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## **Structural Characteristics of the Spanish Economy**

### **Introduction**

Economic globalization is an historical process, the result of people's innovation and technological progress. This refers to the bigger interest in the integration of worldwide economies, particularly by means of trade and financial flows. We also refer to movements of people (work) and knowledge (technology) through international borders. As the International Monetary Fund (IMF) defines it, globalization is, in its basic form, related to a transnational border economic extension of the same market forces which have been operating in all economic activity levels for centuries – small village markets, urban factories or financial centers. This integration is connected to a variable - business productivity, which reflects the efficiency in using human resources, capital, and knowledge in order to produce consumer goods and services (Levitan, 1984).

During these last years, Spain has experienced important economic growth leading the country towards a level of welfare almost equal to Europe and other developed countries. However, this approach has almost exclusively been possible thanks to the faster rate of employment growth. It is foreseeable that this variable will continue its growth at a moderate rate from now on, lowering the level of Spanish welfare. Spanish productivity, which is already lower than the rest of its European competitors, is the only way to maintain the welfare level. We have to emphasize the importance of a high industrial productivity in the country, since high productivity is related to better social welfare, and this permits at the same time a more extended internationalization of national firms and allows the creation of multinational companies, contributing to the yield of profits to the country.

This paper aims to analyze the Spanish economic situation from a theoretical-empirical point of view in order to construct a theoretical approach to how the productivity of a country affects the internationalization of its industrial manufacturing sectors. The main hypothesis would be that if a country increase productivity its economy will be prone to an internationalization process and in the mean time the social welfare of the country will improve, unfortunately we consider it is not the Spanish case.

### **A structural problem**

Some years ago, western industry started experiencing a deep and fast transformation of its structure and growth basis. This event can be explained by the convergence of different factors and it becomes clear through many ways such as economic globalization, the internationalization of firms, technological changes, new demographic phenomena, etc. These are some of the challenges and tendencies that have become more intense during the last years, making them key factors of this transformation. We are looking at an important change of the basis of the economic productive model which had characterized developed economies during the last quarter of the century. The main characteristics are productive outsourcing, globalization of the manufacturing chain, intense financial flows, the prominence of new countries in the international sphere, a fall in transportation costs, etc.

As a result of all these processes, the world economy is experiencing a deep transformation, which is clearly reflected in the new international industrial model. Each of the European countries has avoided these challenges and tendencies of the western world.

In the Spanish case, it has become worse because of the following reasons:

- Labour input intensity.
- Medium and low demand sector predominance.
- Low innovation ability.
- High presence of small, medium companies and micro firms.
- Industry's limited influence with regard to Spanish global welfare, compared to the EU. Nowadays, a secondary sector means a 17,5 % gross added value to our country's welfare.

In the following table, there are three financial indices of the European industrial sector which provide more details regarding business turnover, number of firms and gross added value in the European Union of 27 countries in the year 2006. This aims to show each country's business solidity.

Total amount for the business			Number of Firms			Gross Added Value (GAV)		
Country	Millions of Euros	%	country	Number	%	country	Millions of Euros	%
EU 27	7.983.811,0	100	EU 27	2.361.623	100	EU 27	2.003.987,3	100
Germany	2.049.544,5	25,67	Italy	520.658	22,05	Germany	510.097,8	25,45
Italy	1.132.459,5	14,18	France	259.866	11,00	United Kingdom	288.518,5	14,40
France	1.045.355,3	13,09	<b>Spain</b>	229.271	9,71	Italy	245.890,2	12,27
United Kingdom	889.839,8	11,15	Germany	202.007	8,55	France	245.870,9	12,27
<b>Spain</b>	593.338,3	7,43	Poland	197.520	8,36	<b>Spain</b>	150.001,9	7,49
Netherlands	352.989,8	4,42	United Kingdom	153.236	6,49	Netherlands	72.532,3	3,62
Belgium	281.244,8	3,52	Czech Republic	150.585	6,38	Norway	71.684,8	3,58
Poland	239.314,0	3,00	Portugal	100.227	4,24	Sweden	62.051,2	3,10
Sweden	216.406,1	2,71	Greece	94.090	3,98	Poland	60.894,7	3,04
Norway	183.580,1	2,30	Sweden	63.431	2,69	Belgium	56.749,7	2,83
Austria	168.510,3	2,11	Hungary	62.649	2,65	Austria	51.532,8	2,57
Finland	152.833,4	1,91	Rumania	60.119	2,55	Ireland	38.738,8	1,93
Czech Republic	141.256,1	1,77	Netherlands	47.375	2,01	Denmark	38.265,8/	1,91
Ireland	126.482,5	1,58	Belgium	36.687	1,55	Finland	36.957,8	1,84
Denmark	114.940,2	1,44	Austria	30.560	1,29	Czech Republic	32.837,8	1,64
Hungary	96.041,7	1,20	Bulgaria	29.892	1,27	Portugal	22.855,1	1,14
Portugal	91.076,1	1,14	Finland	27.479	1,16	Greece	19.458,0	0,97
Rumania	65.969,3	0,83	Denmark	22.311	0,94	Hungary	19.356,3	0,97
Greece	62.511,0	0,78	Norway	21.179	0,90	Rumania	15.832,8	0,79
Slovakia	46.375,4	0,58	Slovenia	18.458	0,78	Slovakia	9.800,4	0,49
Luxembourg	27.160,7	0,34	Lithuania	17.356	0,73	Slovenia	7.196,8	0,36
Bulgaria	25.881,5	0,33	Latvia	8.439	0,36	Bulgaria	5.310,7	0,27
Slovenia	15.133,3	0,32	Slovakia	8.368	0,35	Lithuania	3.355,1	0,17
Lithuania	8.848,0	0,19	Estonia	5.850	0,25	Luxembourg	3.058,3	0,15

Estonia	7.471,9	0,11	Cyprus	5.687	0,24	Estonia	2.478,1	0,12
Latvia	7.471,9	0,09	Ireland	4.618	0,20	Latvia	2.169,7	0,11
Cyprus	4.175,0	0,05	Luxem- bourg	1.014	0,04	Cyprus	1.461,1	0,07
Source: Eurostat								

One of the remarkable examples is the privileged German situation. Although the country has a lower number of companies compared to Spain, net revenues and gross added value are clearly higher. Poland is also an interesting case. Despite being in the top five for volume of firms, it is at a disadvantage with regard to sales volume and in a worse position for gross added value. We can observe that Spain is in fifth place with regard to industrial turnover and value added, though it is the third country if we take industrial businesses in 2006 as a reference.

One of the effects of the Spanish productive system is clearly apparent when productivity rates are observed, since these rates are below those of the rest of the countries with a higher standard of development. Furthermore, Spanish industry is currently suffering an unprecedented economic crisis, which is damaging the business structure at different levels, provoking an intense increase of unemployment and falling market demand.

### The strategic social role of industry

The Spanish secondary sector, as we have already mentioned, doesn't hold an outstanding position within the European economy. It would be necessary to provide a new context for Spanish industrial policy, in order to grant a privileged position to firms' productivity and their expansion in the international market.

Thanks to Solow's (1957) theoretical work and the large amount of empirical and theoretical literature which has appeared since then, we can study the variations in firm productivity<sup>1</sup> throughout the years. These changes are due to the biggest use of labor and capital and also to the way of using both factors. The last decade's wide theoretical evidence permits us to reach the conclusion that the Solow residual factor, also known as the Total Factor Productivity (TFP), has a special role in productivity increase.

Despite its validity, its age and the high utilization of the term, some confusion still exists about this concept and some others such as "work intensity which means an increase of work, that is an excessive effort from the worker, efficiency which means producing goods and offering services of high quality in the shortest time possible, effectiveness understood as the extent to which the objectives are accomplished, and "production" a term referred to the activity of producing goods and services". (Martinez de Ita, 2005).

We find a high number of examples in the case of firms showing that the way to increase their productivity includes a bigger effort from the workers, a better profitability margin, solely product improvement or simply, reduction of costs. Likewise, businessmen wrongly consider that productivity can only be put in practice in the production process, forgetting other functional areas of a firm.

More recent theoretical proposals identify company features with productivity and suggest they are the main difference among competing companies in the national and international markets. In this sense the Dunning eclectic paradigm (1988) is relevant, combining firm specific features with the economic and strategic Foreign Direct Investment option which states the chosen way for internationalization.

We should emphasize that all the available literature related to the association between productivity and internationalization suggests a positive and significant relationship. The existence of identical or homogeneous companies was one of the most popular conventions of Trade Theory during the eighties, though this hypothesis is clearly wrong, as can be deduced from the subsequent

<sup>1</sup> Factors such as competitiveness, economic growth and quality of life standards are measured from the productivity concept, both at the business and state-owned levels.

publications. Extensive empirical literature shows that firms change enormously depending on their size (Cabral and Mata, 2003; Bernard and Jensen, 1999) and their productivity (Helpman, Melitz and Yeaple, 2004; Girma et al, 2004). Contradicting this firm homogeneity hypothesis, we conclude that companies are heterogeneous and we propose a supposition closer to economic reality, as Melitz (2003) or Melitz and Ottaviano (2003) do.

Focusing on Melitz's (2003) work<sup>2</sup>, we discover a reflection of the effects of the opening of international markets; a situation that adds companies with different levels of productivity (heterogeneous). From this perspective, the main conclusions obtained from Melitz's model are that the transformation of a closed economy into an open system goes through a Darwinist<sup>3</sup> process. This means that only the more productive companies survive in the international market which are, at the same time, considered as the most efficient<sup>4</sup>. Selling in the foreign markets is expensive, but the decision to enter the international market is taken based on the productivity of the firm. We can expect international trade to be more competitive than on the national market, so the prospect assumes that only firms with a high productivity level will enter and maintain their activity for a long time in foreign trade. Therefore, one of the features that might increase the chances that a company will start exploiting its activity in the international market is its productivity<sup>5</sup>. Bernard and Jensen (1995) and Clerides, Lach and Tybout (1998) point to exporting companies as more efficient than non exporting firms.

As this article proves, the Spanish economy nowadays suffers from lower productivity levels than those among our main commercial partners, as shown in table 2, which shows worrying efficiency results in comparative market studies between Spain and the EU-25. Consequently, it is important to point out the reasons underlying this lower grade of efficiency.

Magnitude	Spain			Spain/EU-25		
	1995	2000	2005	1995	2000	2005
Productivity (real GAV per employed)	100	104'5	104'5	100	89'6	80'2
Source: Instituto Nacional de Estadística (INE) and Eurostat						

The increasing internationalization of the Spanish economy took place in a recent period and was accompanied by clear damage to exterior competitiveness. The debit balance keeps on rapidly growing for most manufacturing products. This occurs in a strong integration into international economy advances, a process that has been given a boost by two simultaneous forces: incorporation into the European market and globalization.

Spanish exports gained market share in world trade until the end of the last decade, but its influence is at a standstill currently; furthermore, imports have increased and their importance in final demand is getting bigger. As a result of what we have just mentioned, the debit balance relating to Gross Domestic Product (GDP) is close to breaking a record.

Spanish firms now find competence in their traditional export markets. The seriousness of this trouble lays on higher differential costs and the difficulty of competing against new industrial countries to sell the same product. In this sense, we can observe in the next graph how rapidly the Spanish foreign trade coverage rate has fallen against new members of the EU.

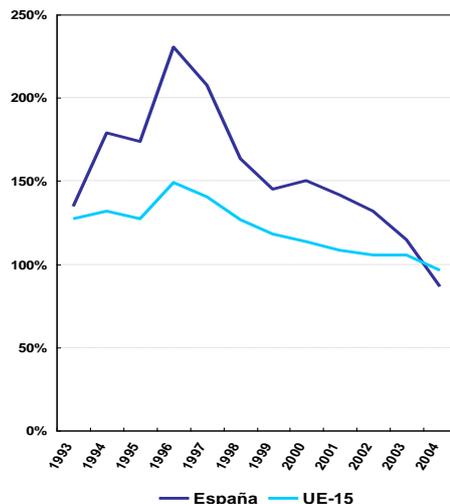
<sup>2</sup> One of most important contributions of Melitz (2003) is considering the productivity variable as endogenous and not exogenous as it had been up to that moment.

<sup>3</sup> Jovanovic (1982) shows that entering a new market is accompanied by a selective process that allows only strong companies to survive, at the same time as less competent firms quit the international market. Considering it a natural selective process, the fact that determines withdrawal is supposed to be associated with the competence of the firm or its activity, understood as productivity. We conclude then, that productivity at the start of the international experience of the firm is higher for those companies which maintain their activity.

<sup>4</sup> In Melitz's work (2003) we also find an extension of the intraenterprise trade, Krugman (1980).

<sup>5</sup> Together with other features such as factory plant, labor composition and other factors such as sunk costs and necessary inputs costs that only the most productive firms can face.

### Coverage rate (exports/imports) against new members of the EU



Source: CEPII-CHELEM (May 2006) and authors' augmentation

Throughout decades, some other economies with higher expenses than the Spanish, have not tried to compete on prices. Instead, these countries have focused their efforts on specific sectors or on those production phases which result in higher effectiveness since their output is better paid. This research intends to find some solution to the situation.

Specializing in highest demand products and those which are likely to be innovative is one method. The second option is continuing to sell consolidated products but selecting only the up market ones, which will be paid higher prices due to some of their features, like design. The third possibility would consist in creating different subsidiaries in other countries to lower prices and maintain control of the most productive activities. (Investigation + Development + innovation (I+D+i), design, logistics, quality control, distribution, marketing). And the fourth possible solution would consist in outsourcing a part of production inside or outside the country, acquiring components or procedures on which production inside the organization is less efficient, because it is not risky to buy them instead of manufacturing due to their standardization (besides, they can be bought at a low price).

Finally, this study admits the difficulty of changing a sector. However, the orientation of the firm to more sophisticated products of the same sector is a more feasible strategy, although it could mean important changes and the demand for skilled manpower and more competent workers.

### Internationalization tendency

As for the expansion to international markets, since through exportation and/or Direct Foreign Investment, it would continue to depend on productivity, as Helpman, Melitz and Yeaple (2004) suggest. They show the effects productivity has on the position of companies in foreign trade. Particularly, Helpman, Melitz and Yeaple (2004)<sup>6</sup> remark that in an economic sector, firm productivity acts as the foundation of the companies' position in national or international trade. These authors suggest three different categories to classify these firms. Those companies with the lowest productivity only exploit their activity in national trade, whereas those firms with high productivity will focus their activity on the national market as well as in foreign trade, through export; and the last group of firms with a higher productivity than the second group, will sell their products to the international market through FDI. Bernard and Jensen (2001) proved how exporting

<sup>6</sup> In Helpman, Melitz and Yeaple (2004) an extension of the Melitz model (2003) is done. Companies are classified according to their participation level in international trade and their productivity.

firms reach higher productivity standards than non exporting firms, with 6,7% against 10,5%, respectively. At the same time, Girma et al (2005) empirically show the Helpman, Melitz and Yeaple hypothesis suggested for the Japanese case.

As for the Spanish case, the old backward-forward integration tendency has converted into disintegration. This process requires a combination with an adequate specialization addressed to those procedures better appreciated by the market and more protected from the market competitors, externalization of the standard activities which demand less qualified work, lower salaries and lower profit margins. When this strategy can be developed, production phases are those that suppose a higher value added and not necessarily firm productivity decreases because of externalization. On the contrary, it can rise at the same time as the percentage of qualified workers with high wages increase.

In Spain, however, specialization in funded sectors and low added value activities, as well as small firms' predominance and limited use of manpower services and technology seem to limit the potential positive effects of externalization. If this process goes on as a need more than as a strategy, mostly due to the advantages of resorting to foreign suppliers, the ability to keep crucial links of the value chain would be restricted.

This way, the combination of productive specialization, international expansion and production disintegration, is being used to enforce productivity growth in many countries, whereas in Spain it seems to restrain its welfare. So, it represents a potential menace to capital accumulation and job creation.

As this study shows, all sectors of the Spanish economy tend to the externalization and increasingly to international externalization, a situation with clear outsourcing effects. In fact, throughout the last few years, the intermediate consumer goods imported by Spanish industry has changed from 20% of the total amount of total intermediate consumer goods in 1985 to close to 40% in 2004.

Productivity is the essential economic variable to consider in the internationalization of a firm. It reflects the new importance productivity is being given in the present economic situation, that is, increasingly open foreign markets and greater business correlation.

As for what we have mentioned up to this moment, productivity is considered a determining factor to firm growth. From this context, productivity is connected with production. More specifically, productivity and its methods and its practical use have gained a great interdisciplinary meaning to productive processes, acting as leading elements of competitive advantage. Few economic science areas are as outstanding and complex as productivity measurement. In this situation, the productive function has become an essential competitive variable to business organization (Hayes and Wheelwright, 1984).

Productive theory aims at a systematic approach in order to develop an input-output analysis to shape a firm's behavior.

However, different ways of measuring productivity exist. Total Factor Productivity is an ideal measure, as we have already mentioned in the present article. This approach has suffered an intense transformation thanks to the profuse related empirical literature, undoubtedly favored by a recently created historical business micro database.

Once the main firm internationalization factors have been revised, the most relevant theoretical contributions can be summed up in two big groups as follows:

- The first group is focused on researching and analyzing productivity. More specifically, this group has established some conditions about dispersion of productivity among different companies, uniformity of production changes, consequences of going into trade and market outlets.
- As for the second group, it describes how some factors have an influence on productivity growth. These factors refer to management skills, technology, human resources, firm regulation and connection to international trade.
- Consequently, a balance between the three vectors upon which Spanish welfare requirements are supported is necessary. These elements are:

- Technological innovation, which provides a fundamental improvement of firms' productivity.
- Knowledge, to give a boost to the human capital added value contribution.
- Spanish companies' internationalization big, medium or small.

What we have seen so far is that productivity is one of the most outstanding variables to firm internationalization; the increase of this variable provokes higher internationalization, which at the same time provides higher welfare.

One can realize that the world economy is changing rapidly through new patterns and it implies new adaptation processes for the national economies. One of this new patterns, vast literature has identified it, is how increasing productivity will conduct the country to an internationalization process gaining welfare at the same time, in other words, those companies with lowest productivity only exploit their activity in national trade, whereas those firms with high productivity will focus their activity on the national market as well as in the international. Spain increased its productivity and internationalization in the past but nowadays it seems that its particular structural characteristics like the specialization in funded sectors and low added value activities, the predominance of small firm and the limited use of manpower services and technology are putting Spain in a really difficult position to increase productivity facilitating internationalization and improving welfare. It will be necessary then to pay attention to Spain's productivity in the immediate future.

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