

THE EXPORT COMPETITIVENESS OF SOCIAL ECONOMY ENTERPRISES. THE CASE OF SOUTHERN SPAIN

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Abstract. This work was performed in order to quantify the export competitiveness of internationalised Social Economy enterprises. To achieve this objective, we have quantified the strengths and weaknesses of the sector and first applied Rasch's logistic model to measure the latent variable called export competitiveness. This is defined by the following items: size, cooperation, number of target markets, competitive advantages, years abroad and percentage of sales abroad. The article presents empirical evidence of 121 Andalusian Social Economy enterprises. The results show the export competitiveness of social enterprises reflected in a standard type of organisation with identified strengths: number of destination markets and competitive advantages.

Keywords: Competitiveness, Strengths, Internationalisation, Social Enterprises.

JEL: D21, L20, M16, P13.

1. Introduction

Economies and enterprises increase their penetration in foreign markets when their competitiveness is higher than their competitors', so the measurement of competitiveness is a permanent priority task of the macro and micro economical range (Metaxas, 2011).

Since 2009 Andalusian and Spanish exports have been growing at a high rate, and we wished to know if that growth is also associated with a progress in the regional competitiveness and business. It is therefore appropriate at this time to open a line of research in the international competitive behaviour of Social Economy enterprises¹ (cooperatives and labour societies) from their territorial popularity and their social and functional dimensions.

As a regional economic macro reflection, we know that exports of Andalusian and Spanish goods have increased from 2009-2013 by 79.37% and 46.50%, respectively. In the case of Andalusia they have enabled it to pass from the fifth to the third exporting region of Spain.

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¹ According to Article 2 of Spanish Law 5/2011, of March 29, Social Economy "is called the social economy of all economic and business activities, which in the private sphere are carried out by those entities that, in accordance with the Principles enshrined in Article 4, either pursue the collective interest of its members, or the general economic or social interest, or both." While, on the other hand, Article 5 identifies a series of Entities of the Social Economy, among which are Cooperative enterprises and Labour Society enterprises.

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Today, the region is among the country's leaders and most exports are concentrated in sectors accentuated by its most competitive vigour (Santos-Roldán, 2012). It should be pointed out, as did Myro et al. (2013), that Andalusia is a dynamic region with a great weight in the national aggregate of foreign sales and an increasing market share, this being neither more nor less than the result of its improved competitiveness.

The Social Economy provides revealing tools of action, derived from its own characteristics and business structures, which allow successfully facing social and economic changes (Pérez & Jiménez, 2012). The Social Economy model is vital to stimulate local and regional development (Pérez & Carrillo, 2000) without being exempt from competing in the global market. In the case of Spanish co-operatives, for some years the volume of exports has been relevant, as Fuentes, Sánchez & Santos (2011) point out: "In 2009, 35% of Spanish cooperatives sold in other EU countries (...). The external implantation of the Spanish cooperatives is scarce (...) derived from problems of dimension and business formation". In Spain, according to a report of the Business Confederation CEPES there are more than 42,800 Social Economy companies. That is to say, Social Economy companies already represent 10% of the GDP². The truth is that their behaviour has been resolute in the present times, since they have given a less pernicious response than the traditional capitalist economy in parameters such as the destruction of employment (Pérez & Jiménez, 2012). Specifically, in Andalusian cooperatives there are substantial legal forms, since they have a demonstrative weight by their number of societies in the national cooperative dynamics (Clemente, Díaz & Marcuello, 2008). As confirmed by the Directorate-General for Autonomous Labor, Social Economy and CSR in Spain on 31 December 2013, there are 230 Andalusian cooperatives included in a regional total of 1166 new Social Economy enterprises.

Social economy companies are relevant as an object of study for various reasons, among them, to configure a business fabric rooted in the territory and its local development (Pérez & Carrillo, 2000); to establish a research topic in regular annual growth during the last ten years (an estimate of 1% according to data from the Web of Science); and to generate scientific publications with both a theoretical and an empirical impact (Defourny & Nyssens 2010) (Chaves & Monzón, 2012). Likewise, in academia, there are constant empirical demonstrations related to the economic sphere (Pérez-Suárez et al., 2016), the business spheres (Huybrechts & Mertens, 2014) and the social spheres (Bauwens, 2016).

Once we decided to investigate the competitiveness of Social Economy enterprises, the problem we faced was that we did not know quantitatively the competitiveness of the group of enterprises for 2013. We have switched around this problem and have turned it in our overall goal: *To quantify the Export Competitiveness of Internationalised Social Economy Enterprises*. We have in turn split this overall objective into three specific goals: 1) To know the profile or characterisation of Social Economy exporting enterprises; 2) To measure the competitiveness of all the Social Economy exporting enterprises expressed as strengths and/or weaknesses; 3) To understand the competitive quantification of the Social

² Source: www.cepes.es

Economy exporting enterprises not only individually but also aggregated, according to different categories.

The results achieved have generated useful knowledge, both for the administration, business managers and the governing bodies of cooperatives and labour societies in order to guide their foreign strategy. At the same time, these skills are at the service of research staff interested in expanding their knowledge about the export sector of the Social Economy of Andalusia. Undoubtedly, they are useful for the respondent entrepreneurs themselves and for entities that promote knowledge and development, including fostering organisations and academia. Strand and Freeman's (2015) conclusion supports the expression "regional cooperative advantage" as combining a competitive advantage with a cooperative advantage.

In the first part of the article, we check through a descriptive analysis of the characterisation or profile of Social Economy enterprises with a presence abroad, enabling us to attain the first specific objective. Subsequently, we have selected a series of indicators to quantify the *strengths and weaknesses* of the Social Economy exporting enterprises in the sector and thus achieve the second goal. In the third part, we quantify *export competitiveness*, from enterprise to enterprise and sectorally, using Rasch's Measurement Theory. We apply this to a categorisation of six items that are selected as indicators of competitiveness for exporting Andalusian enterprises and to 75 Social Economy enterprises, allowing it to rigorously detail the competitive diagnosis in a matrix with the strengths and weaknesses that are deduced according to the SWOT methodology.

2. Methodology

To achieve the main goal proposed we rely on the inductive method as a scientific method, and we perform the appropriate field work in order to achieve the results of the investigation.

2.1. Description of the population, sample and research design

The first step was to design a questionnaire of 53 selected questions — a number of them for this research — aimed at Social Economy exporting enterprises (Micro and SMEs), which was completed by telephone in 2014 by those responsible for foreign trade in the enterprises surveyed. The data processed correspond to a total of 121 Social Economy enterprises (cooperatives and labour societies), allowing us to treat them to achieve the first and second objectives.

Our analysis required initiating the investigation by delimiting a material object: enterprises (cooperatives and labour societies) that make up the Andalusian Social Economy system. In this sense, at the end of 2013, the regional total is 7,026 Social Economy enterprises (CEPES-Andalusia, 2013). Faced with the absence of binding primary sources related to the internationalisation of this sector (exporter enterprises), we chose to develop our own searchable business directory of enterprises from secondary sources such as Extenda and CEPES-Andalusia.

Table 1 includes data compiled from field work, and it should be noted that after debugging the regional information on regular exporter enterprises in the Social Economy, it turned out that only 263 Andalusian Social Economy enterprises (cooperatives and labour societies) are regularly exporting.

Data collection is done by applying a technique of qualitative research to the development of a structured personal questionnaire during 2014. The SPSS/PC (V23) has also enabled us to generate the information necessary for subsequent analyses. The extraction of the two sample elements, 121/75 enterprises, was made by a simple random sampling method, based on chance and applied through random number tables, regardless of the unanswered statistical analysis questions. Finally, we indicate that for reasons of confidentiality enterprises are not treated in the registered form under consideration if this is not substantial.

Table 1. Data Sheet.

Table 1. Data Sheet	
Methodological process	Telephone survey, and most of them, through an interview lasting approximately 25 minutes
Type questions	Dichotomous, Nominals and Intervals
Universe	263 Andalusian Social Economy enterprises with regular export
Sample obtained	121 Andalusian Social Economy enterprises with regular exports
Type of contact	E-mail and telephone
Sampling method	Random sampling for proportions with a confidence level of 95% and with the assumption of maximum uncertainty ($p=q=0.5$).
Error	$\pm 6.21\%$
Date of survey	January to December 2014
Source: Own elaboration	

2.2. Selection Method

2.2.1. Strengths and weaknesses according to the SWOT methodology

The SWOT matrix (Ponce, 2006) is an instrument to promote economic and social diagnoses that can represent the characteristics of both the environment, in order to plan, and the internal field that identifies the internal resources of an agent or a spatial area. So much so that we have developed the part of the SWOT matrix binding to internal resources, *strengths* (competitive capabilities of Social Economy enterprises to export building competitive advantages) and *weaknesses* (bottlenecks faced by Social Economy enterprises to maintain or improve their competitive position abroad) to show exporting Social Economy enterprises about their international competitiveness. We have decided that strengths are considered as such when the indicator exceeds 50% of the item, and are regarded as weaknesses when they are below this.

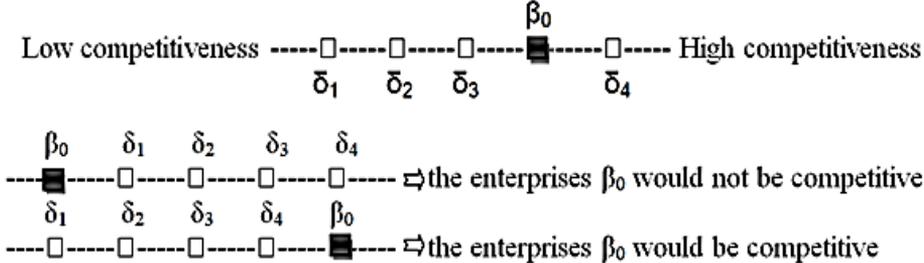
2.2.2. Rasch's Method

The Quantum Measurement Technique, based on Rasch's probability, is a working tool that allows us to measure a latent variable, in our case "competitive strength", being a more appropriate measure than any other as it reduces complex data matrices to a one-dimensional variable (Morán & Álvarez, 2001). In addition, the appropriateness of the method lies in: its *simplicity*, therefore, the response to an item depends on the difficulty of the item itself and the competence of the subject on which a variable of variable magnitude is centred, since the manifestations of that variable are observed and described to be transferred to the construction of measures; its *efficiency*, since the model provides a

measure converting ordinal observations into linear scales and concerning qualitative analysis with a quantitative method, thus obtaining an objective measure; and in its *prudence* when reducing the data of matrices to unidimensional variables. The parameters governing Rasch's probability have been obtained using the computer programme WINSTEPS Rasch Measurement (Linacre & Wright, 1993; Arboleda & Alonso, 2014; Blanco et al., 2014). We have applied Rasch's probability to those 75 of the 121 enterprises in the sample for which we have answers to all items at our disposal to answer, and this has allowed us to quantify the items for each company and know in detail the most competitive Social Economy exporters, as well as the weakest. We also wish to emphasise that this method has not to date been applied to a similar reality for measuring the export competitiveness of enterprises.

Given the latent variable (x) measured for 75 enterprises and defined by a set of 6 uncorrelated items, this measurement technique places them along a line to its measure according to their competitive position (Morán & Álvarez, 2001), evaluating these according to a scale of 1 (lower value) to 4 (higher value). The items categorised respond to the scenario in Table 2.

Figure 1. Variable Getting latent.



Source: Own elaboration from Moran and Alvarez, 2001.

Scale	Size	Percentage of overseas sales
1	Less than 9 workers	Less than 5%
2	Between 10 and 49 workers	Between 5% and 15%
3	Between 50 and 249 workers	Between 15% and 50%
4	More than 250 workers	Between 50% and 100%
	Cooperation mechanisms Instruments	Number of Target Markets
1	Non-cooperation	One continent
2	Yes, of commercial character	Two continents
3	Yes, financial	Three continents
4	Yes, productive or technological and of innovation	More than three continents
	Competitive advantages	Years abroad
1	Low production costs and sales	From 0 to 4 years
2	Adaptation customers and quality offered	From 5 to years
3	Product or service differentiation	From 11 to 20 years
4	Product differentiation: Brand	More than 20 years

Source: Own elaboration

Like any latent variable, this can be displayed as a line with a direction along which the items and enterprises are located. Increased competitiveness corresponds to a more distant point on the line. This means that it is necessary to find a way of establishing the appropriate location of the items along the line in order to measure the *competitive strength*.

The differences in competitiveness between two enterprises are given by their relative position in the number of items. So, the latent variable *export competitiveness* is conceived as a continuum along which the parameters δ_i and β_n items for businesses are located. This means that there may be enterprises which do not exceed the agreed value (parameter) for any item and they will be among those with weaknesses, and conversely when they overtake the values of all the excellent items.

Consider the X_{ni} export *competitiveness* dichotomous variable describing the fact that a company "n" endorses the item "i". If $X_{ni}=1$, then the company "n" is said to be strong; on the contrary, if $X_{ni} = 0$ it is said that the company "n" is not strong.

With the suitable calculations the formula provided is obtained. This provides us in our case with the probability that the company "n" referring to item "i" is strong, given the parameters β_n and δ_i . This is the formula that George Rasch got in his treatise on the Latent Variables (Morán & Álvarez, 2001; Oreja-Rodríguez, 2005).

Equation 1. Formula Rasch

$$P[X_{ni} = 1] \beta_n, \delta_i = \frac{e^{(\beta_n - \delta_i)}}{1 + e^{(\beta_n - \delta_i)}}$$

Source: Own elaboration from Moran and Álvarez, 2001.

3. Results and Discussion

3.1. Characterisation of the Internationalised Social Economy Company

We find it advisable to know the profile of the Social Economy Enterprises as a prelude to measuring the *strengths* and *weaknesses* of this export sector, and to quantifying their *export competitiveness*. In this way, a number of variables already in the line identified have been set out in Table 2. Their characterisation is represented by the highest values, as shown in Table 3.

As a starting point, in the Andalusian productive fabric cooperatives represent 56.2% of the Social Economy, an increase of 15.7 percentage points among exporting enterprises of the Social Economy, while labour societies with a weight in the Social Economy of 43.8% in the productive sector are down to 28.1% in exports. This means that cooperatives have strengths in exporting labour societies, their *strength* in going abroad. The study of the influence of the size of internationalised enterprises is common. In fact, 6.7% of the enterprises have 250 workers or more, and 46.2% have less than 10 workers. This latter percentage has an important meaning in internationalisation because the European Union itself is committed to creating hundreds of thousands of multinational enterprises until 2020 with less than 10 workers (Europe 2020 Strategy of the European Commission, 2010).

In the methodology we have already stated that this research focuses not only on enterprises exporting goods but also on those which export services, which is why we want to highlight

two aspects in their characterisation: 1) 80.1% export goods and 19.8% services; 2) the main economic activity of these Social Economy export enterprises is industry and construction, 60.3%, followed by the services sector, 31.4%, and 8.2% representing agriculture, stockbreeding, forestry and fishing. Actually, these data reflect what is happening. That is to say, the Andalusian goods exports increased more than in other regions and some service enterprises that until recently had not gone abroad are internationalising real goods from other enterprises and have become companies that pull exports, as is especially the case of consulting firms, architectural firms and engineering enterprises. In addition, there are enterprises with fewer than 10 workers which have a high volume of external turnover, reflecting the degree of dependence that enterprises have on foreign markets, as they bill from 15% to 52.98% of their total turnover abroad.

Social Economy Enterprises are young in their output to foreign markets. If we consider that the economic recession has lasted five years in the Spanish and Andalusian economies, and that 35.5% of enterprises have had a regular export activity for less than four years, it is obvious that they may have gone abroad to take advantage of the opportunities offered by other markets. This behaviour fits with the motivations expressed by enterprises for going abroad: 33.3% to diversify markets as well as to find a larger dimension and new opportunities and 49.6% to seek a greater dimension and new opportunities (multiple choice question, in which enterprises could mark a maximum of two answers, whose result is based on the total of enterprises that have answered).

Legal Form	Cooperatives	71.9%
	Labour societies	28.1%
Company Size	Less than 10 workers	46.2%
	Between 10 and 49 workers	37.8%
	Between 50 and 249 workers	9.2%
	More than 250 workers	6.7%
Export Type	Products	80.1%
	Services	19.8%
Main Economic Activity	Agriculture, stockbreeding and forestry and fishing	8.2%
	Industry and construction	60.3%
	Services	31.4%
Turnover abroad	Less than 5% of total billed	27%
	Between 5% and 15% of total billed	26%
	Between 15% and 25% of total billed	11.5%
	Between 25% and 50% of total billed	10.5%
	50% or more of total billed	25.0%
Years of activity abroad	Less than 4 years	35.5%
	5 to 10 years	18.1%
	From 11 to 20 years	28.9%
	20 years	17.3%
Reasons for Internationalisation	Diversify Markets	33.3%
	Casually	25.7%
	Search larger size and new opportunities	49.6%
Source: Survey as it is presented in the methodology section.		

3.2. *Strengths and Weaknesses of the Social Economy export sector*

Below we have set out the external behaviour of the Social Economy internationalised enterprises, which is reflected by various indicators, showing the *strengths* and *weaknesses* regarding competitiveness for the sector and is summarised in Table 7. We used *ex post* indicators that we have quantified for a set of competitive items, among which are also included those which will be dealt with in the last part of this article in Rasch's measurement. When we analyse the competitiveness, three internal capabilities linked to export competitiveness play an important role, as is shown in Table 7:

- *Export Performance*: business practice linked to exports determined by business ability to grow and its dynamism to open new markets. It gives the enterprise the opportunity to obtain economies of scale, a diversification of markets and provides them with a greater stability by not making them dependent on an internal market. Within this capacity we have included as indicators those that depend on business policies: the foundations on which competitiveness rest (cost or differentiation); the dedication of resources to innovation (March & Yagüe, 2010; Vaz, De Noronha Vaz, Galindo & Nijkamp, 2014; Galaso, 2015); and the existence of business cooperation. And secondly, the indicators that generally represent the international past of enterprises (years of outdoor activity) and their size - both items with an enormous influence on competitiveness.
- *Degree of Internationalisation*: number of foreign markets and continents where they sell products and/or services (Pérez-Suárez et al., 2016). In this capacity we have included as indicators the increase of foreign activity in the last five years; the percentage of billing, the use of e-commerce (online sales), and if not selling online when this is available.
- *Initiative and exporters support*: enabler elements of the process of international integration and /or external promotion, choosing as indicators: if they have staff with specific training and the role played by business cooperation mechanisms (Meléndez, 2014); that is, if aids granted by the government have been used to improve their chances of internationalisation (Mariotti & Piscitello, 2001), including cooperation aids.

The capabilities we have just defined are identified with any of the items, so when we look at the *sales abroad percentage*, this is a reality: the influence of export performance on the international expansion strategy of a company. This statement verifies Bobillo et al. (2010) in the literature and Rostek (2012) when he says that the role of the sales factor is dominant, sales volume being a key measure of competitiveness. In other words, the export intensity of a company is directly determined by its sales volume (Estrella et al., 2012). In billing, the sector swings between 47% of enterprises that account for over 15% and about 53% that are billing less than 15%, which for this group of enterprises can be stated right now as an *intrinsic weakness*.

Something similar happens with the *internationalisation degree*., The number of foreign markets or continents where trade comes from the need to access markets that would not rely solely on local markets, highlighting as strengths in our case that 20% of the Social Economy enterprises export to every continent, and also 63.64% of them increased their foreign activity over the past 5 years.

Among the identified strengths underscored in the export performance, 45.16% of enterprises base their competitiveness on the differentiation of products or services and 76.86% have an interest in the quantity and/or quality. We do know that our enterprises have a future only if they base themselves on differentiation. Nor can we ignore the significant percentage of enterprises that devote resources to innovation (76.86%), which is an important sector strength, in line with those related to differentiation and quality. On the other hand, Pérez et al. (2014) identified *years of abroad activity* as influencing competitiveness, as experience is acquired with the product sold and customers. This generates an implicit know-how in the export knowledge, also involving other *competitive advantages* (product quality and/or service). In general, enterprises with high export levels are distinguished by an advantage from the development of sales skills complemented by productive advantages (Estrella et al., 2012).

For Gómez (2005), the economic literature indicates that company size matters, a fact that we relate to the number of workers, but advances in information and communications technology (ICT) and globalisation reduce firms' requirements. Regarding the importance of this variable, some authors, such as Madrid & García (2004), claim that a larger size encourages greater efforts in foreign markets. Others call it international commitment, see Fernández and Nieto (2002), or a first step to success in their export venture - Calderón et al. (2007) and Myro et al. (2013) - is provided by the size of enterprises and their productivity that influence international trade and then, going deeper, the competitiveness determinants. In addition, Buendía and Carrasco (2014) point out the importance of formal institutional factors in the size of the sector.

As we have seen before, the major weaknesses in the export performance are focused on the size, 84.04% have fewer than 50 workers, and in the years of external activity, as 52.94% of enterprises have fewer than 11 years of activity abroad. Nor is it to be forgotten that the years abroad provide expertise and know-how, which have to do with the competitive learning. In addition, there are many theoretical and empirical defences about *business cooperation* as a growth strategy; this itself being a viable alternative to strengthen competitiveness in the domestic and international market. That is, much of the literature indicates that the enterprises which have a greater competitive potential are those that develop relational skills through partnerships with other enterprises under very different formulas. Our sector has a major weakness in its internationalisation, as 55.67% of enterprises do not use cooperation mechanisms. This is especially so due to the importance of enterprises with fewer than 50 workers and it being about Social Economy Enterprises whose principle is cooperation.

Finally, public and private *foreign promotion* is a key point to external activity, as revealed by Myro (2013), as well as *workers training* being crucial for the enterprise in order to sell part of its production abroad and to take advantage of ICT (Medina et al., 2014).

3.3. Export competitiveness Measure of Social Economy Enterprises

3.3.1. The latent variable export competitiveness

Then, we have gone a step further, quantifying a latent variable that identifies with competitiveness, from choosing the most important items for the variable and categorising them. This new analysis applied to exports has allowed us to add more value to the research performed by Rasch's method and obtain a specific quantification, with results for each enterprise and the sector.

We are aware that there is no accepted definition of international competitiveness that includes different items. It is true that, in recent years, in Spain, the correlation between internationalisation and competitiveness has been investigated (Bennett, R. J., 1998). This is founded on the theory of international strategic competition, analysing international trade as a competitive game between territories and enterprises. Thus, Camisón (2007) explains the international competitiveness of Spanish companies from microeconomic factors that provide the enterprises with advantages over their rivals in the markets. The same author indicates, citing the Research Department of the Bank of Spain, that "the analysis of competitiveness requires a multidimensional approach, incorporating quality comparative studies of the factors, efficiency of production processes (...) beyond the usual indicators of relative prices and costs" (Camisón, 2007). This has led us to conclude that the optimal competitiveness to be defined needs to contemplate *ex ante* international competitiveness indicators and *ex post* international competitiveness indicators.

There are several national authors correlating international growth with intangible assets as stated (Camisón, 2007; Madrid & García, 2004; among others). Many other international studies show empirical evidence demonstrating that the analysis of competitiveness factors really defines competitiveness (Pérez et al., 2014; Piatkowski, 2012; Estrella et al., 2012; Rostek, 2012; Man et al., 2002; Knight, 2001).

We accept that there is a relationship between the factors and variables associated with real competitiveness. This has allowed us to define the latent variable *export competitiveness* of Social Economy enterprises, having used six multidimensional items with no correlation between them. The items under consideration, listed in Table 2, are: Cooperation, size, number of target markets, competitive advantages, years abroad and percentage of sales abroad.

3.3.2. Measurement of a Social Economy Enterprise

Table 4 shows the extent of export competitiveness for the enterprises studied, collecting therein a selection of the results.

Table 4. Measurement of Export Competitiveness for Social Economy Enterprises

EC1 = Excellent			EC2 = Improvable			EC3 = Weak		
Enterprises	Measure	Error	Enterprises	Measure	Error	Enterprises	Measure	Error
E1	2.64	1	E11	0.68	0.48	E57	-1.17	0.56
E2	1.94	0.72	E12	0.46	0.46	E65	-1.52	0.63
E3	1.51	0.60	E17	0.25	0.46	E66	-1.52	0.63
E4	1.51	0.60	E18	0.04	0.46	E67	-1.52	0.63
E5	1.19	0.54	E24	-0.17	0.46	E68	-2.00	0.75
E6	1.19	0.54	E37	-0.39	0.47	E69	-2.00	0.75
E7	0.92	0.50	E45	-0.62	0.49	E70	-2.00	0.75
E8	0.92	0.50	E54	-0.88	0.52	E71	-2.00	0.75
E9	0.92	0.50				E72	-2.00	0.75
E10	0.92	0.50				E73	-2.76	1.04
...						E74	-2.76	1.04
						E75	-2.76	1.04
						...		

Source: Own elaboration

Looking at this, we can classify the enterprises into two subgroups, those above the average (-0.4) and those which did not attain it. At the top of the measurement are the E₁ export competitiveness of 2 and 6 with a level 4 in the items studied except for the item *competitive advantages*, wherein no company exceeds level 3, which means that there are no own brands. Together with this company, another 44 enterprises are also placed above the average, including primary level cooperatives and secondary level cooperatives, whose presence in this block of enterprises is justified by their size attained and their years of activity abroad.

Moreover, of the 30 enterprises that are placed below that average, most of them justify their presence in this group because of the low cooperation among enterprises, their size and the average number of destination markets. Maintaining a high percentage of overseas sales does not itself define export competitiveness. However, it really involves a higher level in the years of external activity and a competitive advantage.

Less competitive enterprises, unlike the rest, assume a certain uniformity in export competitiveness and their profile tells us that they are micro-SMEs with few years of external activity, the majority of them being service enterprises which have not developed notable instruments of cooperation.

3.3.3. *Imbalances*

As we have mentioned, the measurement provides unexpected results in subjects and items that the model classifies as imbalances and are accounted for by residual values. A positive residual means an answer with a higher level than expected by the model and conversely. We wish to point out that there are precisely 18 of the 75 enterprises surveyed that have imbalances. The expected measurement reliability is 71%, and that obtained significantly approaches 67%, but it would be interesting to slightly increase this percentage. A detailed causal analysis of the imbalances would correct the measurement or not. This may be the subject of future research lines.

3.3.4. *Indicators Measurement*

The latent *export competitiveness* in Social Economy enterprises is reflected in the order of measurement of the items. This order is due, firstly, to the peculiarities of Social Economy and to the three internal and export capacities of the enterprises studied. Thus, the ordering of the items according to their relevance means that the item “size” is the one that fewer enterprises exceed and “billing” is the one most exceeded by enterprises.

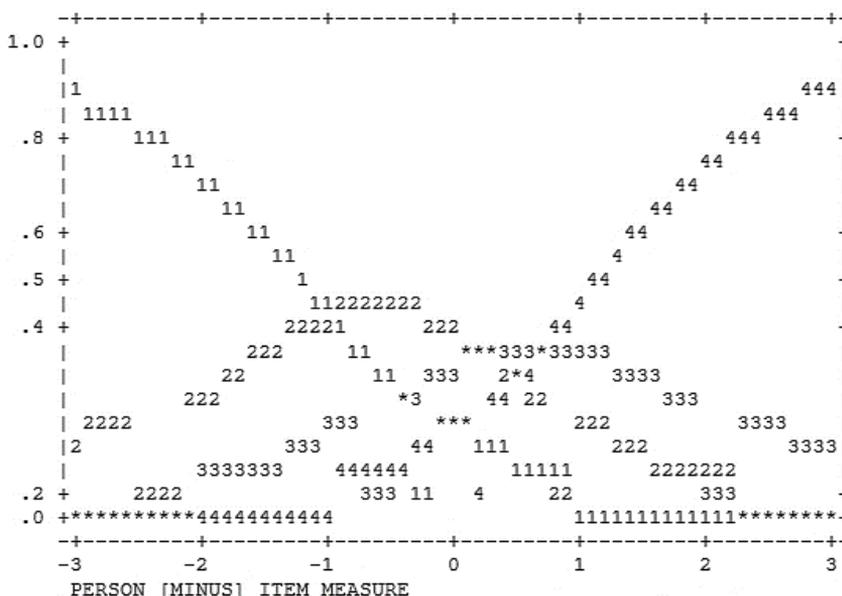
This means that, all items being conclusive about competitiveness, the most decisive are those which are overcome with more difficulty. The results of the measurements of the items are shown in Table 5, and prioritise the variable of the number of staff workers through the item “size”. This is followed by items such as cooperation, number of target markets, competitive advantages, years of activity and percentage of sales abroad, in order of relevance. These results validate the importance noted before about the size and the cooperation offered.

Figure 2 shows that the categories are well chosen as they show a high setting in the application, having a growing Andrich’s Threshold (Andrich et al., 2012). The observed mean and the expectations also increasingly evolve and the similar ones have an average square error in the *infit* and in the *outfit* between 0.5 and 1.5 units. Besides, the expected reliability and that obtained regarding the items are very coherent, being 82% and 84%.

Table 5. Evidence of latency export competitiveness through their items. Source: Own Elaboration.

Items	Measure	Error	Mnsq	Infit	Mnsq	Outfit	Ptmeasure
Size	0.49	0.15	0.78	-1.4	0.73	-1.5	0.69
Cooperation	0.49	0.15	1.63	3.3	1.34	1.7	0.62
Number of Target Markets	-0.01	0.15	1.02	0.2	0.98	-0.1	0.6
Competitive Advantages	-0.21	0.14	0.78	-1.5	1.04	0.3	0.37
Years abroad	-0.27	0.14	0.97	-0.1	0.9	-0.5	0.71
Overseas sales percentage	-0.48	0.14	0.95	-0.3	0.91	-0.5	0.69

Figure 2. Probability curves. Source: Model application with Winsteps



3.3.5. Classification of export competitiveness

The results of Rasch's measurement expressed for the latent variable help us not only to understand what export competitiveness is, but also to make a classification of Social Economy enterprises. An empirical classification provides us with the details of which and how many of these enterprises have greater or lesser export competitiveness. We have thus determined three competitive categories, as shown in Table 6. These are set out in Rasch's measurement (Measure) and are granted 33% for each category of the highest value achieved.

Categories			Total studied enterprises
EC1	Excellent export competitiveness	> 0.8	10
EC2	Improvable export competitiveness	From 0.8 to -0.9	46
EC3	Weak export competitiveness	< -0.9	19

Source: Own elaboration

This classification highlights Social Economy export enterprises, sorting export according to export competitiveness, enabling us to know the position where a company is placed at a regional and sectoral level. This is a useful and practical tool to know the position of the Andalusian Social Economy enterprises in relation to competitiveness, having employed several items which are synthesised in a single measurement tool. Table 4 points out the position in which the main Social Economy enterprises of Andalusia are placed according to *export competitiveness* and the categorisation registered. At this point, we can say that, in relation to the *export competitiveness* of the Andalusian Social Economy, 80% of the exporting enterprises which are qualified as *excellent* are cooperatives, consolidating these enterprises as clear dominators of the overall rating.

Table 7. Strengths and Weaknesses of the <i>export competitiveness</i> of the Social Economy		
<p><i>Export Performance:</i></p> <ul style="list-style-type: none"> - Bases of competitiveness - Resources devoted to innovation - Business Cooperation - Size - Years of outdoor activity 	<p><u>Strengths:</u></p> <ul style="list-style-type: none"> ▪ 75.2% are based on quality, and 45.1% on differentiating their competitiveness. ▪ 76.8% devote resources to innovation. 	<p><u>Weaknesses:</u></p> <ul style="list-style-type: none"> ▪ 22.5% are based on the costs on competitive basis. ▪ 23.2% do not devote resources to innovate. ▪ 55.6% do not use cooperation mechanisms. ▪ 84.0% have fewer than 50 workers. ▪ 52.9% have less than 11 years of activity abroad.
<p><i>Degree of Internationalisation:</i></p> <ul style="list-style-type: none"> - Presence on Continents - Increased abroad activity in the last 5 years - Percentage of billing - E-commerce 	<p><u>Strengths:</u></p> <ul style="list-style-type: none"> ▪ The presence on every continent is more than 20% except Oceania. ▪ 63.6% have increased external activity the last 5 years. 	<p><u>Weaknesses:</u></p> <ul style="list-style-type: none"> ▪ 53% bill less than 15% of the foreign activity. ▪ 73.4% do not use e-commerce.
<p><i>Initiative and supports:</i></p> <ul style="list-style-type: none"> - Staff with specific training - Use of aids granted by the government 		<p><u>Strengths:</u></p> <ul style="list-style-type: none"> ▪ 60.3% have staff trained in foreign trade. ▪ 51.2% have used third aids to export.
<p><i>Rasch's measurement:</i></p> <ul style="list-style-type: none"> - Enterprises with excellent export competitiveness. - Enterprises with weak export competitiveness. 	<p><u>Strengths:</u></p> <ul style="list-style-type: none"> ▪ 80% of excellent enterprises are cooperatives. ▪ 40% of excellent enterprises have more than 250 workers. ▪ 90% of the outstanding enterprises export goods. ▪ 60% of excellent enterprises account for over 50% abroad. 	<p><u>Weaknesses:</u></p> <ul style="list-style-type: none"> ▪ 74% of cooperative enterprises are weak. ▪ 79% of the weaker enterprises have fewer than 10 workers, and 63% are service enterprises. ▪ More than 7% of weak enterprises bill less than 5% overseas.
<p>Source: Own elaboration</p>		

At the other extreme are the three internationalised enterprises which have a lower competitive level and an identical legal categorisation, resulting from responses mostly concentrated at the lowest level (one point). One of the most significant features to note is the homogeneity of the items that define export competitiveness in enterprises of the *weak* enterprise's category. That is, the cooperatives also predominate among the weaker enterprises, since 26% of them are labour societies, leading us to affirm that international competitive weakness is more common in labour societies.

Finally, it should be noted that while in the lower category are enterprises belonging mostly to the services sector (63%), excellent enterprises in terms of export competitiveness export goods (90%) and have a manufacturing production activity. The majority of social economy companies have, today, an *improvable export competitiveness*. However, not only do they fit this claim, it is necessary for their *export competitiveness* to increase for them to progress in their internationalisation process. Table 7 displays a summary of the results from this research, results consistent with those listed in Table 3 about *the profile of the Andalusian Social Economy Company* having activities abroad in 2013.

4. Conclusions

This paper quantifies the *export competitiveness* of internationalised Andalusian Social Economy enterprises. This has enabled us to achieve the three intermediate targets set by two techniques: the partial development of the SWOT matrix (strengths and weaknesses) and Rasch's measurement, thus obtaining the following conclusions:

Objective 1. The results of the questionnaire answers from 121 enterprises have allowed us to know the profile or characterisation of Social Economy exporting enterprises in 2013, which is as follows: a cooperative with less than 10 workers, an exporter of industrial products, billing abroad less than 15%, having less than four years of activity in foreign markets, and whose main motivation to internationalise has been to diversify markets.

Objective 2. To measure the competitiveness of all the Social Economy exporting enterprises expressing this as strengths and/or weaknesses. As for the competitive *Strengths and Weaknesses* that emerge from the analysis of the sector, we can highlight as significant the following:

Strength 1. The Social Economy enterprises have an *Export Performance* defined by quality and differentiation based on their competitiveness and the dedication of resources to innovation.

Strength 2. The Social Economy enterprises show a considerable *degree of internationalisation* as over 20% of the enterprises surveyed are present in all continents except Oceania and note a considerable increase in their foreign activity in the last five years (63.6%).

Strength 3. *Exporting Support and Initiatives* are available to Social Economy enterprises not only for international promotion in training (over 60% have staff with expertise in foreign trade) but for third-party assistance (over 51% have received administration funding to export).

Weakness 1. Over 20% of enterprises in the Social Economy have a defined *Export Performance*, 55.6% do not use cooperation instruments, the fact that 84%

have fewer than 50 workers, and that 52.9% enterprises have been operating in foreign markets for less than 11 years.

Weakness 2. Social Economy enterprises show an insufficient level of internationalisation as more than 52% bill less than 15% due to their foreign activity and 66% do not sell online.

Objective 3. To quantify the competitiveness of Social Economy exporting enterprises individually as well as in an aggregated manner according to different categories. This has been defined as a latent variable, the *export competitiveness* of enterprises in social economy, by six multidimensional items. The export competitiveness is reflected in the following order of importance of items: size, cooperation, number of target markets, competitive advantages, years of activity and percentage of sales abroad, correspondingly. This therefore meaning that the item “*size*”, of an objective nature, is the most determinant in competitiveness, followed by that which represents a resource consisting of a concrete competitive aim to be stronger in internationalisation, thus emphasising *cooperation* as a *competitive strategy*, not as an alternative to it, as is often heard in the Social Economy environment.

The definition of export competitiveness has allowed us to classify the exporting business sector from establishing three categories. On the basis of this it is stated that in the Andalusian Social Economy there are: 10 excellent enterprises of export competitiveness; 46 enterprises exhibiting intermediate or improved export competitiveness; and 19 enterprises with weak export competitiveness.

Rasch’s analysis has allowed us to add a number of strengths and weaknesses that we have related to the categorisation of Excellent, Improvable and Weak firms:

Strength 4: 80% of the excellent enterprises are cooperatives; 40% have more than 250 workers; 90% export goods, 80% of them belong to the industrial or construction sector; and 60% of excellent enterprises bill over 50% abroad.

Weakness 3: 74% of the weaker enterprises are cooperatives; 79% have fewer than 10 workers; 63% are service enterprises; and > 73% of the weaker enterprises bill less than 5% overseas.

Finally, as Basterretxea & Martínez (2012) say, this is also an empirical study of a causal nature in which the main limitation comes from the study itself, since only the Social Economy exporting enterprises located are examined. Moreover, as we have noted, subjective scales have been used to measure competitiveness. This decision may be subject to future improvement. Among other reasons, this is why we will keep on investigating to evaluate the export competitiveness of Social Economy enterprises, in order to overcome the limitations of the internationalisation process and those to which the literature refers to in this knowledge area.

References

Andrich, D., Marais, I. & Humphry, S. 2012. “Using a theorem by Andersen and the dichotomous Rasch model to assess the presence of random guessing in multiple choice items”. *Journal of Educational and Behavioral Statistics*, 37(3): 417-442.

Arboleda, A. M. & Alonso, J. 2014. "Design awareness and purchase intention: an item response theory approach". *Academia Revista Latinoamericana de Administración*, 27(1):138-155.

Basterretxea, I. & Martínez, R. 2012. "Impact of management and innovation capabilities on performance: are cooperatives different?" *Annals of Public and Cooperative Economics*, 83(3): 357-381.

Bauwens, T. 2016. "Explaining the diversity of motivations behind community renewable energy". *Energy Policy*, 93: 278-290.

Bennett, R.J. 1998. "Business associations and their potential contribution to the competitiveness of SMEs". *Entrepreneurship & Regional Development*, 10(3): 243-260. <https://doi.org/10.1080/08985629800000014>

Blanco, B., Sánchez, L., Pérez-Labajos, C.A. & Serrano A. M. 2014. "Financing and Development of innovation in commercial sea ports". *Journal of Maritime Research*, 8(2): 75-90.

Bobillo, A., López-Iturriaga, F. & Tejerina-Gaite, F. 2010. "Firm performance and international diversification: The internal and external competitive advantages". *International Business Review*, 19(6): 607-618.

Buendía, I. & Carrasco, I. 2014. "Impact of institutional factors in the entrepreneurship: an analysis of the European cooperative sector". *Revista de Economía Mundial*, 38: 175-200.

Calderón, M.H., Cervera, A., Tubillejas, B. & Fayos, T. 2007. "Selección del modo de entrada en un mercado internacional: valoración de las capacidades empresariales, la estrategia empresarial y la percepción de los problemas de la internacionalización". *Información Comercial Española, ICE: Revista de Economía*, 839: 143-162.

Camisón, C. 2007. "Bases organizativas de la internacionalización y la competitividad de la empresa española: dinámica en las dos últimas décadas". *Información Comercial Española, ICE: Revista de Economía*, 838: 59-100.

CEPES-Andalucía. 2013. *Informe Estadístico de la Economía Social Andaluza 4º Cuatrimestre*. Central de Estadísticas de la Economía Social de CEPES-Andalucía. Recovered from <<http://www.cepes-andalucia.es/estadisticas/>> [15/07/2014].

Chaves, R. & Monzón, J.L. 2012. *The social economy in the European Union*. European Economic and Social Committee of the European Union, Brussels: 1-116. Recovered from <http://dx.doi.org/10.2864/19534>

Clemente, J., Díaz, M. & Marcuello, C. 2008. *Estudio sobre las cooperativas y sociedades laborales en España: creación de empleo y contribución al desarrollo económico*. Ministerio de Trabajo e Inmigración, Código F08348. Universidad de Zaragoza, Zaragoza, Spain.

Defourmy, J. & Nyssens, M. 2010. "Conceptions of social enterprise and social entrepreneurship in Europe and the United States: Convergences and divergences". *Journal of Social Entrepreneurship*, 1(1): 32-53.

Estrella, A., Jiménez, D., Ruiz, J. L. & Sánchez, M. 2012. "¿Cómo compiten las pymes en los mercados internacionales? Análisis de un clúster local con vocación exportadora". *Investigaciones Europeas de Dirección y Economía de la Empresa*, 18(1): 87-99.

- Fernández, Z. & Nieto, M. J. 2002. “La estrategia de internacionalización de la pequeña empresa familiar”. Departamento de Economía de la Empresa, Universidad Carlos III de Madrid: 1-26. Recovered from <<http://e-archivo.uc3m.es/handle/10016/26#preview>> [16/07/2014].
- Fuentes, F., Sánchez, S. M^a. & Santos, L. M.^a. 2011. “Cooperativas agroalimentarias y exportación. El proceso de internacionalización de la Cooperativa del Valle de Los Pedroches (COVAP)”. *REVESCO, Revista de Estudios Cooperativos*, 104: 38-62.
- Galaso, P. 2015. “Diagnóstico del Sistema Español de Innovación: Agentes, Recursos y Resultados”. *Economía, Sociedad y Territorio*, 15(49): 807-833.
- Gómez, F. 2005. “El papel de la empresa en la internacionalización de la economía española”. *Información Comercial Española, ICE: Revista de Economía*, 826: 423-434.
- Huybrechts, B. & Mertens, S. 2014. “The relevance of the cooperative model in the field of renewable energy”. *Annals of Public and Cooperative Economics*, 85(2): 193-212.
- Knight, G. 2001. “Entrepreneurship and Strategy in the international SME”. *Journal of International Management*, 7(3): 155-171.
- Linacre, J. & Wright, B. 1993. A user's guide to BIGSTEPS: Rasch-model computer program. Mesa Press.
- Madrid, A. & García, D. 2004. “Influencia del tamaño, la antigüedad y el rendimiento sobre la intensidad exportadora de la pyme industrial española”. *Información Comercial Española, ICE: Revista de Economía*, 817: 35-49.
- Man T., Lau T. & Chan K.F. 2002. “The competitiveness of small and medium enterprises: A conceptualization with focus on entrepreneurial competencies”. *Journal of Business Venturing*, 17(2): 123-142.
- March, I. & Yagüe, R. M. 2010. “Internationalization of the Innovation in Spain and Model to Measure the Export Intensity in High-tech Activities”. *Revista de Economía Mundial*, 25: 227-258.
- Mariotti, S. & Piscitello, L. 2001. “Localized capabilities and the internationalization of manufacturing activities by SMEs”. *Entrepreneurship & Regional Development*, 13(1): 65-80. <https://doi.org/10.1080/089856201750046810>
- Medina, M.J., Mozas, A., Bernal, E. & Moral, E. 2014. “Factores determinantes para la exportación en las empresas cooperativas oleícolas andaluzas”. *CIRIEC-España, Revista de Economía Pública, Social y Cooperativa*, 81(1): 241-262.
- Meléndez, M. 2014. “Internacionalización de las PYMES en Colombia”. *Integration and Trade Journal*, 37(17): 25-40.
- Metaxas, T. 2011. “Territorial Assets and Firms’ Competitiveness in Southern Europe: Industrial vs Commercial Firms Using Exploratory Factor Analysis”. *Regional and Sectoral Economic Studies*, 11(1): 45-62.
- Morán, J.C. & Álvarez, P. 2001. “Medida del desarrollo humano para los países de la América Latina”. *Trimestre Económico*, 68(270-2): 195-208.
- Myro, R. 2013. “La política de internacionalización de la empresa española”. *Economía Industrial*, 387: 119-130.

- Myro, R., Álvarez E., Fernández-Otheo, M., Rodríguez, D. & Vega, J. 2013. Fortalezas competitivas y sectores clave en la exportación española. J. M. P. de Tudela Vázquez (Ed.). Instituto de Estudios Económicos.
- Oreja-Rodríguez, J.R. 2005. “Introducción a la medición objetiva en Economía, Administración y Dirección de Empresas: El Modelo de Rasch”. Serie Estudios-Instituto Universitario de la Empresa del Instituto Universitario de la Empresa (IUDE), 47: 1-78.
- Pérez, B. & Carrillo, E. 2000. Desarrollo local: Manual de Uso. ESIC Editorial, Madrid, Spain.
- Pérez, M.C. & Jiménez, M. 2012. “Dinámica territorial y Economía Social: una reflexión con especial referencia a Andalucía ante los cambios sociales”. *Revista de Estudios Empresariales, Segunda Época*, 1: 40-58.
- Pérez, S., Macías, C., Rosiles, L. & León, J. 2014. “Factors that Impact the Competitiveness of Home Construction Businesses in Mexicali, Baja California”. *Revista Global de Negocios*, 2(3): 79-90.
- Pérez-Suárez, M., Espasandín-Bustelo, F. & Sánchez-Torné, I. 2016. “La Propensión Exportadora de la Economía Social Andaluza y sus determinantes”. *Revista de Estudios Empresariales. Segunda Época*, 1: 46-68.
- Piatkowski, M. 2012. “Factors Strengthening the Competitive Position of SME Sector Enterprises. An Example for Poland”. *Procedia-Social and Behavioral Sciences*, 58: 269-278.
- Ponce, H. 2006. “La matriz FODA: una alternativa para realizar diagnósticos y determinar estrategias de intervención en las organizaciones productivas y sociales”. *Contribuciones a la Economía*, 2: 1-16. From http://econpapers.repec.org/article/ervcontri/y_3A2006_3Ai_3A2006-09_3Ab9bf1ba67b762b269ce8d78bc886ce0e.htm [17/07/2014].
- Rostek, K. 2012. “The reference model of competitiveness factors for SME medical sector”. *Economic Modelling*, 29(5): 2039-2048.
- Santos-Roldán, L. 2012. “An Opening to the Outside World of The Andalusian Furniture Sector”. *Regional and Sectoral Economic Studies*, 12(2): 97-106.
- Strand, R. & Freeman, E. 2015. “Scandinavian cooperative advantage: The theory and practice of stakeholder engagement in Scandinavia”. *Journal of Business Ethics*, 127(1): 65-85.
- Vaz, E., de Noronha Vaz, T., Galindo, P. V., & Nijkamp, P. 2014. “Modelling innovation support systems for regional development—analysis of cluster structures in innovation in Portugal”. *Entrepreneurship & Regional Development*, 26(1-2): 23-46. <https://doi.org/10.1080/08985626.2013.860193>