0.0	0.0	0.0	--	0.0	6.9	0.7	0.0
T	99.9	99.9	99.9	99.9	100.0	99.9	100.0	100.0	100.0	100.0	99.9	--	100.0	99.9	100.0	99.9

Sources: Alfred Chandler Jr. (1990), Appendix B., and Fortune (1975), May and August.

Note: C = Sectors:

20	Food and kindred products	30	Rubber and miscellaneous plastic products
21	Tobacco manufactures	31	Leather and leather products
22	Textile mill products	32	Stone, clay, and glass products
23	Apparel and other textile products	33	Primary metal products
24	Lumber and wood products	34	Fabricated metal products
25	Furniture and fixtures	35	Machinery, except electrical
26	Paper and allied products	36	Electric and electronic equipment
27	Printing and publishing	37	Transportation equipment
28	Chemicals and allied products	38	Instruments and related products
29	Petroleum and coal products	39	Miscellaneous manufacturing industries

3.3. How big were Spanish big manufacturing firms?

To answer this question we have heavily relied on the three appendices of Scale and Scope. Our first move has been to assess the size (in Spanish currency) of the 200th firm in the USA, and the 50th firm in the UK and Germany for each of the three relevant years.

TABLE 10.
POSITION OF THE 200TH INDUSTRIAL FIRM OF USA, AND THE 50TH INDUSTRIAL FIRM OF UK AND GERMANY WITHIN THE SPANISH RANKING OF INDUSTRIAL FIRMS, 1917-1974[50].

	USA	U.K.	Germany
c.1917[1]	5th	11th	9th
c.1930[2]	4th	4th	13th
c.1948[3]	1st	1st	2nd
1974	7th	11th	..
1990	12th	..	..

Sources: See note 51 and Carreras & Tafunell (1993)
Notes:
[1] 1917, 1919 and 1913, respectively.
[2] 1930, 1930 and 1929.
[3] 1948, 1948 and 1953.

The comparison immediately reveals a pattern of incresing reduction of the size of the Spanish big industrial firms from 1917 to 1948. By

[50] The assets of the 200th manufacturing firm in United States were: 101 millions of ptas (24.4 m. $). in 1917; 339 m. (36.1 m. $) in 1930; 2,249 m. (66.1 m. $) in 1948; and 42,086 m. (745.1 m. $) in 1974. The market value of the 50th british manufacturing firm was: 53.2 millions of ptas (4.0 m. £) in c. 1917; 314.7 m. (6.9 m. £) in 1930; 1,876.9 m. (14.8 m. £) in 1948; and 23,405 m. (414.4 m. $) in 1974. The assets of the 50th german manufacturing firm were: 61.6 millions of ptas. (41.1 m. M.M.) in c. 1917; 113.2 m. (65.6 m. RM.) in c. 1930; and 915.9 m. (155.6 m. DM.) in c. 1948. Sources: A.Chandler, (1990, Appendixes A, B and C) and *Fortune* (1975), May; (1991), April. For the exchange rates, Pablo Martín Aceña, "Sistema financiero", in A.Carreras, ed., *op.cit*, C.9.9., Oskar Schwarzer & Jürgen Schneider (1987) and Anuario El País (1992).

1948 the size of the 200th USA industrial firm (measured by the assets) was impossible to obtain for the first Spanish. The same hold true for the 50th British. Though we lack the relevant data, we have the impression that the declining trend continued at least until 1960. It was clearly reversed by 1974, and even more by 1990, according to table 10[51].

Some Spanish firms reached a quite impressive size in international terms. In 1917 this was the case of the SG.Azucarera (sugar producer and refiner), 5th among the British manufacturing firms and 6th among the Germans and, in both cases, first among the food manufacturers. The Azucarera was quite an outstanding case. The three following firms (Duro-Felguera, CA.Tabacos and SECN) had a similar size -around 26 million $. They were small among the big American firms, but substantive among the British (around the 20th) and the German (around the 25th). Still in 1930, when there were signs of relative declining size, the first Spanish manufacturing firm -Peñarroya-, was to be placed 26th among the British and 8th in the German ranking. But in 1948 none of the top 50 Spanish industrial firms was able to enter among the first US 200; the first was only 86th among the British and 38th among the German. Checking the Fortune 500 world list for 1990[52] the situation is as follows: REPSOL, the Spanish manufacturing giant, is 102th by assets; the second Spanish industrial concern, CEPSA, is 379th -and both are petroleum refiners. The high level reached by the public holding INI (24th) is not reflected in our data because we have considered each of the INI firms separately and because Fortune includes the assets of the electrical firms owned by the INI -so, the estimate becomes inconsistent. By its assets REPSOL is the 31st US industrial corporation, the 8th UK, and the 11th German. It may represent a catching-up.

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[51] According to Profitability (1975) and Dunning & Pearce (1981 & 1985) in their rankings of 497 world's largest industrial enterprises (classified by sales and not by assets), Spanish firms were absent by 1962 and 1967. They only appeared in 1972 (SEAT). The following benchmark -1978- is one of clear success: seven firms (EMPETROL, U.E.Rio Tinto, CEPSA, Tabacalera, ENSIDESA, SEAT, Altos Hornos) enter among the top 497. The industrial crisis reduced the Spanish presence by 1982 to three (EMPETROL, CEPSA and Tabacalera). By 1990, and according to Fortune, the situation was not very different: four firms (INI, REPSOL, CEPSA and Tabacalera). The trend of the first Spanish firm in the ranking is continuously increasing: 452th in 1972; 215th in 1978; 167th in 1982 and 62nd in 1990.

[52] "The World's biggest industrial corporations", Fortune, July 29, 1991, pp. 71-104.

Unfortunately for Spanish pride in big business, the second firm -CEPSA, a petroleum refiner, too- is substantively smaller (three times).

The Spanish big business has become increasingly smaller through a good deal of the twentieth century. It probably reached its minimum international size around 1960. It is now in a catching-up stage.

4. THE BUILDING AND MAINTENANCE OF INDUSTRIAL LEADERSHIP.

We focus here on the sectors where we find most of the Spanish top manufacturing firms.

4.1. The chemical industry.

The birth and development of Spanish chemical industry is closely related with the incorporation, growth and merger (in 1988) of the two leading firms in the sector: Unión Española de Explosivos (latter Unión de Explosivos Rio Tinto) and S.A.Cros. These two firms began their operations toward the end of the nineteenth century in the fields that pioneered the diffusion of modern chemistry in Spain: sulfuric acid (Cros) and explosives (UE.Explosivos). Shortly after, both moved into the production of fertilizers.

The first was Cros. Indeed, its origins can be traced back to 1817, as a family-owned firm. After three generations devoted to the production of acids, preserving their early leadership in sulfuric acid[53], Cros moved into the production of superphosphates in 1896. The financial challenges of the large scale fertilizer technology induced Cros to incorporate the firm in 1904. The newly created Sociedad Anónima Cros succeeded in attracting funds to enlarge the production building new factories near the seaside and improve the marketing through a network

[53] Probably at a much lower scale than the producers of more industrialized countries. Jordi Nadal (1986), and J.Nadal, F. Homs and J.Pages (1989).

of stock houses close to the agricultural consumers[54]. It quickly became a multiplant firm with a centralized management structure. Subsequent diversification didn't come within S.A.Cros but through the ownership control of other chemical firms, ranging from electrochemicals to farmaceuticals. This growth strategy began during the First World War and continued ever since. The head of the group remained anchored to the phosphated fertilizers production. Since the 1940's half of the Spanish market was under its control -the other half was under its main competitor, Unión Española de Explosivos (UEExplosivos).

The origins of UEE are the Sociedad Española de la Dinamita, incorporated in 1872. The SED was the first investment of a multinational manufacturing firm -the Nobel Trust- in Spain[55]. Spain, an industrially backward country with a world-size mining sector, provided a very fertile ground for the explosives production -the most dynamic item among the Spanish chemical universe. The SED wasn't the only explosive producer. The field attracted many others, and also the fiscal interest of the State. The private producers became interested in forming a stable cartel, and they did it in 1896 (Unión Española de Explosivos). They managed to persuade the government to grant them a legal monopoly in exchange for a high level of taxation. The monopoly was enforced since 1897 and for twenty years. The monopoly profits proved to be astonishing and supported a continued expanding policy[56]. UEE immediately developed the production of fertilizers taking advantage of some of its by-products. Soon after the Civil War, during the 1940's, UEE entered into the carbo-chemical business, and during the 1960's moved into the petro-chemistry. The latter was developed jointly with foreign capital and the leading Spanish oil refining private firm, CEPSA. In 1970, UEE merged with the Compañía Española de Minas de Rio Tinto -the nationalized heir of the former British-owned Rio Tinto Mining

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[54] Francesc Cabana (1992), p. 315-323. It is worth noting that the owners managed to keep complete control over the capital at least until 1929.

[55] G.Tortella (1983).

[56] G. Tortella (1987). UEE was organized as a trust and not as a multiplant firm with unified management. The pre-existing firms retained their managing independence.

Co.[57]. Rio Tinto was involved in mining, copper metallurgy and inorganic chemistry. Their merger into Unión de Explosivos Rio Tinto (ERT) was mutually convenient: some of their activities were complementary while others were coincident. The vertical and horizontal integration allowed ERT to exploit economies of scale and scope[58]. During the following years, ERT launched a strategy of rapid growth through absorptions. Its organizational structure became typically multidivisional. Nevertheless, ERT failed to fully reduce its operating costs at the same pace of its expansion. The organization slipped from multidivisional to conglomerate. The financial strategy became too risky. The 1979 oil shock was impossible to digest. A long and complicate crisis begun then that eventually led to a merger with Cros in 1988. The new firm -ERCROS- was under KIO control[59].

4.2. The Iron and Steel Industry

The development of the large industrial firm in Spain had one of its roots in modern steel production. Founded in 1882, the Altos Hornos de Bilbao (which began operations in 1886), together with other iron and steel plants in the Bilbao area (all which began producing between 1879 and 1890), represented the birth of a new industry; a new industry, using the most advanced European technology available at this time[60]. Three of these firms would merge in 1901 to form the Altos Hornos de Vizcaya (AHV), a firm that was destined to have a very strong hold on the

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[57] Charles Harvey (1981), Gómez Mendoza (1994). The nationalization took place in 1954. The Compañía Española de Minas de Río Tinto founded in 1966 Río Tinto Patiño, with a minority participation by the British Rio Tinto Zinc (former Rio Tinto Mining) and a majority share of the Canadian Patiño Mining Company, world leader in copper mining and smelting. Thanks to the Patiño technology the increasingly poor Rio Tinto ores continued to be mined.

[58] E. Bueno (1987). The merger was also desirable from a national perspective in order to achieve the proper dimension in international terms.

[59] Ramón Tamames (1990), pp. 386-387.

[60] Manuel González Portilla (1981); Emiliano Fernández de Pinedo (1983).

Spanish iron and steel market until 1960[61]. During the period of Bessemer Steel, Vizcaya steel works possessed a clear comparative advantage: rich and abundant reserves of non-phosphoric iron metal[62]. Protected by the nationalistic turn of economic policies (the Escuadra Act of 1887, the tariff of 1891, the repeal of the exemption from customs duties on railroad materials in 1896), the Basque iron and steel industry attempted to take hold of the internal market[63]. With the merger that gave birth to the AHV (1901), its actors managed to establish a large, modern, "normal" steel firm, at least in the first stage of its existence. Up to the first world war, the AHV adopted British technology and its experts and managers were formed on these bases. Later on, a technological and certainly managerial "gap" took place: new methods and products developed by the iron and steel industries of the most advanced countries in the 1920's were not adopted, given that the internal market had already been taken over[64]. A large-scale competitor - the Compañía Siderúrgica del Mediterráneo (CSM) founded in 1917 and functioning in 1923 - did not bring about any changes in AHV strategies. Its project turned out to be inconsistent because it suffered from an insuperable and fatal competitive disadvantage, in virtue of its location. AHV had only to await its downfall, in order to purchase its equipment at clearance prices (1940)[65].

The supply structure and the behaviour of the main firms in the sector, underwent no important variations until ENSIDESA appeared on the

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[61] From the beginning, the AHV produced more than 50% of Spain's pig iron and steel. González Portilla (1981), and Pedro Fraile (1989).

[62] They were able to obtain British coal at a low cost, transported by the boats that carried iron ore to Great Britain. Jordi Nadal (1975).

[63] The AHV always used cartel agreements to its best advantage, not only imposing the prices and quantities which were convenient for it, but breaking trade agreements as well.

[64] Pedro Fraile (1987)(1989).

[65] Manuel Girona (1989). The CSM could not introduce itself in any of the external (Mediterranean) markets where it was to sell its products and the internal market was saturated. However, the most serious problem lay in the fact that the CSM purchased coal and iron-ore at a much higher price than that of the Basque and Asturian iron and steel industries. It is easy to understand the company's collapse, despite its heavy financial resources.

scene in 1950. In a context dominated by a strong oligopolization and autarcy, with weak industrial and economic growth, the iron and steel industries showed no interest in increasing production. Nonetheless, political leaders and those of the INI felt that an increase in the steel supply was essential in order to accelerate industrialization; with this in mind, they decided to create a large, integral iron and steel industry on the Asturian coast, ENSIDESA[66]. By 1957, ENSIDESA had reached a position of leadership (hegemony) which it has maintained up to the present. Undoubtedly, ENSIDESA lacked the dynamism that the Basque iron and steel industries possessed between 1880 and 1913. The management of the firm was weighted down by bureaucratic obstacles and governmental controls, and in the same way, investment policies suffered drastic cutbacks due to pressures exerted by private iron and steel companies[67]. Nevertheless, state initiative had the virtue of spurring on the main iron and steel industries to modernize, especially when the liberalization of iron and steel product imports followed. In this manner, AHV undertook a plan of technological transformation that, given the enormous amount of obsolete technical materials -and knowledge- accumulated did not however prevent from selling shares to the US Steel. The building of another integral (complete) iron and steel plant in the old installations of the CSM in Sagunto at the beginning of the 1970's would represent for the AHV an excessively risky strategy, which would signal the beginning of a period of crisis from 1975 onwards when the demand for steel plunged drastically. The strategy of diversification that begun parallelly way was insufficient. Duro-Felguera - one of the oldest coal blasted furnace plants[68]- merged with two other iron and steel companies to form in 1961 the UNINSA, a firm that then promoted the construction of a new large-scale complete (integral) iron and steel plant. This required enormous financial resources which its backers were not able to contribute and finally ENSIDESA saw itself forced to support and finally to absorbe the company in 1973. Faced with the iron and steel crisis, the public sector was forced to give an enormous amount of financial assistance to remodel two giant firms (AHV and ENSIDESA) that were not capable of investing adequately and

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[66] Chilcote (1968), Schwartz & Gonzalez (1978), Martín Aceña & Comín (1991).

[67] Fraile (1992).

[68] The minero-metallurgic company Duro was created in 1857. See Germán Ojeda (1985).

timely in technology.

4.3. Shipbuilding

Spain has always been a traditionally maritime country, due to its island-like geography[69]. The construction of sailboats with wooden hulls flourished during the second third of the nineteenth century. The advent of steam and steel hulls produced a heavy crisis from 1870 up to the end of the nineteenth century. The small-scale builders were not able to produce costs comparable to those of foreign shipowners[70]. The launching of the Spanish modern naval shipbuilding industry would take place at the turn of the century. State demand was decisive for this new beginning. Astilleros del Nervión, the first large modern shipyards, emerged in 1888 as an integral part of the Navy's renewal plans which had been approved the year before. . However, this public demand was neither so large nor so regular as to sustain large-scale shipyards. On the other hand, there was no use in increasing productive efficiency since the Administration spared no expenses[71]. This brought the Astilleros del Nervión - incapable of satisfying the private demand - to its ruin. SECN and the Euskalduna Company - the other large shipbuilding company that preceded it - were luckier in looking after the demands of the merchant marine. In reality, Euskalduna, created in 1900 by a group of Basque shipping companies, responded to a strategy of vertical integration developed by them. When at the end of the first world war, the orders of the shipping companies lessened, the firm became stronger and grew thanks to specialization in shipbuilding and railway equipment (rolling stock).

The strategies -but, not the origins- of the Sociedad Española de Construcción Naval (SECN) are quite different. It was founded in 1908 with warships as its first building objective, in answer to the recently

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[69] Even in the 1970's, 95% of external commerce and 30% of internal commerce was by sea. See Rodrigo (1972) and Portillo (1981).

[70] Valdaliso (1991)

[71] Valdaliso (1991)

passed Escuadra Act[72]. Northern banks and iron and steel company interests contributed to the formation of the firm - constituting another case of vertical integration - and Vickers, a famous British shipbuilding firm, was involved in a multinationalization strategy[73]. SECN, who had purchased the assets of the Nervión shipyard, maintained an hegemonic position in the sector from the beginning. It finally abandoned its position of power in 1969 when it merged with Euskalduna.

After the Civil War, the new régime was reticent about putting the Navy into the hands of a company (SECN) which was under foreign control. This brought about the INI's creation of ENBAZAN in 1947. This firm had to deal with the same problems than all the shipyards that depended on public demand: an excess of productive capacity, high costs, etc. However, the distinctive mark of public intervention in this sector was the increasing direct participation of the State which culminated in 1969 in a virtual nationalization[74]. In part, the INI was forced to take over private shipyards that had declared bankruptcy due to poor management (Astilleros de Cádiz and ASTANO). On the other hand, the Administration - through Concerted Action, approved in 1967 - propelled a strong concentration of the existing units, hoping to achieve scale economies that would allow for the competition of the Spanish shipyards and make the most of a moment of strong expansion worldwide. The 1969 formation of AESA (Astilleros Españoles) as the merger of SECN, Euskalduna and the Astilleros de Cádiz was fruit of this policy. For its size, the new company was among the largest European shipbuilding industries. The shipbuilding industry of the country grew accordingly in an international context: by the mid-1970's Spain was the fourth world producer. Nevertheless, it did not succeed in maintaining its position since the large shipyards specialized in oil tankers for which the demand decreased after 1973, and not less significant, due to the fact that the INI did not undertake any form of economic rationalization within the companies of the group (a process which eventually led to the closing

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[72] The question of the determining character of state policies has stirred a certain amount of controversy. See Harrison (1974) (1976), Trebilcock (1973)(1974), Gómez Mendoza (1988) and Valdaliso (1991).

[73] The British firm possessed the greatest number of shares. As to its external investments see Davenport-Hines (1986).

[74] In the 1970's INI went on to control 90% of naval production. Myro (1980), Martín Aceña & Comín (1991).

down of several plants).

4.4. The automobile industry

Since the 1970's, the automobile industry has been the most important of Spain's industrial sectors[75]. Its development was incredible indeed; until the 1950's vehicle manufacturing was at very low levels[76]. This has caused many authors to affirm that the Spanish automobile industry did not evolve until this decade[77]. This point of view is inexact, since it ignores the fact that in the interwar period it had begun to take its first -and promising - steps forward. Many small firms existed that manufactured very short series of automobiles using artisan methods, and there were, as well, some more ambitious than others, dedicated to the assemblage of imported parts. The Hispano Suiza was known for the exceptional mechanical and aesthetic quality of the vehicles it produced. For this reason, the Hispano Suiza did not succumb to external competition, despite its low production rate (less than 600 vehicles annually); naturally, this allowed it to specialize in luxury items. The great expertise of its technical staff made a diversified production possible, and various types of industrial vehicles were also produced[78]. The accumulated know-how would serve to build the bases on which ENASA -the most important Spanish manufacturer of industrial vehicles- would later be constructed.

The second type of manufacturer above-mentioned - the automobile assembly plant - had two prominent representatives: the two largest worldwide producers, Ford and General Motors. The first company was established in Spain in 1920 and by 1930 more than 10,000 vehicles left

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[75] Tamames (1990) p. 344. It is well known that Spain is among the largest producers and exporters worldwide.

[76] From the end of the Civil War in 1939 up to 1954 not even a thousand private cars were produced annually. Farré (1986).

[77] Tamames (1990), p. 334, Rivilla (1980), Castaño (1985).

[78] During World War I, extremely successful airplane motors were produced. Even before in 1910, the company opened an affiliated company near Paris. Nadal & Tafunell (1992).

its assembly lines annually (part of the production was destined for various North African and Southern European markets)[79]. Ford Motor Ibérica had, moreover, revolutionized the production methods of the newly born Spanish automobile industry. The increased profits that were obtained from its overwhelming competitive superiority and the growth potential that it offered to the Spanish market caused its main rival General Motors to follow its example, unfortunately with little success. Operations began in 1932 but the Civil War soon brought things to an abrupt halt[80].

The conflict and its outcome were incredibly traumatic for the vigorous automobile industry. Faced with the enormous difficulties of importing raw materials and intermediary goods, the hostility of the Administration towards firms financed with foreign capital and the overall economic disaster in general, the two North American firms abandoned the concern. Two firms fostered by the public sector, ENASA (trucks) and SEAT (private cars) replaced them with the declared objective of substituting imported cars. The first company was created in 1946, with material assets and above all the personnel of the earlier Hispano Suiza. The second concern was established in 1950, with the majority of shares belonging to the INI and a minor participation of Spanish private interests and the Italian FIAT, that contributed technology for the manufacturing processes and products. The establishment of the SEAT was immediately followed by the FASA (1951), a branch of the Régie-Renault. However, a market so extremely protected and short of goods attracted foreign manufactures. In a little more than a decade three other companies joined together, producers of private cars and by-products - Citroën Hispania (1957), Chrysler-Barreiros (afterwards the Peugeot Talbot España, 1963) and AUTHI (1967) -, all of them subsidiary firms of each multinational - Citroën, Chrysler (sold to Peugeot) and the British Motor Corporation -. And finally, the map of the Spanish automobile industry was completed with the incorporation, for the second time, of

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[79] Large production volumes, when compared with those of the automobile companies in other European countries of the period, and with those of the assembly plants functioning during the 1960's in many developing countries.

[80] Apparently, the General Motors plant did not reach its full projected level of production.

it developed into an overly bureaucratized and poorly run organization[85]. The second automobile company (FASA-Renault) did not have these problems and its successful policies regarding its manufactured models allowed the FASA - Renault to oust the SEAT from its first place position on the internal market in 1979.

The return of Ford upset the sector once again. All the established firms were producing at high unit costs due to the fact that the series were not long enough for the excessive variety of models and variants and the low productivity of the plants. The new Ford factory (and that of General Motors) was conceived with completely different ideas in mind, responding to a maximum internationalization of the product. The plant was designed to produce a single type of vehicle, to be sold throughout Europe. The scale economies which had been realized and the programming and automation of factory production allowed a drastic cut in costs. New strategies of contract negotiation and quality control, together with the impact of new advertising techniques (one campaign launched for one single model simultaneously throughout the Western Europe) rapidly gained public approval.

4.5 The Oil Industry

Large-scale oil refineries grew in Spain as in many other countries (see section 2) -not surprising, indeed, since the oil industry is one of the most capital intensive. The particularity of the Spanish case lies in the obstacles presented by public intervention in the field.

In fact, the historical development of the oil industry, from its beginnings has been marked by the Oil Monopoly. When it was established in 1927, the Spanish market for oil and its by-products was very limited[86]. Yet numerous companies worked in the area of commercializing by-products of imported oil. Two of these were the big names in the field: Standard

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[85] Overall costs represented a very high percentage in the SEAT'S cost structure. Commercial organization was very heavy and business management neglected rationalization. See García Palencia (1967).

[86] Consumption remained at insignificant levels until 1920, due to the fact that there were only several thousand cars in the country at the time. See Sudrià (1990).

Oil (through two branch subsidiaries) and the Royal Dutch Shell (also through a subsidiary). These, plus a middle-sized Hispanic-French company (Porto Pi) had begun a fierce competitive fight for a greater share of the market[87]. This situation was dramatically altered by the governmental intervention mentioned above. From that moment on, a monopoly existed regarding imports, refinery, and the distribution of oil and its by-products. The CAMPSA was formed to manage the monopoly, with a majority of private capital but strong government participation as well. The companies active in the field were expropriated. However, CAMPSA only fully carried out one of its tasks: distribution (transportation and storage)[88]. This was the main task entrusted to it, which was, naturally, closely linked to the fiscal objective of the Administration. It did nothing to increment the crude oil refining capacity, which was extremely limited at the time[89]. There was no subsoil searching or surveying for hydrocarbons, which should have been one of its tasks. The company let completely unattended the final step of the distribution process: the sale of fuels to the consumer. CAMPSA was inefficient with regard to management and operative costs[90]. This can be attributed to the fact that the fixed assets it managed belonged to the State which also controlled investments. With a captive market and fuel sold by individual licensed dealers, CAMPSA limited itself to the sale of oil-based products and refrained from investing (in marketing as well). This attitude changed only recently with the entry of Spain in the EEC; because in 1947, when the company lost its monopoly over research, importation and refining, it retained it with regard to distribution and commercialization[91]. This fact conditioned the possibilities of expansion

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[87] Tortella (1990); the same author gives us a more detailed description in Tortella (1991).

[88] Tamames (1960).

[89] The figures on imports of crude oil and principal by-products in Tortella (1990), p. 95. This author believes that the company operated rationally, given that the reduced size of the Spanish market did not justify the heavy technology for a first plant which was needed to install a refinery using the cracking .

[90] Fernández Cuesta (1986).

[91] In line with Community law, Spain abolished at the end of 1992 its previous monopoly on gasoline sales. The CAMPSA service stations (whose property had been transferred to the State), together with the remaining assets, was divided up in 1985

Ford (1972) and General Motors (1979)[81].

Notwithstanding this brief outline, much more needs to be said about the four companies that we have just mentioned. The first two - in chronological order - and the last two, are precisely those which were among the ten largest industrial firms. The SEAT was the main impulse in the motorization: it put Spain on wheels. SEAT's hegemony was absolute between 1953 (when manufacturing began) and 1976: it produced 59% of all vehicles manufactured in Spain[82]. It was therefore able to realize an efficient scale of production, even if quite inferior to what an optimal level could have been. SEAT like ENASA - in the industrial vehicle sector -was able to profit fully from the advantages derived from government policy, but has also suffered its long-term negative effects. Absolute protection against external competition[83],barriers to entry[84], government price intervention (until 1979!), scarce or non-existent export possibilities - due to the subordination of the licensed branch firms and the total technological dependence on outside sources conditioned the direction and orientation of the automobile companies. SEAT (and ENASA) could rely on financial backing and government management interference which explains why

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[81] In the area of industrial vehicles, ENASA had to face the competition of various manufacturers, the most well-known being Motor Ibérica (Ford's follow-up that quit manufacturing in Spain in 1954), SAVA and IMOSA (transformed in MEVOSA). For more details see Tamames (1990).

[82] Yearly production details of the various factories - not fully coinciding - in Argandoña (1972) and Castaño (1985). 1975 was the first year in which SEAT'S interest (shares in vehicle production) were below 50%. Before 1963, this figure was above 60%, despite the fact that, on the average, not more than 25,000 vehicles were manufactured annually.

[83] Imports were practically vetoed until 1979, and were not effectively - and quickly - liberalized until Spain became part of the EEC in 1986. From 1976 to 1979 the importation of private automobiles represented just 3.1% (in units), a percentage which was slightly less than ten years before. See data in Castaño & Cortés (1980).

[84] Plant installation required administrative authorization, whose concession implied an elevated percentage of national materials regarding parts and products utilized and a minimum capacity of determined production. The Government used this last requisite as a means of limiting possible undesirable competition, as happened with Volkswagen in 1965.

and the strategy of the oil industries. Obligated to sell their products to the CAMPSA for fixed prices and fixed quantities and forced to buy a part of the crude oil from a public firm (HISPANOIL), they were not able to carry out vertical integration[92]. The only firm that developed a growth strategy analogous to the one implemented by the oil industries of other countries was able to do so thanks to a small opportunity given by the legislation passed in 1927. CEPSA, founded in 1929, acquired all rights concerning the production of crude oil in an area of Venezuela and built the refinery - with North American technology - outside the territory covered by the Oil Monopoly in order to furnish the non-peninsular Spanish zone, and, supply fuel to the monopoly. After ten years' time, CEPSA threw itself actively into exploration and research - not only was this firm a pioneer in the field, but the only private national company that had a relevant role; one involving high investment costs and great risks[93]. A little later it participated actively in the creation (1949) of the first refinery built on the Spanish peninsula (REPESA), destroying the autarquic dream of obtaining hydrocarbons from the distillation of the country's mineral resources[94]. When in 1964 it was authorized to

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among the company shareholders, and from this moment on, all national or foreign companies are free to create their own chain of gasoline stations.

[92] In reality, the refineries did not sell all their production to the CAMPSA. Several special products, utilized by the petrochemical industry were sold outside the monopoly , as also happens in the case of exported fuels. Furthermore, the refineries had already been authorized, for some time, to sell lubricants and any other primary commercial product to the consumer, by paying a State tax. See Santamaría (1985), p. 69. In any case, fuels purchased by the CAMPSA represented an important fraction of refinery sales. See Myro (1980), p. 187, and Borrell (1978).

[93] In any case, this not too successful attempt at exploration was very limited, when compared with the results of non-producing countries, and those of the public industries. See Laca-Cotorruelo & Sanz (1978), Myro (1980).

[94] This was the initial project backed by the INI to increase the national production of fuel and lubricants, which gave birth to ENCASO in 1942. The same process used in Nazi Germany was to be applied in order to obtain hydrocarbons by synthesis. Financial restrictions and lack of technology and technical assistance, destroyed a project that was outlandish at its start from an economic point of view. However, a large part of the funds invested in the 1940's were concentrated here by the Institute. The alternative project of constructing a mixed refining industry was repeatedly proposed by the CEPSA to INI (the industrial public holding). Once the official consent was received in 1947, in order to reform the Monopolio de Petróleos on new foundations, CEPSA took on the responsibility of finding a foreign partner (Caltex Oil products) to provide technology and financial

construct its own refinery[95], CEPSA quickly developed and expanded a conglomerate of petrochemical industries, reinforcing its commercial structure. The high level of vertical integration and product diversification achieved, in addition to the well known economic efficiency of the head of the group - the refinery - allowed CEPSA to become a multinational company which is exceptional in the Spanish business context.

The Spanish oil industry finally gave birth to another modern enterprise in the public sector through the creation and merging of firms. The first step was taken in 1974, when the EMPETROL was formed, or EMP, as a result of the merge of three refineries in which the INI held the majority of the company's capital (ENCASO, REPESA, ENTASA) - incorporating in 1985, the last independent public (state-owned) refinery PETROLIBER. This horizontal integration in the public sector was intended to improve management and reduce operating costs. The creation of the Instituto Nacional de Hidrocarburos (INH) -a holding that groups all oil-related companies in which the State possesses shares- allowed for an intensification of the processes of organizational rationalization already undertaken[96]. This culminated in 1987 with the creation of REPSOL. This company is the head of a group of companies formed by REPSOL EXPLORACION, REPSOL PETROLEO, REPSOL QUIMICA and REPSOL BUTANO, firms that concentrate all the public oil business in each of its separate phases of production. REPSOL is an extremely integrated firm, horizontally as well as vertically. This has made possible the adoption of

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assistance in exchange for a crude oil supply. See Martín Aceña & Comín (1991) pp. 203-212.

[95] This was not an isolated initiative. Between 1964 and 1968 the government authorized the installation of three refineries maintained with private national and foreign capital -the latter with a growing share, although minority. With this scope in mind, two oil companies, Petróleos de Mediterráneo (PETROMED) and Petróleos del Norte (PETRONOR) (the third plant was built by the chemical firm UE.Rio Tinto) were created. Moreover, between 1961 and 1969, the construction of three more refineries was approved with the majority of capital coming from the public sector, in La Coruña (Compañía Ibérica Refinadora de Petróleos, PETROLIBER, a mixed company following the REPESA scheme), in Puertollano (ENCASO) and in Tarragona (E.N. de Petróleos de Tarragona, ENTASA, to which another refinery in the same area with its corresponding firm would be added - Asfaltos Españoles, ASESA - whose capital was distributed in equal parts, by CAMPSA and CEPSA). A total of ten refineries now existed (and seven companies which completed the map of the Spanish Oil Industry. Santamaría (1988).

[96] Fanjul (1989)

organizational schemes and commercial and financial strategies similar to those of the large European oil companies (of which REPSOL is a part). The introduction of a business image and a well-recognized commercial trademark[97] seem to show that, even if at an extremely late date, the Chandlerian firm has finally emerged within the Spanish oil industry.

5. TOWARD A CHANDLERIAN INTERPRETATION: THE THREE-PRONGED INVESTMENT.

5.1. **Production.**

We have approached the investment in production and new technology through the change in assets -i.e., variation in assets in real terms (pesetas of 1917). As usual, we concentrate on the first 10 manufacturing firms, but for the sake of the dynamics we follow each firm on the top from the beginning to the end of the period.

[97] Fanjul (1989), Chaves (1989)

TABLE 11.
CHANGE IN ASSET VALUE. (in million pesetas of 1917)

Firms	1917	1917-30	1930-48	1948-60	1960-74	1974-90
SGAzucarera	313.4	-29.2	-187.2	70.8	31.8	..
Peñarroya	156.1	699.7	-811.3	280.9	..	..
Duro-Felguera	114.1	3.0	-55.0	212.0	-14.5	..
CATabacos[a]	107.7	263.7	-181.0	134.1	588.2	3.6
SECN[b]	107.1	366.3	-264.6	156.3	} Astilleros	--
Papelera	76.6	0.8	-37.8	30.3	198.2	..
Fabra&Coats	65.5	18.5	-55.5	..	..	..
Altos Hornos[c]	65.0	168.7	-231.5	696.3	670.1	-365.1
Filipinas	54.9	58.0	-54.5	107.6	..	..
A. Nervión[d]	53.8	} SECN	--	--	--	--
CG. Corcho	--	252.6	--	--	--	--
SiderúrgMed[c].	35.9	109.5	} AHV	--	--	--
UEExplosivos[e]	44.9	92.5	1.5	247.3	} UERT	--
Cros[f]	15.3	113.7	-23.1	214.9	351.4	} ERCROS
EN.Bazán	--	--	140.8	651.7	155.5	-542.7
Calvo Sotelo[g]	--	--	129.4	1,330.7	} EMPETROL	--
ENASA[h]	11.9	23.8	66.9	201.5	43.4	-268.4
Maquinista	19.8	17.9	38.7	140.1	..	..
ENSIDESA	--	--	--	2,104.0	2,111.9	-2,402.9
CEPSA	--	91.5	-25.0	449.1	1,058.6	-275.3
REPESA[g]	--	--	--	362.2	} EMPETROL	--
EMPETROL[g, i]	--	--	--	--	664.3	} REPSOLPet
UERioTinto[e, f]	--	--	--	--	1,116.9	} ERCROS
Astilleros[b]	--	--	--	--	1,032.7	-1,176.9
SEAT	--	--	--	323.3	1,230.0	-367.5
Ford España	--	--	--	--	1,036.3	-438.8
RepsolPetr[i]	--	--	--	--	--	-1,690.1
FASA-Renault	--	--	--	..	641.1	421.2
General Motors	--	--	--	--	--	1,041.4
CASA	--	..	32.2	..	..	909.5
IBM España	--	--	..	..	..	924.4
ERCROS[f]	--	--	--	--	--	-1,531.3

--: Do not exist.
..: Under 200th position (all the firms). For 1990, under 100th.

Notes:
[a]) CATabacos will change into Tabacalera.
[b]) SECN, Astilleros de Cádiz and Euskalduna form Astilleros Españoles.
[c]) Altos Hornos take over Siderúrgica del Mediterráneo.
[d]) Astilleros del Nervión was absorbed by SECN.
[e]) UEExplosivos merges with Española de Minas de Riotinto to form UERT.
[f]) Cros and UERT merge into ERCROS.
[g]) ENCASO and REPESA merge into EMPETROL.
[h]) ENASA was formed through the nationalization of Hispano-Suiza in 1946.
[i]) EMPETROL and Petroliber merge into Repsol Petróleo.
Source: Carreras & Tafunell (1992) (1993).

The evolution is quite dramatic. From 1917 to 1930 the experience varies from the 700 million 1917 ptas invested by Peñarroya[98], to the real disinvestment of 29 millions by SG.Azucarera. Unless the latter, all the others, as could be expected, have positive developments. The twenties were a very prosperous period also for Spain. The top manufacturing firms engaged in expanding their productive capacity -i.e., invested in production. Many multiply their previous size by factors ranging from two to eight in only thirteen years. New firms appeared.

The period 1930-1948 was a disastrous one. The vast majority of the firms were unable to make positive net investments[99]. With a few exceptions of small caliber (Maquinista, CASA, UEExplosivos), the private sector was unable to invest in production. Only the newly created "national enterprises" (Calvo Sotelo, EN.Bazán, ENASA) committed themselves to a substantive growth in production.

The years 1948 to 1960 were of a very different standing. Prosperity came back for all the firms. Some were unable to compensate for the disinvestments made in the previous period: SG.Azucarera, Peñarroya, Tabacalera, SECN, Papelera, Fabra & Coats. They were the real top firms in 1917, and found themselves in a very declining situation. The huge (in historical terms -we are using 1917 pesetas) real expansion in production came again from the public sector: ENSIDESA and Calvo Sotelo made enormous investments. Other newly created public firms followed their pattern: EN.Bazán, SEAT and ENASA. They worked in sectors with high economies of scale, and the private firms of those sectors also expanded. In steelmaking (where ENSIDESA took the lead), Altos Hornos and Duro-Felguera also expanded dramatically their equipment. In oil refining (Calvo Sotelo), we find REPESA and CEPSA developing, too. In shipbuilding (EN.Bazán), the SECN followed the pattern. Car-making seemed a bit exceptional -but a more complete information on FASA-Renault should produce the same follower effect by the private to the public (SEAT, ENASA). The only exception among the top firms to this pattern of public leadership seemed to be the private

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[98] But this figure may be an overestimate because two different reasons: the assets include mining activities, and the assets are valued in French Francs -the peseta being depreciated in 1930.

[99] Perhaps the assessment of their performance is worsened by the fact that they were slow in revaluing their assets according to inflation. Nevertheless, we have checked their market value and the results found fluctuate closely around the book value.

chemical firms UEExplosivos and Cros. Altogether, the change in technological leadership was completed: new sectors emerged, new firms appeared while the old sectors and firms declined.

The years 1960 to 1974 were the golden era of Spanish economic miracle. It is no wonder to see how large were the investment commitments of the top manufacturing firms. A number of elements should be underlined. The first one is the "wave" of mergers: Astilleros Españoles in 1969, UERio Tinto in 1970, EMPETROL in 1974. The search for larger scales and more competitiveness was the reason behind these moves. Two of them (Astilleros and Empetrol) had in common the mixing of private and public firms within new firms of mixed ownership. A second element is the stagnation or crisis of old firms: Duro-Felguera, SG.Azucarera, even ENASA. Others simply disappear from our list of the top two-hundred: Peñarroya, Fabra & Coats and (Tabacos de) Filipinas. The boom period is a critical one for many of the oldest and most respectable Spanish manufacturing firms. These failures seem more related to their strategy than to the sector performance -indeed, quite good in many cases (steel, sugar, car-making, metal producers, tobacco). A third point is the complete consolidation of a young sector, car-making, with SEAT, FASA-Renault and Ford (still in the investment stage by the end of 1974). Their productive expansion is the largest (2,907 million 1917 ptas.). Steel makers (ENSIDESA and Altos Hornos) are second with 2,782 million 1917 ptas, followed by oil-refiners (EMPETROL and CEPSA, 1,723), chemicals (UERio Tinto and Cros, 1,468) and shipbuilders (Astilleros and ENBazán, 1,188).

Except for some of the car-makers, the period 1974-1990 has been extremely painful. It can only be compared with 1930-1948. The old top positions have been completely destroyed except the very modest resistance of Tabacalera. The recently expanding sectors and firms suffer a dramatic contraction: steelmaking (-2,768 million 1917 ptas.), oil refining (-1,965), chemicals (-1,531), shipbuilding (-1,720). It is shocking how similar these figures are to those of the previous expansion. The worst performance, the shipbuilding companies, has led to the closing of entire shipyards and the abrupt decline of their home towns.

The extent of the crisis sheds a dark shadow on the assessment of the previous investment strategies. The performance is worse the more public is the company: compare ENSIDESA to Altos Hornos, or REPSOL PETRÓLEO to CEPSA. The mergers (REPSOL and ERCROS) have been

oriented more toward the contention of a crisis than to the foundation of a growth. Only the automobile industry had a less critical development. ENASA, SEAT and Ford went wrong (this is not really the case for Ford but the 1974 benchmark may overestimate their real investment), but Renault and General Motors went very well. The company strategies are critical in such a case. Firms with new technologies have reached the range of the top 10 manufacturing: CASA (a plane builder, publicly owned) and IBM España (with a strong commercial component).

The overall impression is one of too high discontinuity. The firms seem unable to protect their production investments, and everything done in a period can vanish out in the following. This fragility may be the outcome of state hyperactivism combined with rent-seeking.

5.2. **Management.**

A real managerial tradition begins in Spain only toward the early 1960's. Schools of management and a management culture with specialized journals begins then[100]. There were engineering basis for such a tradition since the last century, with a host of specialized journals[101]. The years around the First World War -notorious in our story for so many reasons- were also the period of multiplication of economic and business journals[102].

The proto-history of modern management was to be found in railway companies, but we still are very short of knowledge about it[103]. The industrial firms began to modernize through the adoption of Taylorism. Taylor's "Scientific Organization of Labour" began to be known since 1914 and was first adopted in steel works and engineering firms during

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[100] W.Frederick & Ch. Haberstroh (1969). A. Suárez (1983).

[101] Garrabou (1982).

[102] See A. Carreras (1989), M.V. De Diego & J. Timoteo (1985)

[103] But the situation is beginning to change with Javier Vidal (1993).

the 1920's[104]. The Civil War provoked some dramatic changes in the management of large firms. The managers loyal to the Republican régime lost their positions after the War. A new managerial class rose with good political connections as their main asset. Moreover, the wave of nationalizations and the creation of many new "national enterprises" opened the way to new managers. It is an interesting feature of Spain's post war years the fact that many of these came from the military and diffused their own culture in the managerial field. After the stagnating 1940's, the creation of the "Comisión Nacional de Productividad" (National Productivity Commission) in 1952 and, just afterwards, the by-products of the US-Spain military agreement of 1953, opened a new period. For some twelve years the activity of managerial retraining and of professional development was very much intensified. Many "productivity missions", public grants, new committees, new specialized journals and, eventually, even new management schools, built new managerial capabilities in Spain's business world[105]. The movement slowed down since 1964 when the management schools became well established and the foundations of the catching-up, too[106]. It was also the end of the most pro-liberal (in economic terms) stage of the Franco régime.

The main paths for the introduction of new management techniques were the consulting firms. They used to be of French or US origin, and the first to operate were created in 1952 (TEA) and 1953 (Bedaux)[107]. Still nowadays they retain a critical role in the introduction and diffusion of the most advanced technology related to labour management - robotics.

Another hint of the modernity of management: the introduction of new technologies -computers- has been studied by Santiago López. According to him the first companies to install computers were the railway

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[104] J.M. Vegara (1971). J.Tomás & J.Estivill (1979).

[105] J.L. Herrero (1990).

[106] Social capabilities as described by Moses Abramovitz (1986).

[107] P. Egurbide (1976).

companies during the thirties[108].

The diffusion of top management as differentiated from ownership has been for long time present in Spanish business life. The railway and the mine business of the nineteenth century were very much of this kind. The fact of being foreign investment induced a higher complexity in the firm organization. Nevertheless this top management used to be foreigner. A further and critical step toward the emergence of a native class of managers in the manufacturing sector was the merger wave of the end of the nineteenth century. The mergers introduced systematically a top management component. The new firms were always multi-plant (not multi-divisional): SG.Azucarera, CA.Tabacos, Papelera, UEExplosivos, Altos Hornos, and so on. The investment role of Spanish banking from the First World War also allowed for the diffusion of management ownership cleavages on a more modern basis. By 1960, Linz and De Miguel observed this new pattern in a large sample of in-depth interviews with business leaders[109]. The trend was confirmed in another research conducted by Payno around 1970[110]. At that moment, the manager was much more present in business life. Nevertheless, there has never been in Spain a "managerial revolution". Managers have remained well under control of the ownership[111].

5.3. **Distribution.**

We are very short of information about the development of modern distribution in Spain. As far as basic marketing techniques are concerned, we can point at some elementary developments. The poster enjoyed a very wide diffusion since early this century. The printed publicity as well as the oral publicity through the radio were the two main channels for the new products oriented to mass markets. The twenties and the thirties assisted to major developments along these

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[108] S.López (unpublished).

[109] Linz & De Miguel (1963), (1963-1964), (1964a) and (1964b).

[110] J.A. Payno (1973).

[111] Salas (1990).

lines[112]. The first multi-stores appeared during the interwar years[113]. The post-war years were of frustration of consumption expectations. Only since 1960 new developments became possible mainly based on TV mass advertisement.

We do not yet know about the diffusion of distribution techniques, though it seems likely that these were only developing significantly during the 1920's, when branching became more common. They resumed actively in the late 1950's and, mainly, in the 1960's. The role of foreign direct investment has been fundamental in these developments[114].

The intermediate character of the goods produced by the top manufacturing firms has been an obstacle to the development of modern marketing. To produce to very few customers is not the proper incentive to innovate in distribution techniques[115]. Only the firms oriented to mass demands: food and drugs, domestic appliances, cars and so on, succeeded in developing huge markets through an intensive use of publicity[116].

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[112] C. Garitaonaindía (1988). J.Timoteo Alvarez (1989).

[113] J. Casares ed. (1988)

[114] Roldán, Muñoz & Serrano (1978).

[115] But Pedro Fraile (1991) completely forgets this argument as a relevant one in his long complaint on the low productivity of Spanish firms.

[116] See Asociación Española de Anunciantes (1969).

6. THE UNMAKING OF ORGANIZATIONAL CAPABILITIES, BETWEEN STATE AND MARKET.

A provisional conclusion that can be reached for Spain is the failure to build organizational capabilities of the kind needed to develop "global enterprises". We perceive, in a simplified approach, two main reasons. The first derive from the unrestricted working of markets. The second from the intervention of the state. Let's begin by the explanations coming from the market side.

We have underlined the limited size of the market and the role of the commercial policy. We would like to suggest here that even when the market was growing smoothly and no reallocative policy was undertaken, nothing really significant developed in the direction of building organizational capabilities.

An interesting test is the development of trade-marks. Alfred Chandler has insisted on the centrality of trade-marks for the development of organizational capabilities. They are critical in the deployment of marketing policies, in the formation of managerial hierarchies and in the investment in new technologies. The trade-mark represents the key to mass consumption. A recent article by Mira Wilkins underlines and expands these considerations[117]. As she, interestingly enough, points out, her interest for trade marks arose with a question by Juan Linz on the absence of Spanish trade-marks. The question, formulated at the beginning of the sixties, has deserved a detailed and fascinating answer by Mira Wilkins with a delay of more than a quarter of a century -quite a normal feature in the social sciences. The substance of Wilkins response is: trade-marks are related with levels of income. The richest the country (in per capita terms), the more likely they develop their own trade-marks. It may be possible to introduce some delays or some inertias in order to cope with some outlier observations but, generally speaking, here we have a simple and sound theory. The high standards of living in the turn of the century United States was responsible for the first upsurge of well diffused and recognized trade-marks. Other European countries followed, but with significant delays. Indeed, trade-marks were identified with American products for many decades.

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[117] Mira Wilkins (1992).

If this approach is a sound one we may expect the rise of Spanish trade-marks in the coming years. Moreover, given the previous, continuous and spectacular growth of Spanish per capita income since the fifties, we may wonder how is it that we are still short of Spanish trade-marks - as we are.

But, is the trade-mark so well related to income per capita? It is difficult to test for this correlation. How can we measure trade-marks? A short-cut is multinationals or, at least, giant firms. Daems developed a test of this kind in order to realize the underlying factors to the growth of big firms[118]. He provided some puzzling facts, as the astonishing high level of UK multinationals in real per capita terms among the European countries or, on the contrary, the surprising low level of Spanish multinationals in the same terms. Just as UK had by 1982 many more multinationals than expected, Spain had less. Spain was not alone: Norway or Austria were in a similar situation. A possible, but insufficient, explanation was low R & D levels. Another line of reasoning is to check the revealed comparative advantage of a country against the set of sectors more conducive to giant firms. This is the line we would like to explore.

As Chandler has perfectly argued, you do not get modern business enterprises with managerial hierarchies, huge size and well-known trade marks in every manufacturing sector. There are some where big firms do not appear[119]. The difficulty to develop trade marks is even bigger outside the manufacturing sector. You do not get trade marks out of the agricultural or the mining sector -at the very maximum you get "dénominations d'origine". And you fail to get trade marks with services not amenable to foreign trade.

Those countries that have a set of comparative advantages located in sectors were trade marks are unlikely to develop may grow -perhaps not so quickly- but will fail to reach a large size for their top firms. Even when they develop big firms, they will tend not to be of the trade-mark kind. Exporters of food products, minerals, raw materials and semi-manufactured goods are ideal candidates for this class. Here we find Spain -and other Mediterranean countries- and some Scandinavian

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[118] H. Daems (1987).

[119] A. Chandler (1990).

countries (Norway, Finland until very recently), and Austria, and South Africa, and Australia and New Zealand, and the wealthiest countries of Latin America, and Canada, and so on.

The testing of this hypothesis is too much demanding within the space at our disposal, but we will try to develop it in the near future. Meanwhile we simply suggest that the peculiar revealed comparative advantage of Spain was not conducive to the developing of trade marks, at least until 1970. Oranges and fruits, iron ore, lead, pyrites, wine and oil were unlikely candidates to trade-marks. Even the late growth of industrial exports was linked to non trade-mark sectors: shoe-making and shipbuilding. During the last twenty years Spain has begun to show a very competitive profile in one particular sector typically trade-mark led: automobiles. Spain is currently a world major exporter of cars. These cars have well-recognized trade-marks: Ford, Opel (General Motors), Volkswagen, Renault, Nissan, and so on. Spain has entered the era of trade-marks through non-Spanish multinational firms. This is what "global enterprise" also means.

The market defined comparative advantages haven't been conducive to the growth of Spanish big firms. The factor endowment was also inimical, mainly because income factors -labour too much abundant, capital too much scarce, even human capital quite unsatisfactory, and cultural attitudes not business oriented.

The state was also responsible. Public intervention defined a set of priorities that destroyed the potential -even limited- for big firm development within the Spanish economy. The autarchic policies of the forties and early fifties produced a painful misallocation of resources. New firms were created and attracted huge public investment in sectors and/or locations quite inconvenient in a context of open market economy. The rise of new "national" firms meant a major discontinuity in Spanish big firms history. They were too big not to disturb previously existing private firms; they were too small in the world context and too distant of the competitive edge. The slow growth of private, market-oriented firm, though modest and perhaps marginal in core-technology terms, was abandoned for the new national giants. They failed to survive the exposure to the market and are still diverting huge resources to finance their deficits.

Spain has failed to develop global enterprises of national origin. She is entering in the world arena through the acceptance of global enterprises

to operate within Spain. It may well happen that we will see global enterprises directed by Spaniards well before than Spanish global enterprises.

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