

## THE EXPORT COMPETITIVENESS OF SOCIAL ENTERPRISES AS COMPARED TO WITH EXPORT SMES

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### Abstract

*Purpose* – This study aims to determine the export competitiveness of the Social Economy in Andalusia, this is carried out by quantifying the export competitiveness of the internationalized enterprises of the Social Economy in the export sector of the region.

*Design/methodology/approach* – The strengths and weaknesses of this business sector are quantified and the Rasch's Probability. It is a model used to measure the latent variable called export competitiveness, which is defined by items (factors): size, cooperation, number of target markets, competitive advantages, years abroad and percentage of sales abroad. The article provides empirical evidence of 362 Andalusian export enterprises.

*Findings* – The results show that the export competitiveness of social enterprises reflected their strengths as compared with other SMEs.

*Originality/value* – This concept paper empirically combines two different fields of knowledge (design and behavior of companies) in the construction of the foreign trade. This work standardizes the treatment of two descriptors scarcely discussed in the literature: Social Enterprises and Export.

**Keywords:** Competitiveness, Strength, Weakness, Internationalization, Cooperatives, Rasch model.

**JEL:** D21, L20, M16, P13

**Management area:** International business; Business economics.

**Paper type:** Research paper.

### 1. Introduction

Economies and enterprises increase their penetration in foreign markets when their competitive advantage is greater than that of their competitors, so the measurement of competitiveness is a permanent priority task for the macro and micro economic levels.

Andalusian exports have grown at a very high rate in the last five years (Gutiérrez, Morán, Belda, Sánchez-Torné and Pérez-Suárez, 2014) from 2009 to 2013 they have made it a 79.37 %, which has made the region the third most exporter of Spain. In relation to this, we wanted to know, if that growth was due to an improvement also in the regional competitiveness and what types of enterprises is based on, that is, whether SMEs in the social economy have had a more competitive performance than the other regional SMEs (Charlo, Núñez and Sánchez-Apellániz, 2016). In fact, Myro, Álvarez, Fernández-Otheo, Rodríguez and Vega (2013) or Antonelli, Crespi and Scellato (2015), among other

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specialists, recently said that Andalusia is a dynamic region with greater weight in the national aggregate of foreign sales and increased market share as a result of its improved competitiveness.

Certainly, *our starting point is our ignorance, in quantitative terms, about the difference between the competitiveness of enterprises in the social economy during 2013 and all exporting Andalusian enterprises*. If to the indicated problem, give a 180° rotation to turn it into our overall objective, that is: *To quantify the export competitiveness of internationalized SMEs of Social economy in comparison to all Andalusian exporting SMEs*. A general purpose which, at the same time, we have split into three specific objectives: 1) To determine the profile or characterization that differentiates exporting enterprises of Social Economy from the rest; 2) To measure the competitiveness of all the exporters enterprises of the Social Economy versus other enterprises, expressing these differences as *strengths and/or weaknesses*; 3) To understand the competitive quantification of exporting enterprises in the Social Economy and the total of enterprises as individual and aggregated according to different categories.

The results achieved have allowed us to generate useful knowledge for the authorities, enterprises managers (Santos and Muñoz, 2013) and the governing bodies of cooperatives and Labour societies. Usefulness, which can be translated into strategies faced with the other enterprises, and also, expanding knowledge for the research staff. As he noted Rodríguez, Alcaide and López (2012), in this article, knowledge gaps and research opportunities are identified in order for researchers to inquire about them and construct theoretical bases that enhance the development of knowledge in this area.

In the first part of the article, we check through a descriptive analysis the differences in characterization or profile of Social Economy enterprises to total enterprises with presence abroad, allowing us to achieve the first specific objective. Subsequently, a series of indicators are selected related to competitiveness, and we have made the quantification of the *strengths* and *weaknesses* of exporting enterprises in the Social Economy sector, allowing it to us to reach the second objective from the study of 362 enterprises. In the third part, we quantified *exporting competitiveness*, enterprise to enterprise sectorally, using Rasch's probability, and this has allowed us to rigorously detail a competitive diagnosis of *strengths and weaknesses* that this analysis incorporates.

## 2. Methodology

To achieve the proposed main goal the inductive method is used as a scientific method, and we have performed an appropriate fieldwork in order to achieve the results of the investigation.

### 2.1. Selection Method

#### 2.1.1. Strengths and weaknesses according to the SWOT methodology.

The SWOT analysis is a diagnostic tool that can represent the characteristics of both the environment in order to plan and the internal field that identifies the resources of an agent or a spatial area (Ponce, 2006; Gutiérrez, 2007). So much so, we have developed the part of the SWOT matrix linked to internal resources, in particular, the *strengths* and *weaknesses* shown by the exporters of Andalusia. To achieve comparing those with the export enterprises Social Economy versus all exporter enterprises, detecting the items that in the Social Economy enterprises have strengths and weaknesses versus the others, since we should not forget that competitiveness is a relative concept.

As it is well known, competitiveness is a relative concept and, sometimes, it refers to intrinsic strengths and weaknesses, leading to this article to build them according to the variables or items of the enterprises in the Social Economy showing more relevant

percentages than the total of exporting SMEs regarding competitiveness (strengths), or less relevant (weaknesses).

### 2.1.2. 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*, with a standardized and objective scale, in addition to a more appropriate measure than other as it reduces complex data matrices to a one-dimensional variable (Morán and Álvarez, 2001). The parameters governing Rasch's probability have been obtained using the computer program WINSTEPS Rasch's Measurement (Boone, Staver and Yale, 2014). We have applied the Rash's probability to those 257 enterprises of which we have answers to all items (Arboleda and Alonso, 2014), and this has allowed us to quantify the items for each enterprise and to know in detail the most competitive exporters in the region, as well as the weakest ones. In addition, we want to emphasize that this method has not been applied in a similar reality till the date for measuring enterprises, nor for sectorial comparisons.

| Table 1. Categorization of the items |  |                                 |
|--------------------------------------|--|---------------------------------|
| 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 %          |
|                                      | <i>Cooperation Mechanisms Instruments</i>          | <i>Number of Target Markets</i> |
| 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

Given the latent variable ( $x$ ) measured for 257 enterprises and defined by a set of 6 items uncorrelated, this measurement technique places them along a line to its measure according to their competitive position (Morán and Álvarez, 2001), evaluating these according to the scale of 1 (lower value) to 4 (higher value). The categorized items respond to the scenario in Table 1.

The differences in competitiveness between *two* enterprises are given by their relative position in the number of items. So that, the latent variable *exporting competitiveness* is conceived as a continuum along which the parameters  $\delta_i$  and  $\beta_n$  items for businesses are located. It means that, there may be enterprises that do not exceed the agreed value (parameter) on any item and they will be among those with weaknesses, and conversely, when they overtake the values of all the excellent items. If it is considered  $X_{ni}$  *exporting competitiveness* dichotomous variable describing the fact that an enterprise "n" endorses the item "i". If  $X_{ni} = 1$ , then the enterprise "n" is said to be strong; on the contrary, if  $X_{ni} = 0$  is said that the enterprise "n" is not strong.

$$PIX_{ni} = 1/\beta_n \cdot \delta_i = \frac{e^{(\beta_n - \delta_i)}}{1 + e^{(\beta_n - \delta_i)}}$$

With appropriate calculations it is obtained the formula provided. Giving us in our case the probability that the enterprise "n" referring to item "i" would be strong, provided the parameters  $\beta_n$  and  $\delta_i$ . This is the formula that George Rasch got in his treatise on the Latent Variables (Morán and Álvarez, 2001; Oreja-Rodríguez, 2005).

**2.2. Description of the Universe, sample and research design**

The first step was to design a 53 questions questionnaire aimed at exporting enterprises in the region of Andalusia (Charlo et al., 2016), which was completed by telephone in 2014 by people in charge of foreign trade from enterprises surveyed (Santos and Muñoz, 2013). The analysis requires to begin the research delimiting a material object, that is, to contextualize Andalusian exporting enterprises and enterprises that make up the Andalusian Social Economy exporting system (cooperatives and Labour Societies). Andalusian enterprises regularly exporting in 2013 corresponded to a total of 3920 (Extenda, 2014). Thereto, we must add the lack of primary sources related to business internationalization; so, we opted for developing our own business directory of enterprises from indirect sources such as that of Extenda, as well as, of Chambers of Commerce and CEPES-Andalusia. During the process of surveying a total of 1144 companies were identified invalid, non-exporting enterprises.

|                              |   |
|------------------------------|---|
| Table 2. Data Sheet          |   |
| Methodological process       | Telephone survey, and most of them, through an interview lasting approximately 25 minutes                                   |
| Type questions               | Dichotomous, Nominals and Intervals   |
| Universe                     | 2276 Andalusian Enterprises with regular export <sup>1</sup> .  |
| Sample obtained <sup>2</sup> | 362 Andalusian Enterprises with regular export.   |
| Rash's Analysis <sup>3</sup> | 257 Andalusian Enterprises with regular export  |
| Type of contact              | e-mail and telephone  |
| Sampling method              | Aleatory sampling for proportions with a confidence level of 95 % and with the assumption of maximum uncertainty (p=q=0.5). |
| Error                        | ± 4.80 %  |
| Date of survey               | January to December 2014  |
| Source: Own elaboration      |   |

Data collection was performed by applying a qualitative research technique in the development of structured personal nature questionnaire during 2014. The use of SPSS/PC (V23) programme has enabled us to generate information needed for further analysis. The extraction two sample elements, 362 (total enterprises) and 121 (enterprises in the social economy) has been made by a process of simple random sampling, based on at random and applied through tables of random numbers. About the

<sup>1</sup> Of which there were 263 from Social Economy sector.  
<sup>2</sup> Of which 20 are large enterprises that have not been investigated.  
<sup>3</sup> Of the surveyed enterprises, those who had measurements made worthless items have been eliminated.

same ones, it can be said that they are representative samples that the own sampling process itself has allowed us to find them. Similarly, noted that they are not considered in Rasch's measurement unanswered questions; in consequence, 257 exporting SMEs have been used for this measurement and from them, 84 belong to the social economy (Madrid-Guijarro, García-Pérez-de-Lema and Van Auken, 2016). Finally, to indicate that, for confidentiality reasons, enterprises are not treated in a nominative form considering that this is not substantial.

### 3. Results and discussion

#### 3.1. Comparative characterization of internationalized SMEs versus the Social Economy Enterprises

We find it convenient to know the profile of Exporting SMEs and, among them, those identified as Social Economy Enterprises, as a prelude to measure *strengths* and *weaknesses* of this exporting sector, in relation to all exporting enterprises and Rasch's measurement. In this way, we check the profile compared according to variables or items listed in Table 3, whose characterization is represented by the percentages in columns three and four, represented in column five comparisons between both types of enterprises.

Our sample of enterprises in the social economy stands for 32.32 % of all exporting enterprises, of which it could be highlighted the influence of the size of internationalized enterprises; in fact, 6.7 % of enterprises in the social economy have 250 workers or more versus 3.87 % of all enterprises, and 46.2 % have fewer than 10 workers compared to 50.0 % of all enterprises.

Moreover, this research is focused not only on exporting goods enterprises but also in services ones, reason why we want to highlight two aspects in its characterization: 1) the social economy enterprises exports 1.9 percentage points more of goods than services ones, 2.0 points lower; and 2) the main economic activity of social economy export enterprises is the industry and the construction with 60.3 %, and 2.57 percentage points higher than all exporting enterprises, 1.85 percentage points also in agricultural products, and 4.54 percentage points less than those exporting of services. Data about the dimension of services that reflect a current reality that is happening, that, until recently, a part of the service enterprises had not gone outside are internationalizing real goods from other enterprises and become enterprises that pull along export, in most cases, especially related to knowledge with the industrial network, in the case of consulting enterprises, architectural enterprises and engineering enterprises. Which it shows, at the same time, the proliferation of advanced business services to the industry.

The Social Economy enterprises have strengths in goods exportation, whether they were industrial, construction or agricultural ones, versus the overall strengths of the other enterprises in services exporting sector. It stresses the abroad activity of cooperatives, the concentration of their billing abroad in the sections between 5 % and 25 % and 50 % and more.

Exporting enterprises are relatively young in their output to foreign markets, because if the recession leads installed in Spanish and Andalusian economies for five years, and 35.7 % and 35.5 % of exporting enterprises and exporting enterprises of the Social Economy, respectively, lead less than four years in the regular export activity, it appears that the abroad departure may be preceded by harnessing the opportunities offered by other markets. But the fact is, that social economy enterprises dominate among exporting enterprises with over 11 and 20 years exporting, indicator where may lie strengths of Social Economy enterprises.

| Table 3. Exporting Enterprise Profile with abroad activity in compared to Social Economy Enterprises 2013 |  | Total Enterprises % | Social Economy % | Difference |
|---|--|---------------------|------------------|------------|
| Legal Form  | Joint-Stock company and limited company              | 56.90               |                  |            |
|   | Others   | 10.70               |                  |            |
|   | Cooperative Society and Limited Labour Company (LLC) | 32.30               | 23.20            |            |
|   |  |                     | 8.80             |            |
| Enterprise Size   | Less than 9 workers                                  | 50.00               | 46.20            | 3.8        |
|   | Between 10 y 49 workers                              | 36.10               | 37.80            | -1.6       |
|   | Between 50 y 249 workers                             | 9.90                | 9.20             | 0.7        |
|   | More than 250 workers                                | 3.80                | 6.70             | -2.8       |
| Export Type   | Products   | 78.10               | 80,10            | -1.9       |
|   | Services   | 21.80               | 19,80            | 2          |
| Main Economic Activity  | Agriculture, Stockbreeding and Forestry and Fishing  | 6.30                | 8.20             | -1.8       |
|   | Industry and Construction                            | 57.70               | 60.30            | -2.5       |
|   | Services   | 35.90               | 31.40            | 4.5        |
| Abroad Billing Volume   | Less than 5 % of total billed                        | 28.10               | 26.90            | 1.2        |
|   | Between 5 % y el 25 % of total billed                | 32.90               | 37.50            | -4.5       |
|   | Between 25 % y el 50 % of total billed               | 15.10               | 10.50            | 4.6        |
|   | 50 % and more  | 23.70               | 25.00            | -1.2       |
| Years of activity abroad  | Less than 5 years                                    | 35.70               | 35.50            | 0.2        |
|   | From 5 to 10 years                                   | 29.50               | 18.20            | 7.3        |
|   | From 11 to 20 years                                  | 23.00               | 28.90            | -5.8       |
|   | More than 20 years                                   | 16.10               | 17.30            | -1.1       |
| Motivation for internationalization   | Dimension and New Opportunities                      | 63.00               | 49.60            | 13.4       |
|   | To Diversify Markets                                 | 43.90               | 33.30            | 10.2       |
|   | Casually   | 20.50               | 25.70            | -5.2       |

Source: Authors.

Finally, when we refer to the motivations for internationalization we note that, in recent years, the Social Economy Enterprises have not been as dynamic, either in the search for larger dimensions and new opportunities as well to diversify markets. Data lead us to conclude that enterprises in the Social Economy have weaknesses in regard to international initiative (Estrella, Jiménez, Ruiz, and Sánchez, 2012), and they only have strengths in exporting casually, whose explanation can be founded in passive exportation to other markets.

### 3.2. Strengths and Weaknesses of the Social Economy exporting sector

Coming up next, we have payed attention to the external behaviour of internationalized enterprises according to different indicators, which has enabled us to show the competitive *strengths* and *weaknesses* of Social Economy using as a reference comparison with all enterprises synthesized in Table 9 For this purpose *ex post* indicators as competitive items, among which are also included those items which manage in the Rasch's Measurement. In the competitive analysis set forth below, we have highlighted three internal capabilities linked to the exporting competitiveness as shown in Table 9 and refuted in the literature:

*Exporting Performance*: business practice linked to exports determined by business capability to grow and its dynamism to open new markets. Within this capacity are included as indicators the foundation on which sits competitiveness (cost, differentiation, quality...); dedication of resources to innovation (Gupta, Beninger and



Ganesh, 2015; Klimas, 2015); and the existence of business cooperation; size and indicator on previous times of international enterprises (years of foreign activity) (Geldres, Etchebarne and Bustos, 2011).

*Degree of Internationalization:* number of foreign markets and continents where they sell products and/or services (Miró, 2016; Pérez-Suárez and Espasandín, 2014). 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, in case they do not sell online, it then consider it or not.

*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; Calvo and Dávila, 2011); that is, if it has been used aids granted by the government to improve their chances of internationalization, including cooperation aids.

The capabilities we have just defined are identified with any of the items, so that the *sales abroad percentage*, related to the influence of export performance in the international expansion strategy of an enterprise, as shown by Bobillo, López-Iturriaga and Tejerina-Gaite (2010) or Rostek (2012). Thus, the exporting intensity is directly determined by sales volume (Ferrero and Hisgen, 2014). In billing, Social Economy exporting enterprises bill 37.5 % and 25.0 % in stretches of 5 % to 25 % and 50 % and more, with 4.6 and 1.3 percentage points higher than the exporting SMEs, which we identify as strengths. In general, enterprises with high export levels are distinguished for advantages from the development of sales skills complemented by productive advantages (Ramon et al, 2012). Similarly it happens with the *internationalization degree* with the number of foreign markets (continents) where trade, which has increased the need for access to markets that would not rely solely on local markets, especially as strengths in our case, 26 % of exporting enterprises in the Social Economy sector export to every continent and, in addition, the 63.26 % of exporting enterprises in the Social Economy has increased its activity outside the last 5 years, 1.8 percentage points more than the rest, identifying those differences significant strengths in the Social Economy.

Among the detected weaknesses highlight in the export performance, that a 45.16 % of enterprises base their competitiveness on differentiation of product or service, 6.8 percentage points lower than in the rest, and adaptation to customers with a 35.4 %, 0.8 percentage points less too, while quality, with 3.7 percentage points higher, presenting a strength and it also happens in competitiveness based on the costs with an 11.9 percentage points higher.

Actually, assuming that our enterprises only have a future only if they are supported by differentiation, it can not be ignored the significant percentage of enterprises that devote resources to systematically innovate (33.3 %), although it is a weakness because it is equivalent to 2.6 points percentage less than all exporting enterprises. Authors like Pérez, Macías, Rosiles and León (2014) identify that competitiveness influences, *years of abroad activity*, as experience is gained with the product sold and with customers, which generates implicit know-how in the knowledge of exporting, as well as there are involved other competitive advantages (product quality and/or service). In our case, the quantified strengths are focused on the 5.8 and 1.1 percentage points that exceed the enterprises of Social Economy to enterprises between 11 and 20 years old and over 20 years.

For Avilés-Casco (2005) economic literature indicates that enterprise size really matters. Regarding the importance of this variable, some authors as Madrid and García (2004) claim that a larger size encourages greater efforts in foreign markets; others call it

international commitment, as Fernández and Nieto (2002) or a first step to success in their exporting venture as Calderón, Cervera, Tubillejas and Fayos (2007) and Myro et al., (2013), the size of enterprises and productivity that influence international trade, and then deepening, in the competitiveness determinants (Ferrero and Hisgen, 2014).

It means that the Andalusian size enterprises in the Social Economy have strengths by having 2.8 percentage points more than enterprises with more than 250 workers, and in the section of micro SMEs because, despite of the importance of these enterprises meaning 46.2 %, 3.8 percentage points less regarding these enterprises related to all the exporting SMEs.

On the other hand, it is confirmed that major weaknesses in exporting performance are concentrated in the commercial, financial and productive cooperation with 5.7, 1.1 and 1.7 percentage points less than enterprises that cooperate in these areas, being aware of the importance of business cooperation and growth strategy, and that it is an alternative viable option to strengthen competitiveness in the domestic and international market (Rodríguez, Vásquez and Mejía, 2014). That is, much of the literature indicates that enterprises have greater competitive potential are those that develop relational skills through partnerships with other enterprises under very different formulas, although comparing enterprises in the Social Economy with all exporting enterprises, the Social Economy ones have strengths, as in the calculation of all exporting enterprises are higher percentage of enterprises that do not cooperate (7.5 points).

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

### **3.3. Exporting competitiveness Measure of Social Economy Enterprises.**

#### **3.3.1. The latent variable exporting competitiveness**

Then, a latent variable identified with competitiveness is quantified, once the most relevant variable and categorized items are selected. No longer it is a novel method of quantification by Rasch's Method applied to exports to add more value to the investigation, with results for each enterprise and the sector, which has allowed us to compare exporting enterprises with exporting enterprises in the Social Economy being aware that in both cases it is a business network of mostly SMEs. Till the date, Rasch's measurements applied to exports are limited in researches.

There is no accepted definition of international competitiveness that includes various items, aware of this, it is also appropriate to indicate that further research is still in Spain on the correlation between internationalization and competitiveness, which is founded on the theory of international strategic competition, to analyse international trade as a competitive game between territories and enterprises. Thus, Camisón (2007) explains the international competitiveness of the Spanish enterprise from "microeconomic factors provide to enterprises advantages over their rivals in the markets; beyond the usual indicators of relative prices and costs" (Camisón, 2007). To this we must add, that to measure competitiveness we need to contemplate indicators of international competitiveness *ex ante* and *ex post*. There are several national authors correlating international growth with intangible assets, highlighting Madrid and García (2004) and Camisón (2007), as cited Alonso and Donoso (1989, 1994, 1998, 2000), or Ramírez (2004), López (2006), Camisón (2007). Or other international authors exhibiting empirical evidences demonstrating that the analysis of competitiveness factors really defines competitiveness condition (Pérez et al., 2014; Piatkowski, 2012; Estrella et al., 2012; Rostek, 2012; Man, Lau and Chan, 2002; Knight, 2001).





The relationship between factors and variables associated with the real competitiveness, which has allowed us to define the latent variable *exporting competitiveness* of Social Economy enterprises, for which we used 6 multidimensional items with no correlation between them, set out in Table 1, and are: cooperation, size, number of target markets, competitive advantages, years abroad and percentage of sales abroad.

**3.3.2. Measurement of Social Economy Enterprises**

Table 4 shows the extent of exporting competitiveness for the studied enterprises, collecting therein a selection of the results. If we pay attention to, we can classify the enterprises into two subgroups, those above the average (-0.46) and those not reaching it. On top of the measurement are the E1 export competitiveness of 2.6 with a level 4 in the studied items except for the item *competitive advantages*, in which no enterprise exceeds level 3, which means that, the declaration of own trademarks is limited. Together with the already stated enterprise, 144 other enterprises also are above this average, among which there are 36 social economy enterprises, granting 24.8 % attendance, although lower than the percentage of representation of these enterprises, 32.32 %.

Table 4. Measurement of *Exporting Competitiveness (EC)* for Exporting Enterprises of Social Economy

| EC1 = Excellent |         |       | EC2 = Improvable |         |       | EC3 = Weak  |         |       |
|-----------------|---------|-------|------------------|---------|-------|-------------|---------|-------|
| Enterprises     | Measure | Error | Enterprises      | Measure | Error | Enterprises | Measure | Error |
| E1              | 2.58    | 1.01  | E18              | 0.63    | 0.52  | E203        | -1.11   | 0.53  |
| E2              | 1.87    | 0.72  | E19              | 0.60    | 0.46  | E223        | -1.42   | 0.59  |
| E3              | 1.87    | 0.72  | E20              | 0.39    | 0.46  | E244        | -1.84   | 0.71  |
| E4              | 1.43    | 0.61  | E33              | 0.18    | 0.45  | E245        | -1.84   | 0.71  |
| E5              | 1.43    | 0.61  | E44              | -0.02   | 0.44  | E246        | -1.84   | 0.71  |
| E6              | 1.43    | 0.61  | E62              | -0.21   | 0.44  | E247        | -1.84   | 0.71  |
| E7              | 1.43    | 0.61  | E100             | -0.41   | 0.45  | E250        | -1.84   | 0.71  |
| E8              | 1.11    | 0.54  | E145             | -0.62   | 0.47  | E254        | -2.53   | 1.00  |
| E9              | 1.11    | 0.54  | E179             | -0.85   | 0.49  | E255        | -2.53   | 1.00  |
| E10             | 0.84    | 0.50  |                  |         |       | E256        | -2.53   | 1.00  |
|                 |         |       |                  |         |       | E257        | -2.53   | 1.00  |
| ...             |         |       |                  |         |       | ...         |         |       |

Source: Own elaboration.

Of the 113 enterprises that are below that average, most of them justify their presence in this group because of the low business cooperation, and size. In fact, keeping a high percentage of overseas sales does not define itself exporting competitiveness; however, it is shown through more years of foreign activity and competitive advantages. If we consider that 40 % of this group of enterprises are Social Economy enterprises and, that this figure exceeds by 7.3 percentage points to the representation of enterprises in the Social Economy among 257 enterprises, means that these present considerable weaknesses regarding for the Andalusian exporting SMEs.

**3.3.3. Imbalances**

As we have mentioned, the measurement provides unexpected results in subjects and items that the model classifies them as imbalances and are accounted for by residual values. A positive residual means that an answer with a higher level than expected by the model and conversely. Very accurately, we want to point out that, there are a total of 87 of the 257 surveyed enterprises that have imbalances. The expected measurement reliability is 71 %, and the obtained approaches fixing in 45 %, and, although it is true that the

results are distant to the desired ones, the diversity of enterprises provides a more than logical justification in the goodness of the answers. It is true that we have tried to measure a latent variable in inhomogeneous subjects, implying that is much more complex measurement of international competitiveness, being enterprises of different size, sector and objectives (benefits, maintain activity, workload...). If the reliability of the items presented similar values we should restructure the measurement but, despite that we compare very divergent elements, *the reliability of the items is perfect*, as discussed below.

**3.3.4. Indicators Measurement**

The management of items according to their relevance means that the item *size* is the least that enterprises exceed and the one of *billing* the most enterprises exceeded. That is, that while being all items determinants of competitiveness, the most of them, are those which are overcome with more difficulty. The results of measurements of the items shown in Table 5, and that they give priority to the item number of workers named *size*. Following items are cooperation, years of abroad activity, number of target markets, competitive advantages, and percentage of sales abroad, in order of relevance. These results certify the importance noted above about the size and the cooperation of the enterprise.

Table 5. Evidence of latency exporting competitiveness through their items

| Items                     | Measure | Error | Mnsq | Infit | Mnsq | Outfit | Ptmeasure |
|---------------------------|---------|-------|------|-------|------|--------|-----------|
| Size                      | 0.67    | 0.08  | 0.74 | -3.0  | 0.71 | -2.9   | 0.61      |
| Cooperation               | 0.64    | 0.08  | 1.57 | 5.3   | 1.36 | 3.1    | 0.53      |
| Years abroad              | -0.07   | 0.07  | 1.04 | 0.5   | 0.98 | -0.2   | 0.58      |
| Number of Target Markets  | -0.33   | 0.07  | 1.07 | 0.9   | 1.05 | 0.6    | 0.51      |
| Competitive Advantages    | -0.45   | 0.07  | 0.60 | -6.4  | 0.77 | -3.1   | 0.23      |
| Overseas sales percentage | -0.46   | 0.07  | 1.13 | 1.8   | 1.10 | 1.2    | 0.54      |

Source: Own Elaboration.

Table 6 shows that the categories are well selected, manifested in a high adjustment in the application, with an increased Andrich's threshold (Andrich, Marais and Humphry, 2012). Furthermore, the observed mean (OBSVD SAMPLE AVRGE) and expected (SAMPLE OBSVD EXPECT) have a right addressing and a similar one; the mean square error is in all items between 0.5 and 1.5 and are similar. Moreover, the category of measures are equidistant and of different signs (categories 1-4 and 2-3). Definitely, we note, as indicated above, that the expected reliability and the one obtained in the measurement of the items are very consistent, with 98 % and 97 % respectively, which indicates a high degree of accuracy in the selection of items.

Table 6. Function Categories of Rash's Measurement

| Category | Score | Observed Count | %  | OBSVD AVRGE | SAMPLE EXPECT | INFIT MNSQ | OUTFIT MNSQ | ANDRICH THRESHOLD | CATEGORY MEASURE |   |
|----------|-------|----------------|----|-------------|---------------|------------|-------------|-------------------|------------------|---|
| 1        | 1     | 526            | 34 | -1,10       | -1,03         | 0,89       | 0,90        | None              | (-2,02)          | 1 |
| 2        | 2     | 449            | 29 | -0,45       | -0,53         | 1,10       | 1,02        | -0,62             | -0,57            | 2 |
| 3        | 3     | 352            | 23 | 0,03        | -0,08         | 0,87       | 0,82        | -0,06             | 0,55             | 3 |
| 4        | 4     | 214            | 14 | 0,28        | 0,45          | 1,21       | 1,23        | 0,67              | (2,05)           | 4 |
| Missing  |       | 1              | 0  | 0,69        |               |            |             |                   |                  |   |

Source: Own elaboration.

### 3.3.5. Comparison of exporting competitiveness based on Rasch's Measurement among all exporting SMEs and enterprises in the Social Economy

The results of Rasch's Measurement, expressed for latent variable, give us understanding not only of exporting competitiveness, but also to make a classification of *exporting enterprises* of a territory. A classification that empirically details, which and how many of these enterprises have greater or lesser exporting competitiveness, for which we have identified three competitive categories, as shown in Table 7. Fixed based on Rasch's Measurement (Measure) and granting it 33 % for each category of the highest value achieved.

| Categories |                                      |               | Total Enterprises | Social Economy Enterprises | %    |
|------------|--------------------------------------|---------------|-------------------|----------------------------|------|
| EC1        | Excellent Exporting Competitiveness  | > 0.8         | 17                | 10                         | 58.8 |
| EC2        | Improvable Exporting Competitiveness | De 0.8 a -0.9 | 186               | 51                         | 27.4 |
| EC3        | Weak Exporting Competitiveness       | < -0.9        | 54                | 23                         | 42.5 |

Source: Own elaboration.

This classification highlights the exporting enterprises of Andalusia ordered according to exporting competitiveness allows us to understand not only what the exporting competitiveness of Andalusian enterprises is, but also position in that said competitive context the Social Economy enterprises in the region. It is an important and practical tool to know the position of the leading exporting enterprises of a territory in relation to *competitiveness*, having spent several items that are synthesized into a single measure. Table 4 shows the position of the main enterprises according to the exporting competitiveness and the registered categorization.

We verify the polarization in enterprises of Social Economy, therefore, over 58 % of exporting enterprises are qualified as excellent enterprises in this sector (cooperatives as a whole), showing the *intrinsic strengths* of Social Economy enterprises as they exceed the percentage of representation of the said sector, 32.3 %. At the other extreme, there are more than 42 % internationalized enterprises of Social Economy with weak exporting competitiveness, leading to detect a concentration of enterprises in this sector among the weakest in the classification of regional exporting competitiveness. While most Social Economy enterprises in 2013 had upgradable exporting competitive characteristics, namely 51 of the 84 companies, 27.4 %.

In terms of production sectors, while among the weakest enterprises the majority of them belong to the service sector (63 %), among the excellent ones predominate those exporting manufactured goods (90 %).

To summarize we can say, that most of Social Economy enterprises present today an *improvable exporting competitiveness*, and the need to increase their *exporting competitiveness* in order to progress in their internationalization process (Santos and Muñoz, 2013).

Table 8 shows the relative performance of enterprises in the Social Economy facing exporting SMEs not only for items that have used in Rasch's Measurement but also for enterprises characterization. These results have allowed us to sketch the strengths and weaknesses of these enterprises listed in Table 9 and Table 10.

| Table 8. Characterization of competitive enterprises in the Social Economy facing all enterprises in 2013 |   | Percentage de Enterprises of the Social Economy (%) |                    |                    |
|---|---|---|--------------------|--------------------|
|   |   | <i>Excellents</i>                                   | <i>Improvables</i> | <i>Weaks</i>       |
|   |   | <i>58.8 % (10)</i>                                  | <i>27.4 % (51)</i> | <i>42.5 % (23)</i> |
| Legal Form  | Cooperatives  | 58.8  | 18.8               | 25.9               |
|   | Labour Societies  |   | 8.6                | 16.6               |
| Company Size  | Less than 9 workers   |   | 22.6               | 45.4               |
|   | Between 10 and 49 workers                                   | 100   | 27.5               | 30.0               |
|   | Between 50 and 249 workers                                  | 50.0  | 44.4               |                    |
|   | More than 250 workers                                       | 55.5  | 50.0               |                    |
| Export Time   | Products  | 75.0  | 27.8               | 33.3               |
|   | Services  |   | 26.1               | 61.1               |
| Main Economic Activity  | Agriculture, stockbreeding and forestry and fishing         | 100   | 53.3               |                    |
|   | Industry and construction                                   | 90.0  | 25.7               | 33.3               |
|   | Services  |   | 24.3               | 51.8               |
| Abroad Billing Volume   | Less than 5 % of total billed                               |   | 11.4               | 42.8               |
|   | Between 5 % y el 25 % of total billed                       | 50.0  | 22.3               | 42.8               |
|   | Between 25 % y el 50 % of total billed                      | 33.3  | 17.6               | 33.3               |
|   | 50 % and more.  | 70.0  | 86.9               | 50.0               |
| Cooperation Instruments or Mechanisms   | No cooperation  |   | 22.6               | 45.1               |
|   | Yes, of commercial character                                | 50.0  | 34.3               |                    |
|   | Yes, of financial character                                 | 100   | 22.2               |                    |
|   | Yes, of productive, technological character and to innovate | 53.8  | 40.7               |                    |
| Competitive Advantages  | Production low costs and sales                              |   | 75.0               | 28.5               |
|   | Adaptation to customers and quality offered                 | 25.0  | 30.0               | 46.4               |
|   | Product or service Differentiation: Trademark               | 69.2  | 23.5               | 42.1               |
| N° of Target Markets  | One continent   |   | 60.0               | 45.8               |
|   | Two continents  | 50.0  | 88.9               | 50.0               |
|   | Three continents  | 50.0  | 44.4               | 27.3               |
|   | More than three continents                                  | 75.0  | 7.9                |                    |
| Years of Abroad Activity  | From 0 to 4 years   |   | 53.3               | 83.3               |
|   | From 5 to 10 years  | 50.0  | 57.7               | 33.3               |
|   | From 11 to 20 years   | 40.0  | 86.3               | 7.4                |
|   | More than 20 years  | 70.0  | 7.3                |                    |

Source: Own Elaboration.

| Table 9. Strengths of Social Economy Enterprises on all exporting Enterprises   |  |
|---|--|
|   | STRENGTHS  |
| <p><i>1. Exporting performance facing all enterprises:</i></p> <ul style="list-style-type: none"> <li>- 1a. Competitiveness bases</li> <li>- 1b. Resources devoted to innovation</li> <li>- 1c. Enterprises cooperation</li> <li>- 1d. Size</li> <li>- 1e. Years of Abroad Activity.</li> </ul> | <p>1a. 11.9 and 3.74 percentage points higher than enterprises that compete on costs and quality.</p> <p>1c. 7.5 percentage points lower than exporting enterprises that do not cooperate.</p> <p>1c. 2.7 percentage points higher on technological cooperation and innovation.</p> <p>1d. 2.9 percentage points higher of enterprises with more than 250 workers.</p> <p>1d. Lower percentage of micro SMEs (less than 10 workers).</p> <p>1e. 7.1 percentage points higher for enterprises with more than 11 years old and 1.2 points more than enterprises with more than 20 years.</p> |
| <p><i>2. Degree of Internationalization :</i></p> <ul style="list-style-type: none"> <li>- 2a. Continents Presence.</li> <li>- 2b. Increased Abroad Activity the last 5 years.</li> <li>- 2c. Abroad Billing Percentage.</li> <li>- 2d. Electronic commerce (E-commerce).</li> </ul>            | <p>2a. 32.0 and 19.0 percentage points of presence on three continents and over three continents.</p> <p>2b. 1.8 and 5.6 percentage points of the enterprises have increased it by opening new markets and without making changes respectively.</p> <p>2c. 1.2 percentage points for enterprises bill more than 50 % of their foreign activity.</p>  |
| <p><i>4.Rash's Measurement:</i></p> <ul style="list-style-type: none"> <li>- 4a. Enterprises with excellent export competitiveness</li> <li>- 4b. Enterprises with weak export competitiveness</li> </ul>   | <p>4a. 70 % of enterprises that bill more than 50 % abroad, belong to the Social Economy sector.</p> <p>4a. 50 % bill abroad activity between 5 % and 25 %.</p> <p>4a. 55.5 % have more than 250 workers.</p> <p>4a. 75 % export products.</p>   |
| Source: Own elaboration.  |  |

| Table 10. Weaknesses of Social Economy Enterprises on all exporting Enterprises   |  |
|---|--|
|   | WEAKNESSES   |
| <p><i>1. Exporting performance facing all enterprises:</i></p> <ul style="list-style-type: none"> <li>- 1a. Competitiveness bases</li> <li>- 1b. Resources devoted to innovation</li> <li>- 1c. Enterprises cooperation</li> <li>- 1d. Size</li> <li>- 1e. Years of Abroad Activity.</li> </ul> | <p>1a. 6.8 percentage points lower in product differentiation.</p> <p>1b. Minority dedicating resources to innovate consistently, 2.57 percentage points less than enterprises.</p> <p>1c. Cooperating in smaller percentage in commercial, financial and production area.</p>   |
| <p><i>2. Degree of Internationalization :</i></p> <ul style="list-style-type: none"> <li>- 2a. Continents Presence.</li> <li>- 2b. Increased Abroad Activity the last 5 years.</li> <li>- 2c. Abroad Billing Percentage.</li> <li>- 2d. Electronic commerce (E-commerce).</li> </ul>            | <p>2c. Between 25 and 50 % of billing there is 4.6 percentage points less of enterprises.</p> <p>2d. Less than 4.0 percentage points use e-commerce.</p> <p>2d. 0.9 percentage points does not contemplate selling through internet next year by 66 % overall.</p>   |
| <p><i>3. Initiative and Supports :</i></p> <ul style="list-style-type: none"> <li>- 3a. Specially trained Personnel</li> <li>- 3b. Using aid granted by the Governments</li> </ul>  | <p>3a. 15.5 percentage points less trained personnel.</p> <p>3b. Generally, they have been used between 1.59 and 4.1 percentage points less than all kinds of aids.</p>  |
| <p><i>4. Rasch's Measurement:</i></p> <ul style="list-style-type: none"> <li>- 4a. Enterprises with excellent export competitiveness</li> <li>- 4b. Enterprises with weak export competitiveness</li> </ul>   | <p>4b. 45.4 of the weak ones have fewer than 10 workers.</p> <p>4b. 42.8 % bill less than 5 % abroad.</p> <p>4b. 45.1 uncooperative.</p> <p>4b. 45.8 % of weak enterprises export to one continent.</p> <p>4b. 83.3 % of weak enterprises have less than 5 years abroad.</p> <p>4b. No enterprises with own trademark.</p> |
| Source: Own elaboration.  |  |

#### 4. Conclusions

This paper quantifies the *exporting competitiveness* of internationalized enterprises of Andalusia Social Economy versus Andalusian exporting SMEs, which 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.* We were able to know the profile or characterization of exporting enterprises in the Social Economy in 2013 versus exporting SMEs. Enterprises in the Social Economy overtake exporting SMEs by size 10 to 49 and with more than 250 workers; they are more exporters of goods and services and, consequently, concentrate their activity in the primary and secondary sectors construction including, the majority of them bill between 5 % and 25 % and 50 % or more abroad; it is about enterprises that exceed exporting SMEs



with over 11 years of abroad activity, and related to motivations for internationalization have more weight fortuity or passivity.

*Objective 2.* Regarding the competitive *strengths and weaknesses* that are deducted from the sector competitive analysis, a matrix is made with a total score of 8 strengths and 8 weaknesses, established by groups of indicators<sup>4</sup>, about which we can highlight as significant the following ones:

- The enterprises of the Social Economy have a revealing exporting performance versus exporting SMEs defined by articulated strengths on costs and quality as competitive advantages; cooperation, size, number of years of abroad activity, their presence in more continents, and their abroad billing higher to 50 %.
- Their weaknesses are articulated in product differentiation; fewer resources to innovate, less degree of commercial, productive and financial cooperation; lower billing in the stretches between 25 % and 50 %, and less use of electronic commerce.

*Objective 3.* The exporting competitiveness measured by 6 items with the following order of importance of items: size, cooperation, number of target markets, competitive advantages, years of activity and percentage of abroad sales, have allowed us to classify the exporting business network comparing enterprises in the Social Economy with the total of enterprises from establishing three categories: excellents, improvable and weak.

In turn, Rasch's Analysis allows us to add several strengths and weaknesses that have related to the categorization of Excellents, Improvable and Weak:

To highlight the profile of enterprises that 58.8 % of excellent or strong enterprises are part of the Social Economy (10 enterprises), and that 42.5 % of the weak are also Social Economy (23 enterprises).

Among the Strengths that derive from the excellent enterprises, we emphasize:

- 70 % and 50 % of excellent enterprises that bill for over 50 % and between 5 % and 25 % respectively come from the Social Economy; the Social Economy stands out for their excellent enterprises in all sizes and exporting products, as well as, in cooperation, in product differentiation and internationalization in more than three continents, or in the years of abroad activity in all sections from 5 years and especially over 20 years.

As weaknesses arising from the weak enterprises, we emphasize:

- A high percentage of enterprises with fewer than 9 workers (45.4 %), the highest percentage of enterprises that do not cooperate (45.1 %), there are no enterprises with their own trademark; 45.8 % of weak present only in one continent, and 83.3 % of these Social Economy enterprises are under 5 years of presence in foreign markets.

Finally, it is appropriate to highlight the scientific contribution represented of the latent variable *exporting competitiveness*, which has allowed us to know the economic contribution of enterprises to the proven Social Economy Regional competitiveness, and to achieve the objectives set at the beginning of the investigation.

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<sup>4</sup> E.g. An indicator = Business cooperation; an indicator = Size, etc.

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